DRAFT

ENVIRONMENTAL IMPACT REPORT APPENDICES

RECHE CANYON PLAZA PROJECT

CITY OF COLTON, CALIFORNIA

LSA

September 2023

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ENVIRONMENTAL IMPACT REPORT APPENDICES

RECHE CANYON PLAZA PROJECT

CITY OF COLTON, CALIFORNIA

Submitted to:

City of Colton
650 N. La Cadena Drive
Colton, California 92324

Prepared by:

LSA
1500 Iowa Avenue, Suite 200
Riverside, California 92507
951.781.9310

Project No. CLT1802.06

LSA

September 2023

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Appendices Are Available On The City's Website At:
https://www.ci.colton.ca.us/779/environmental-documents

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APPENDIX A-1

NOTICE OF PREPARATION AND COMMENT LETTERS

NOTICE OF PREPARATION

and NOTICE OF PUBLIC SCOPING MEETING

TO:	Distribution list	FROM:	Steve Weiss, AICP Planning Manager Community Development Department, Planning Division 659 N. La Cadena Drive Colton, CA 92324 (909) 370-5523 sweiss@coltonca.gov

The City of Colton (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. The City is soliciting comments from public agencies, organizations, and members of the public regarding the scope and content of the EIR, and the environmental issues and alternatives to be addressed in the EIR. Public agencies may need to use the EIR when considering, permitting or other approvals that are germane to the agencies' responsibilities in connection with the projects.

Because of time limits mandated by state law, public agencies must submit any comments in response to this notice at the earliest possible date but not later than 30 days after receipt of this notice. Comments should identify the significant environmental issues and reasonable alternatives and mitigation measures the agency will need to have explored in the Draft EIR; and whether the commenting agency will be a responsible agency or a trustee agency, as defined by the California Environmental Quality Act (CEQA) Guidelines Sections 15381 and 15386, respectively. The City also will accept comments from other interested parties regarding this notice during this time period.

Accordingly, please provide your written response to the address shown above by 6:00 p.m., April 19, 2019. If you wish to be placed on the notification list for this project, or if you have any questions or need additional information regarding the project or the environmental process, please contact Mr. Weiss (see contact information above.)

A public scoping meeting will be held on April 3, 2019 starting at 6 p.m. at Reche Canyon Elementary School, 3101 Canyon Vista Drive Colton, CA 92324. At this meeting, public agencies, organizations, and members of the public will be able to review the proposed project application materials and provide comments on the scope of the environmental review process.

	A copy of the Initial Study IS attached.
x	A copy of the Initial Study IS NOT attached.
	The proposed project IS considered a project of statewide, regional or area-wide significance.
x	The proposed project IS NOT considered a project of statewide, regional or area-wide significance.
	The proposed project WILL affect highways or other facilities under the jurisdiction of the State Department of Transportation.
x	The proposed project WILL NOT affect highways or other facilities under the jurisdiction of the State Department of Transportation.
x	A scoping meeting WILL be held by the lead agency.
	A scoping meeting WILL NOT be held by the lead agency.

Project Title:	Reche Canyon Plaza
Project Location - Specific: Identify street address and cross street or attach a map showing project site (preferably a USGS 15' or 7 *W* topographical map identified by quadrangle name):	2621 Reche Canyon Road at the intersection of East Shadid Drive and Reche Canyon Road (Figure 1). The project site is located at on west side of Reche Canyon Road just south of Crystal Ridge Lane. The project site is located in Planning Area 9 of the Reche Canyon Specific Plan (RCSP). The project site consists of four parcels, Assessor's Parcel Numbers (APNs) 0284-211-70, 71, 72, and 1178-371-27.
Project Description:	The project proposes the development of approximately 18,770 square feet of commercial uses including: 3,574 square foot (sf) fueling station with 6 fueling dispensers, a 3,000 sf convenience store, 9,800 sf of neighborhood commercial retail space, and a 1,750 sf drive through car wash (Figure 2). The project includes the following actions: **Specific Plan Amendment** to change the existing Reche Canyon Specific Plan (RCSP) Land Use from "Estate Density Land Use" to "Commercial Land Use" and add "automobile fueling" as a conditional use. **Architectural and Site Plan Review** to allow development of a small neighborhood center for multiple commercial uses including automobile fueling; **Conditional Use Permit** to allow food and beverage sales, "automobile fueling; 24-hour operation, and alcohol sales
Project Applicant (if any):	Transtech Engineering
California Environmental Protection Agency Hazardous Waste List (if applicable):	n/a

Date: March 19, 2019	Signature:	Steve Weiss
	Title:	Planning Manager
	Telephone:	(909) 370-5523

Consulting firm retained to prepare draft EIR:

Name:	LSA
Address:	1500 Iowa Avenue, Suite 200
City/State/Zip:	Riverside, CA 92507
Contact Person:	Carl Winter

LSA

LEGEND

Project Site

County Boundary

N

0 1000 2000

FEET

FIGURE 1

Reche Canyon Plaza

Regional and Project Location

SOURCE: Google (2018), 2016; ESRI Streetmap, 2013.

I:\CLT1703\Reports\EIR\RegLoc.mxd (3/19/2019)

LSA

FIGURE 2

N

0 80 160

FEET

SOURCE: Google Earth, Transtech

Reche Canyon Plaza

Site Plan

Q:\CLT1703\Reports\EIR\fig2_Site Plan.cdr (3/19/2019)

NOTICE OF COMPLETION & ENVIRONMENTAL DOCUMENT TRANSMITTAL

Mail to: State Clearinghouse, PO Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery /Street Address: 1400 Tenth Street, Room 222, Sacramento, CA 95812

SCH #

Project Title: Reche Canyon Plaza
Lead Agency: City of Colton — Contact Person: Steve Weiss, AICP
Mailing Address: 659 N. La Cadena Drive — Phone: (909) 370-5523
City: Colton — Zip: 92324 — County: San Bernardino

Project Location: County: San Bernardino — City/Nearest Community: Colton
Cross Streets: Reche Canyon Road / Shadid Drive — Zip Code: 92324
Lat./Long.: 34 ° 1 ' 35.23 " N/ 117 ° 16 ' 44.54 " W — Total Acres: 2.9
Assessor's Parcel No.: 0284-211-70 et al — Section: 3 — Twp: 2S — Range: 4W — Base: SBBM
Within 2 Miles: State Highway No. No — Waterways: Reche Canyon Channel
Airports: No — Railways: No — Schools: Reche Canyon ES, Cooley ES

Document Type

CEQA	☒ NOP	☐ Draft EIR	**NEPA**	☐ NOI	**Other**	☐ Joint Document
	☐ Early Cons	☐ Supplement /Subsequent EIR		☐ EA		☐ Final Document
	☐ Neg Dec	(Prior SCH No.):		☐ Draft EIS		☐ Other:
	☐ Mit Neg Dec	Other:		☐ FONSI		

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 Development Plan	☐ Land Division (Subdivision, etc.)	☒ Other: SPA

Development Type

☐	Residential:	Units:		Acres:			☐	Water Facilities:	Type: MGD:
☐	Office:	Sq. ft.		Acres:		Employees:	☐	Transportation:	Type:
☒	Commercial:	Sq. ft.	18,770	Acres:	2.9	Employees:	☐	Mining:	Mineral:
☐	Industrial:	Sq. ft.		Acres:		Employees:	☐	Power:	Type: MW:
☐	Educational:						☐	Waste Treatment:	Type: MGD
☐	Recreational:						☐	Hazardous Waste:	Type:
							☐	Other:	

Project Issues Discussed in Document:

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

PRESENT LAND USE/ZONING/GENERAL PLAN USE DESIGNATION:

The project is currently undeveloped, is located in Planning Area 9 of the Reche Canyon Specific Plan (RCSP), and is designated "Estate Density".

PROJECT DESCRIPTION *(please use a separate page if necessary)*

The project proposes the development of approximately 18,770 square feet of commercial uses including: 3,574 square foot (sf) fueling station with 6 fueling dispensers, a 3,000 sf convenience store, 9,800 sf of neighborhood commercial retail space, and a 1,750 sf drive through car wash. The project includes a Specific Plan Amendment to change the existing Reche Canyon Specific Plan (RCSP) Land Use from "Estate Density Land Use" to "Commercial Land Use" and to add "automobile fueling" as a conditional use.

NOTE: Clearinghouse will assign identification numbers for all new projects. If an SCH number already exists for a project (e.g., Notice of Preparation or previous draft document) please fill in.

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
X	California Highway Patrol		Parks & Recreation
X	Caltrans District # 8 (Riv & SB Counties)		Pesticide Regulation, Department of
	Caltrans Division of Aeronautics		Public Utilities Commission
	Caltrans Planning (Headquarters)		Reclamation Board
	Coachella Valley Mountains Conservancy	X	Regional WQCB #8 (Santa Ana)
	Coastal Commission		Resources Agency
	Colorado River Board		S.F. Bay Conservation & Development Commission
X	Conservation, Department of		San Gabriel & Lower Los Angeles River & Mountains 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
S	Fish & Game Region # 6 (Inland Desert)		SWRCB: Water Quality
	Food & Agriculture, Department of		SWRCB: Water Rights
X	Forestry & Fire Protection		Tahoe Regional Planning Agency
	General Services, Department of	X	Toxic Substances Control, Department of
	Health Services, Department of	X	Water Resources, Department of
	Housing & Community Development		
X	Integrated Waste Management Board	S	Other: U.S. Army Corps of Engineers
X	Native American Heritage Commission	S	Other: South Coast Air Quality Management District
	Office of Emergency Services		

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

Starting Date: March 21, 2019 Ending Date: April 19, 2019

Lead Agency (Complete if Applicable)

Consulting Firm:	LSA Associates, Inc.	Applicant:	Transtech
Address:	1500 Iowa Avenue, Suite 200	Address:	413 MacKay Dive
City/State/ZIP:	Riverside, CA 92507	City/State/ZIP:	San Bernardino, CA 92408
Contact:	Cari Winter	Phone:	(909) 384-7464
Phone:	(951) 781-9310		

Signature of Lead Agency Representative: Carl Winter for City of Colton **Date:** March 20, 2019

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

Black (Unbold): Internal City Distribution
Bold: Certified Mail
* Overnight Delivery
** Green: Hand-carry

City of Colton
Traffic Safety Commission

City of Colton
Fire Department

City of Colton
Police Department

City of Colton
Economic Development Agency

City of Colton
Code Compliant Division

City of Colton
Utilities Department
Water/Wastewater Division
Electric Division

City of Colton
Engineering Department

City of Riverside
Planning Department
3900 Main Street
Riverside, CA 92522

San Bernardino County
Planning Department
385 N. Arrowhead Ave., 3rd Floor
San Bernardino, CA 92415-0182

Pacific Bell
Attn: Scanner
1742 E. Edinger, Room 2200
Tustin, CA 92680

City of Grand Terrace
Planning Department
22795 Barton Road
Grand Terrace, CA 92324

Southern California Edison
Real Estate Operations
14803 Chestnut Street
Westminister, CA 92683

Southern California Gas Company
P.O. Box 3003
Redlands, CA 92373-0306

United States Army Corps of Engineers
300 N. Los Angeles St., Room 6655
Los Angeles, CA 90012

Pacific Telephone
Right of Way Office
3939 E. Coronado, 1st Floor
Anaheim, CA 92807

City of San Bernardino
Planning Department
300 N. "D" Street
San Bernardino, CA 92418

Southern California Edison Co.
Land Rights Section, Room 515
P.O. Box 410
Long Beach, CA 90801

Riverside County
Planning Department
P.O. Box 1409
Riverside, CA 92502-1409

San Bernardino County Flood Control
Environmental Management Division Rm. 129
825 East Third Street
San Bernardino, CA 92415

Riverside/Highland Water Co.
12374 Michigan Street
Grand Terrace, CA 92313

Calif. Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348

San Bernardino Valley
Municipal Water District
380 E. Vanderbilt Way
San Bernardino, CA 92408

LAFCO
175 West Fifth Street, 2nd Floor
San Bernardino, CA 92415-0490

Colton Unified School District
1212 Valencia Drive
Colton, CA 92324

South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765

S.C.A.G.
818 West 7th Street, 12th Floor
Los Angeles, CA 90017

City of Rialto
Planning Department
150 S. Palm
Rialto, CA 92376

United States Army Corps of Engineers
300 N. Los Angeles St., Room 6655
Los Angeles, CA 90012

United States Dept. of the Interior
Fish and Wildlife Service
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

California Department of Fish and Wildlife
Leslie MacNair, Environmental Specialist
3602 Inland Empire Boulevard, Ste. C220
Ontario, CA 91764

Southern California Edison Co.
Land Rights Section, Room 515
P.O. Box 410
Long Beach, CA 90801

City of Loma Linda
Community Development Dept.
25541 Barton Road
Loma Linda, CA 92354

Department of Water Resources
Division of Engineering/Real Estate Branch
ATTN: Linus A. Paulus, Senior Land Agent
1416 9th Street, Room 425
Sacramento, California 95814

Endangered Habitats League
8424-A Santa Monica Blvd., #592
Los Angeles, CA 90069-4267

California Dept. of Transportation
Planning & Local Assistance
464 West 4th Street, 6th Floor, MS722
San Bernardino, CA 92401-1400

* State Clearinghouse (15 copies)
Office of Planning and Research
PO Box 3044
Sacramento, CA 95812-3044

SBCOG
1170 West 3rd Street, 2nd Floor
San Bernardino, CA, 92410

Omnitrans
1700 West Fifth Street
San Bernardino, CA 92411

** San Bernardino County
Clerk of the Board
385 N. Arrowhead Ave., 2nd Floor
San Bernardino, CA 92415-0182

San Bernardino County
Solid Waste Management Department
222 W. Hospitality Lane, 2nd Floor
San Bernardino, CA 92415-0017

San Bernardino County, Fire Dept.
Hazardous Materials Division
620 South "E" Street
San Bernardino, CA 92415-0153

	APN	NAME	ADDRESS	CITY	STATE	ZIP
1	0284-211-70-72	FAHIM S & NAYRA F TANIOS	1518 CASCANTE CT	REDLANDS	CA	92373
1	1178-371-27	ADMAR MANAGEMENT CORP	1678 W ARROW HWY #141	UPLAND	CA	91786
2	0284-211-49	VAZQUEZ JOSE & MARGARITA FAMILY TRUST	3012 SHADID DR	COLTON	CA	92324
3	0284-211-50	HARDING RANDY IRREVOCABLE TRUST 6/1	1776 W ARROW RTE #206	UPLAND	CA	91786
3	0284-211-50	OCCUPANT	3014 SHADID DR	RECHE CANYON	CA	92324
4	0284-211-54	MICHAEL E ROY	3009 SHADID DR	COLTON	CA	92324
5	0284-211-55	PITTS FAMILY TRUST 7/29/13	3011 SHADID DR	COLTON	CA	92324
6	0284-211-56	MICHAEL LUDWIG	3013 SHADID DR	COLTON	CA	92324
7	0284-211-57	JAN M MACK	3015 SHADID	COLTON	CA	92324
8	0284-211-63	RICHARD J KARR	3008 SHADID DR	COLTON	CA	92324
9	0284-211-64	RAMIRO DELGADILLO	3010 SHADID DR	COLTON	CA	92324
10	0284-211-67	SHIRLEY HALL	3007 SHADID DR	COLTON	CA	92324
11	0284-211-68	ART S POLANSKY	28063 ATLANTIC AVE	HIGHLAND	CA	92346
11	0284-211-68	OCCUPANT	3003 SHADID DR	COLTON	CA	92324
12	0284-211-69	MARTIN FERGOSO ZAVALZA	2250 CORDILLERO AVE	COLTON	CA	92324
12	0284-211-69	OCCUPANT	2594 RECHE CANYON RD	COLTON	CA	92324
13	0284-212-19	ROSS E MASSEY	12446 RECHE CANYON RD	COLTON	CA	92324
14	0284-212-22	HAMILTON LEE	P O BOX 5035	SAN BERNARDINO	CA	92408
15	0284-212-23	RECHE LLC	140 S BARRINGTON AVE	LOS ANGELES	CA	90049
15	0284-212-23	OCCUPANT	2751 RECHE CANYON RD	COLTON	CA	92324
16	0284-212-24	ROBERT R MASSEY	9988 HILBERT ST #310	SAN DIEGO	CA	92131
16	0284-212-24	OCCUPANT	12446 RECHE CANYON RD	LOMA LINDA	CA	92324
17	0284-212-43	ROBERT C MOORE	2671 RECHE CANYON RD	COLTON	CA	92324
18	0284-212-44	STOUT MARVEEN FRANCES TRUST 5-16-13	500 COUNTRY CLUB DR	SAN BERNARDINO	CA	92404
18	0284-212-44	OCCUPANT	2651 RECHE CANYON RD	COLTON	CA	92324
19	0284-212-55	JUAN MERIN	PO BOX 387	LOMALINDA	CA	92354
19	0284-212-55	OCCUPANT	12430 RECHE CANYON RD	LOMA LINDA	CA	92324
20	0284-212-69	RECHE LLC	140 S BARRINGTON AVE	LOS ANGELES	CA	90049
20	0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 1	COLTON	CA	92324
20	0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 2	COLTON	CA	92324
20	0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 3	COLTON	CA	92324
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20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 72	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 73	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 74	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 75	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 76	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 77	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 78	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 79	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 80	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 81	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 82	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 82A	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 83	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 84	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 85	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 86	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 87	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 88	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 89	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 90	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 91	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 92	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 93	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 94	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 95	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 96	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 97	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 98	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 99	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 100	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 101	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 102	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 103	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 104	COLTON	CA	92324

20 0284-212-69	OCCUPANT
20 0284-212-69	OCCUPANT
20 0284-212-69	OCCUPANT

20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 139	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 140	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 141	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 142	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 143	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 144	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 145	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 146	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 147	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 148	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 149	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 150	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 151	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 152	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 153	COLTON	CA 92324
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20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 169	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 170	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 171	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 172	COLTON	CA 92324

20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 173	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 174	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 175	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 176	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 177	COLTON	CA 92324
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20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 191	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 191A	COLTON	CA 92324
20 0284-212-69	OCCUPANT	2751	RECHE CANYON RD# 192	COLTON	CA 92324
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20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 208	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 209A	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 209B	COLTON	CA	92324
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20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 215	COLTON	CA	92324
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20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 217	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 218	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 219	COLTON	CA	92324
20 0284-212-69	OCCUPANT	2751 RECHE CANYON RD# 220	COLTON	CA	92324
21 0284-212-70	RECHE LLC	140 S BARRINGTON AVE	LOS ANGELES	CA	90049
21 0284-212-70	OCCUPANT	2751 RECHE CANYON RD	COLTON	CA	92324
22 0284-212-75	SAN BERNARDINO CO FLOOD CONTROL DIST	825 E THIRD ST	SAN BERNARDINO	CA	92415
23 0284-212-85	MASSEY ROSS E REVOCABLE TRUST 4/06	12424 RECHE CANYON RD	COLTON	CA	92324
24 0284-212-86	ROBERT L MASSEY	12424 RECHE CANYON RD	COLTON	CA	92324
25 0284-611-07	RANDALE R SKATES	3017 E MICHELLE DR	COLTON	CA	92324
26 0284-611-08	SEELEY-HOBBS TRUST 9/21/93	2999 E OCEAN BLVD #1620	LONG BEACH	CA	90803
26 0284-611-08	OCCUPANT	3011 MICHELLE DR	COLTON	CA	92324
27 0284-611-09	MANUEL ACOSTA	3005 E MICHELLE DR	COLTON	CA	92324
28 0284-611-10	WILLIAM H BRAY	3016 MICHELLE DR	COLTON	CA	92324
29 0284-611-12	RANDY MICHAEL	3012 MICHELLE DR	COLTON	CA	92324
30 0284-611-13	KEITH BROWER	3014 MICHELLE DR	COLTON	CA	92324
31 0284-631-01	DAVID DE LA CRUZ	823 SHASTA DR	COLTON	CA	92324
31 0284-631-01	OCCUPANT	3016 SHADID DR	COLTON	CA	92324
32 0284-631-02	KEVIN A VIERA	3018 SHADID DR	COLTON	CA	92324
33 0284-631-03	MARCOS J DRAGONETTI	3020 SHADID DR	COLTON	CA	92324
34 0284-631-10	THEODORE B HOUSLEY	2509 MC CARTY DR	COLTON	CA	92324
35 0284-631-11	VIJAY H PATEL	22715 RAVEN WAY	GRAND TERRACE	CA	92313

35	0284-631-11	OCCUPANT	2503 MC CARTY CT	COLTON	CA	92324
36	0284-631-12	SCOTT J PARK	2501 S MC CARTY DR	COLTON	CA	92324
37	0284-631-13	THOMAS W CHRISTOPHERSON	1410 CLOVER HILL RD	MANSFIELD	TX	76063
37	0284-631-13	OCCUPANT	2505 S MC CARTY DR	COLTON	CA	92324
38	0284-631-14	KANAK D PATEL	2507 S MC CARTY DR	COLTON	CA	92324
39	0284-671-01	YOUNG SHIN SON	2320 CRYSTAL RIDGE LN	COLTON	CA	92324
40	0284-671-02	AMARAILDA A CHRISTENSEN	2340 CRYSTAL RIDGE LN	COLTON	CA	92324
41	0284-671-47	CITY OF COLTON	655 N LA CADENA DR	COLTON	CA	92324
42	0284-671-48	ADMAR MANAGEMENT CORP	1678 W ARROW HWY #141	UPLAND	CA	91786
43	0284-671-49	CITY OF COLTON	655 N LA CADENA DR	COLTON	CA	92324
44	1178-341-01	ANAND VANGARI	13638 FELSON ST	CERRITOS	CA	90703
45	1178-341-02	FRANCISCO M VARGAS	2296 RECHE CYN RD	RECHE CANYON	CA	92324
46	1178-341-03	ANITA SEIVELEY	11 BARUNA CT	NEWPORT BEACH	CA	92663
47	1178-361-24	JOHN M DELGADO	2598 GUNNISON WAY	COLTON	CA	92324
48	1178-361-25	PETER C PHAM	2596 GUNNISON WAY	COLTON	CA	92324
49	1178-361-26	GLENN MARTIN	2594 GUNNISON WAY	COLTON	CA	92324
50	1178-361-27	MANCHA MARLENE LIVING TRUIST 5-16-0	2592 GUNNISON WAY	COLTON	CA	92324
51	1178-361-28	BERENICE A HERNANDEZ	2590 GUNNISON WAY	GRAND TERRACE	CA	92324
52	1178-371-03	KAREN MOORSHEAD	PO BOX 1576	REDLANDS	CA	92373
52	1178-371-03	OCCUPANT	2299 RECHE CANYON RD	COLTON	CA	92324
53	1178-371-05	DAVID F DE JAGER	23892 FERN ST	COLTON	CA	92324
54	1178-371-06	HARAN E MC CUTCHEN	23868 FERN ST	COLTON	CA	92324
55	1178-371-08	LA VECINA TRUST 10/10/15	17258 MARYGOLD AVE	FONTANA	CA	92335
55	1178-371-08	OCCUPANT	23912 FERN ST	RECHE CANYON	CA	92324
56	1178-371-09	LA VECINA TRUST 10/10/15	17258 MARYGOLD AVE	FONTANA	CA	92335
57	1178-371-12	ALBERT DEL REAL JR	12376 RECHE CANYON RD	COLTON	CA	92324
58	1178-371-13	BRIAN J LANGFORD	12400 RECHE CANYON RD	COLTON	CA	92324
59	1178-371-14	RICHARD M BANASIAK	12480 RECHE CANYON RD	COLTON	CA	92324
60	1178-371-15	KNAPP FAMILY TRUST 9/16/14	1678 JULIA WAY	RIVERSIDE	CA	92501
61	1178-371-16	ALBERT DEL REAL JR	12376 RECHE CANYON RD	COLTON	CA	92324
62	1178-371-17	SAN BERNARDINO CO FLOOD CONTROL DIST	825 E THIRD ST	SAN BERNARDINO	CA	92415
63	1178-371-21	THOMAS EICKMANN	7068 QUIET RETREAT CT	NIWOT	CO	80503
64	1178-371-22	DE LA CRUZ REV LIV TR 05/14/97	12085 HEACOCK ST	MORENO VALLEY	CA	92557
64	1178-371-22	OCCUPANT	12487 RECHE CANYON RD	RECHE CANYON	CA	92324

65	1178-371-23	MAJELLA S VAN AKEN	12490 RECHE CANYON RD	COLTON	CA	92324
66	1178-371-24	CUTCHEN H EARL MC	23868 FERN ST	COLTON CA	CA	92324
67	1178-371-25	CITY OF COLTON	655 N LA CADENA DR	COLTON	CA	92324
68	1178-371-26	CITY OF COLTON	655 N LA CADENA DR	COLTON	CA	92324
69	1178-371-28	ADMAR MANAGEMENT CORP	1678 W ARROW HWY #141	UPLAND	CA	91786
70	1178-371-29	ADMAR MANAGEMENT CORP	1678 W ARROW HWY #141	UPLAND	CA	91786
71	1178-371-30	REYMUNDO DELGADO	8098 RECHE CANYON RD	COLTON	CA	92324
71	1178-371-30	OCCUPANT	23946 FERN ST	RECHE CANYON	CA	92324
72	1178-371-31	BOBBY RISTE	12280 RECHE CANYON RD	COLTON	CA	92324
73	1178-381-02	HIRSCHBERG KLAUS F TR	23296 WESTWOOD ST	GRAND TERRACE	CA	92313
74	1178-381-03	DE LA CRUZ REV LIVING TRUST 5-14-97	12085 HEACOCK ST	MORENO VALLEY	CA	92557
75	1178-381-04	SAN BERNARDINO CO FLOOD CONTROL DIST	825 E THIRD ST	SAN BERNARDINO	CA	92415
76	1178-381-05	SAN BERNARDINO CO FLOOD CONTROL DIST	825 E THIRD ST	SAN BERNARDINO	CA	92415
77	1178-381-06	EMERSHY FAMILY TRUST 8/11/89	3719 E PIEDMONT	HIGHLAND	CA	92346
78	1178-381-08	REDFIELD JAMES W TR	23886 PRADO LN	COLTON	CA	92324
79	1178-381-13	MATTESON TRUST 7/30/86	PO BOX 1411	COLTON	CA	92324
79	1178-381-13	OCCUPANT	12660 DARK CANYON RD	COLTON	CA	92324
80	1178-381-17	CATHERINE A JACOBS	12422 RECHE CANYON RD	COLTON	CA	92324

600-100'

	APN	NAME	ADDRESS	CITY	STATE	ZIP
81	0284-211-10	HERZIG FAMILY TRUST 6-20-89	1246 LAGO VISTA DR	BEVERLY HILLS	CA	90210
82	0284-211-58	MICHAEL F MOYERS	3017 SHADID DR	COLTON	CA	92324
83	0284-211-59	ROBERT W SANCHEZ	3019 SHADID DR	COLTON	CA	92324
84	0284-211-60	SHADID ROSEMARY A TR	3021 SHADID DR	COLTON	CA	92324
85	0284-212-84	ANNA J SITES	230 BROWNING ST	UPLAND	CA	91784
86	0284-611-01	ELIZABETH C POWELL	3016 SHANE DR	COLTON	CA	92324
87	0284-611-02	THOMAS MCGINNIS	3024 PARVIN DR	COLTON	CA	92324
88	0284-611-06	RUBEN G MARTINEZ	2393 DEL ROSA AVE #3	SAN BERNARDINO	CA	92404
89	0284-611-11	RAY TONGPO	26330 LONG ST	LOMA LINDA	CA	92354
90	0284-611-14	JAMES E BAUMANN	3017 SHANE DR	COLTON	CA	92324
91	0284-611-15	ROLAND ST LOUIS	2651 RECHE CANYON DR #5014	COLTON	CA	92324
91	0284-611-15	RESIDENT	3026 MICHELLE DR	COLTON	CA	92324
92	0284-631-04	ESKANDER ADEL & TAHANI REV TR 10/2	19210 CHESTRIDGE CIR	WALNUT	CA	91789
92	0284-631-04	RESIDENT	3022 SHADID DR	COLTON	CA	92324
93	0284-631-05	GUTIERREZ PRICILLA T FAMILY LIV TR	PO BOX 44	COLTON	CA	92324
93	0284-631-05	RESIDENT	3024 SHADID DR	COLTON	CA	92324
94	0284-631-06	MICHAEL J DIMMITT	276 VAN BUREN ST	COLTON	CA	92322
94	0284-631-06	RESIDENT	3026 SHADID DR	COLTON	CA	92324
95	0284-631-07	STEVEN P BRUHL	2504 MCCARTY DR	COLTON	CA	92324
96	0284-631-08	ROBERT LYMAN GOODRICH	2506 S MCARTY DR	COLTON	CA	92324
97	0284-631-09	G & C SWAN INC	333 E ARROW HWY #220	UPLAND	CA	91785
97	0284-631-09	RESIDENT	2511 S MCCARTY DR	COLTON	CA	92324
98	0284-671-03	CAMPBELL REVOCABLE LIVING TRUST 12/1	3000 CRYSTAL RIDGE LN	COLTON	CA	92324
99	0284-671-04	LILIA N LOREDO	25711 EMMERSON ST	COLTON	CA	92324
99	0284-671-04	RESIDENT	3010 CRYSTAL RIDGE LN	COLTON	CA	92324
100	0284-671-05	TERRY L DAVIS	3016 CRYSTAL RIDGE LN	COLTON	CA	92324
101	0284-671-26	ALFRED K QUANSAH	3079 CRYSTAL RIDGE LN	COLTON	CA	92324
101	0284-671-26	RESIDENT	2299 TIFFANY LN	COLTON	CA	92324
102	0284-671-46	CITY OF COLTON	655 N LA CADENA DR	COLTON	CA	92324
103	0284-671-50	CITY OF COLTON	655 N LA CADENA DR	COLTON	CA	92324
104	1178-341-04	ANITA SEIVELEY	11 BARUNA CT	NEWPORT BEACH	CA	92663
105	1178-341-05	ANITA SEIVELEY	11 BARUNA CT	NEWPORT BEACH	CA	92663
106	1178-361-02	MICAH A GEORGE	2590 BRYCE CT	COLTON	CA	92324

107	1178-361-03	DAVID R AGUIRRE	2588 BRYCE CT	COLTON	CA	92324
108	1178-361-04	GAUSE WILLIAM LIVING TRUST 3/29//16	2586 BRYCE CT	COLTON	CA	92324
109	1178-361-05	MICHAEL J JORDAN	2584 BRYCE CT	COLTON	CA	92324
110	1178-361-18	LAURA MARIE HENDERSON	2581 GUNNISON WAY	COLTON	CA	92324
111	1178-361-19	SAMIA D SAAD	2583 GUNNISON WAY	COLTON	CA	92324
112	1178-361-20	DINAH-MARI P CLOSAS	2585 GUNNISON WAY	COLTON	CA	92324
113	1178-361-21	MARIO A HERRERA	2587 GUNNISON WAY	COLTON	CA	92324
114	1178-361-22	EARL J BONNER	2589 GUNNISON WAY	COLTON	CA	92324
115	1178-361-23	SILVIA L AVILA	2591 GUNNISON WAY	COLTON	CA	92324
116	1178-361-29	MOOR FAMILY TRUST 06/24/05	26094 BRENTWOOD AVE	LOMA LINDA	CA	92354
116	1178-361-29	RESIDENT	2588 GUNNISON WAY	COLTON	CA	92324
117	1178-361-30	STEPHANIE JO MC FARLAND	687 JACKSON ST	RIALTO	CA	92376
117	1178-361-30	RESIDENT	2586 GUNNISON WAY	COLTON	CA	92324
118	1178-361-31	JOHN SUMILAT	2584 GUNNISON WAY	COLTON	CA	92324
119	1178-361-32	SCHANKER CHIHO S TR	2582 GUNNISON WAY	COLTON	CA	92324
120	1178-361-33	ELIZABETH CEBALLOS	2580 GUNNISON WAY	COLTON	CA	92324
121	1178-361-34	BRATLEY BENNETT & KIMBRA FAM TR 8/1	1650 FRANKLIN DR	KINGMAN	AZ	86401
121	1178-361-34	RESIDENT	2578 GUNNISON WAY	COLTON	CA	92324
122	1178-371-02	SAN BERNARDINO CO FLOOD CONTROL DIST	825 E THIRD ST	SAN BERNARDINO	CA	92415
123	1178-371-19	KENNY ANN L LIVING TRUST 4/6/11	23 ESTRELLA ST	RANCHO MIRAGE	CA	92270
124	1178-371-20	STANTON S APPLETON	23831 FERN LN	COLTON	CA	92324
125	1178-381-14	ANNA J SITES	230 BROWNING ST	UPLAND	CA	91784
126	1178-381-15	MASSEY ROSS E REVOCABLE TRUST 4/06	12424 RECHE CANYON RD	COLTON	CA	92324

Summary

SCH Number
2019039115
Lead Agency
Colton, City of *(City of Colton)*
Document Title
Reche Canyon Plaza
Document Type
NOP - Notice of Preperation
Received
3/21/2019

Document Description
The project proposes the development of approx. 18,770 square feet of commercial uses including: 3,574 square foot (sf) fueling station with 6 fueling dispensers, a 3,000 sf convenience store 9,800 sf of neighborhood commercial retail space, and a 1,750 sf drive through car wash. The project includes a Specific Plan Amendment to change the existing Reche Canyon Specific Plan (RCSP) Land Use from "Estate Density Land Use: to "Commercial Land use" and to add "automobile fueling" as a conditional use.

Contact Information
Steve Weiss
City of Colton
659 N. La Cadena Dr.,
Colton, CA 92324
909-370-5523

Location

Coordinates
34°1'35.23"N 117°16'44.54"W
Cities

Colton

Counties

San Bernardino

Cross Streets

Reche Canyon Rd./ Shadid Dr.

Zip

92324

Total Acres

2.9

Parcel #

0284-211-70 et al.,

Schools

Reche Canyon ES, Cooley ES

Waterways

Reche Canyon Channel

Township

2S

Range

4W

Section

3

Base

SBBM

Notice of Completion

Review Period Start

3/21/2019

Review Period End

4/22/2019

Development Type

Commercial (18,770 Sq. Ft., 2.9 Acres)

Local Action

Other Action **Use Permit** **SPA**

Reviewing Agencies

Cal Fire **California Department of Parks and Recreation** **Caltrans, District 8** **Department of Conservation** **Department of Fish and Wildlife, Region 6** **Department of Toxic Substances Control** **Native American Heritage Commission** **Office of Historic Preservation** **Regional Water Quality Control Board, Region 8** **Resources Agency** **State Lands Commission** **State Water Resources Control Board, Division of Drinking Water**

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SAN BERNARDINO COUNTY FIRE PROTECTION DISTRICT

620 South "E" Street ● San Bernardino, CA 92415-0153 ● (909) 386-8401 ● Fax (909) 386-8460

Office of the Fire Marshal
Hazardous Materials Division
sbcfire.org

Don Trapp
Interim Fire Chief/Fire Warden

Michael A. Horton
Fire Marshal

DATE: April 1, 2019 **PHONE:** 909.386.8401

FROM: **Andrew Bezdek**
Hazardous Materials Specialist

TO: **Steve Weiss, AICP Planning Manager**
Community Development Department
695 N. La Cadena Drive
Colton, CA 92324

SUBJECT: **Reche Canyon Plaza, APNs 0284-211-70,71,72, Transtech Engineering**

San Bernardino County Fire District, Office of the Fire Marshal, Hazardous Materials Division has the following conditions for this project:

1. Prior to occupancy, the business operator shall be required to apply for one or more of the following permits, or apply for an exemption from hazardous material permitting requirements: Hazardous Material Permit, Hazardous Waste Permit, Aboveground Storage Tank Permit or an Underground Storage Tank Permit. Application for one or more of these permits shall occur by submitting a hazardous materials business plan using the California Environmental Reporting System (CERS) http://cers.calepa.ca.gov/

2. Underground storage tank (UST) systems storing hazardous substances in the County of San Bernardino shall conform to standards issued by the San Bernardino County Fire Protection District. Written approval shall be obtained from this Department prior to the installation of any new UST system(s) and/or modifications to existing UST systems. Prior to installation, plans for underground storage tank systems shall be reviewed and approved by Office of the Fire Marshal, Hazardous Materials Division. For additional information please contact (909) 386-8401.

Additional information can be found at http://www.sbcfire.org/ofm/Hazmat/PoliciesProcedures.aspx or you may contact The Office of the Fire Marshal, Hazardous Materials Division at (909) 386-8401.

BOARD OF DIRECTORS

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825 East Third Street, San Bernardino, CA 92415-0835 | Phone: 909.387.8109 Fax: 909.387.7876
www.SBCounty.gov

SAN BERNARDINO COUNTY

Department of Public Works

- Flood Control
- Operations
- Solid Waste Management
- Surveyor
- Transportation

Kevin Blakeslee, P.E.
Director

Transmitted Via Email

April 15, 2019

City of Colton
Attn: Steve Weiss, Planning Manager
659 N. La Cadena Drive
Colton, CA. 92324

File: 10(ENV)-4.01

RE: CEQA – NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR RECHE CANYON PLAZA PROJECT FOR THE CITY OF COLTON

Mr. Weiss:

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on March 25, 2019** and pursuant to our review, the following comments are provided:

GENERAL COMMENTS

The project will disturb more than one acre of land and is within the Santa Ana River Watershed. The applicant will be required to obtain a WDID number in accordance with the General Construction Permit from the state, identifying how they will retain all runoff onsite during construction as well as insure that a Water Quality Management Plan is prepared and implemented per NPDES permit R8-2010-0036 to retain stormwater runoff from the project. For more information, please contact Jonathan Dillon at 909-387-8119.

Permits/Operations Support Division (Melissa Walker, Chief, 909-387-7995):

Any proposed work within or access to San Bernardino County Flood Control District (Reche Channel) right-of-way will require a Flood Control encroachment permit. Its necessity and any impacts associated with the construction should be addressed in the DEIR prior to certification.

We respectfully request to be included on the circulation list for all project notices, public reviews, or public hearings. In closing, I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

MICHAEL R. PERRY
Supervising Planner
Environmental Management

MRP:PE:sr
Email: Sweiss@coltonca.gov

BOARD OF SUPERVISORS
Robert A. Lovingood, First District | Janice Rutherford, Second District | Dawn Rowe, Third District | Curt Hagman, Chairman, Fourth District | Josie Gonzales, Vice Chair, Fifth District
Gary McBride, Chief Executive Officer

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA USPS AND E-MAIL: April 16, 2019

sweiss@coltonca.gov
Steve Weiss, AICP Planning Manager
City of Colton, Community Development Department
Planning Division
659 N. La Cadena Drive
Colton, CA 92324

Notice of Preparation of an Environmental Impact Report for the Proposed Reche Canyon Plaza[1]

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. South Coast AQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the Proposed Project that should be included in the Environmental Impact Report (EIR). Please send South Coast AQMD a copy of the EIR upon its completion. Note that copies of the EIR that are submitted to the State Clearinghouse are not forwarded to South Coast AQMD. Please forward a copy of the EIR directly to South Coast AQMD at the address shown in the letterhead. **In addition, please send with the EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files[2]. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, South Coast AQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

South Coast AQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. South Coast AQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from South Coast AQMD's Subscription Services Department by calling (909) 396-3720. More guidance developed since this Handbook is also available on South Coast AQMD's website at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). South Coast AQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

South Coast AQMD has also developed both regional and localized significance thresholds. South Coast AQMD staff requests that the Lead Agency quantify criteria pollutant emissions and compare the results to South Coast AQMD's CEQA regional pollutant emissions significance thresholds to determine air quality

[1] The Proposed Project consists of construction of 36,894 square feet of commercial and retail uses and a gasoline service station with six fueling pumps on 2.9 acres.

[2] Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.

impacts. South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found here at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, South Coast AQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the Proposed Project, it is recommended that the Lead Agency perform a localized analysis by either using the LSTs developed by South Coast AQMD staff or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.

In the event that the Proposed Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, which can be found at: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Guidance[3] on strategies to reduce air pollution exposure near high-volume roadways can be found at: https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF.

Mitigation Measures

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize these impacts. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project, including:

- Chapter 11 "Mitigating the Impact of a Project" of South Coast AQMD'S *CEQA Air Quality Handbook*
  South Coast AQMD's CEQA web pages available here:

[3] In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's Air Quality and Land Use Handbook: A Community Health Perspective. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: https://www.arb.ca.gov/ch/landuse.htm.

http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies

- South Coast AQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- South Coast AQMD's Mitigation Monitoring and Reporting Plan (MMRP) for the 2016 Air Quality Management Plan (2016 AQMP) available here (starting on page 86): http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Alternatives

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires the consideration and discussion of alternatives to the project or its location which are capable of avoiding or substantially lessening any of the significant effects of the project. The discussion of a reasonable range of potentially feasible alternatives, including a "no project" alternative, is intended to foster informed decision-making and public participation. Pursuant to CEQA Guidelines Section 15126.6(d), the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project.

Permits and South Coast AQMD Rules

The Propose Project would include, among other things, a gasoline service station with six pumps. A permit from South Coast AQMD would be required. South Coast AQMD should be identified as a Responsible Agency for the Proposed Project in the CEQA document. The assumptions in the air quality analysis in the CEQA document will be the basis for permit conditions and limits. The 2015 revised Office of Environmental Health Hazard Assessment (OEHHA) methodology is being used by South Coast AQMD for determining operational health impacts for permitting applications and also for all CEQA projects where South Coast AQMD is the Lead Agency. For general information on permits, please visit the South Coast AQMD webpage at: http://www.aqmd.gov/home/permits. Permitting questions can be directed to South Coast AQMD Engineering and Permitting staff at (909) 396-3385.

Data Sources

South Coast AQMD rules and relevant air quality reports and data are available by calling South Coast AQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available at South Coast AQMD's webpage at: http://www.aqmd.gov.

South Coast AQMD staff is available to work with the Lead Agency to ensure that project air quality and health risk impacts are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov or (909) 396-3308.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
SBC190402-07
Control Number

APPENDIX A-2

PUBLIC SCOPING MEETING MATERIALS AND COMMENTS

City of Colton
Reche Canyon Plaza Project
Environmental Impact Report

Public Scoping Meeting
April 3, 2019

Introductions

- Lead Agency: City of Colton
  - Steve Weiss, AICP, Planning Manager
    City of Colton, Development Services Department
  - Mark Tomich, AICP, Director
    City of Colton, Development Services Department
- Applicant
  - Fahim Tanios Family Trust
  - David Mlynarski, Principal, Transtech
- Environmental Consultant
  - Carl Winter, LSA, CEQA Project Manager

Purpose of Meeting

- Present Project Information
- Explain Environmental Review Process
- Discuss Scope and Content of the EIR
- Define the Public Input Process
- No Decision on Project Tonight

Scoping Meeting Comments

- The purpose of the scoping meeting is to discuss the scope and content of the EIR. The project merits and the City's decision on project approval/denial will be considered at later meetings.

- All speakers are asked to sign in so that the City can keep a record of attendance for future project notification(s).

- Speakers are encouraged to also submit their comments in writing

- As appropriate, information will be addressed and/or incorporated into the Draft EIR

Reche Canyon Plaza Project

LSA

FIGURE 2

0 80 160
FEET

SOURCE: Google Earth, Transtech

Q:\CLT1703\Reports\EIR\fig2_Site Plan.cdr (3/19/2019)

Reche Canyon Plaza
Site Plan

Project Description

The project proposes the development of approximately 18,770 square feet of commercial uses including:

- 3,574 square foot (sf) fueling station with 6 fueling stations
- 3,000 sf convenience store
- 9,800 sf of neighborhood commercial retail space
- 1,750 sf drive through car wash.

The project includes a Specific Plan Amendment to change the existing Reche Canyon Specific Plan (RCSP) Land Use from “Estate Density Land Use” to “Commercial Land Use” and to add “automobile fueling” as a conditional use.

Requested Approvals

- Specific Plan Amendment (SPA)
- Zone Change (ZC)
- Conditional Use Permit (CUP)
- Architectural Site Plan Review
- Parcel Map

California Environmental Quality Act (CEQA)

- Provide objective information to the public and decision-makers on the potential environmental effects of the project
- Identify project impacts, appropriate mitigation, and feasible alternatives to reduce potentially significant impacts
- Provide transparency during the City's decision-making process

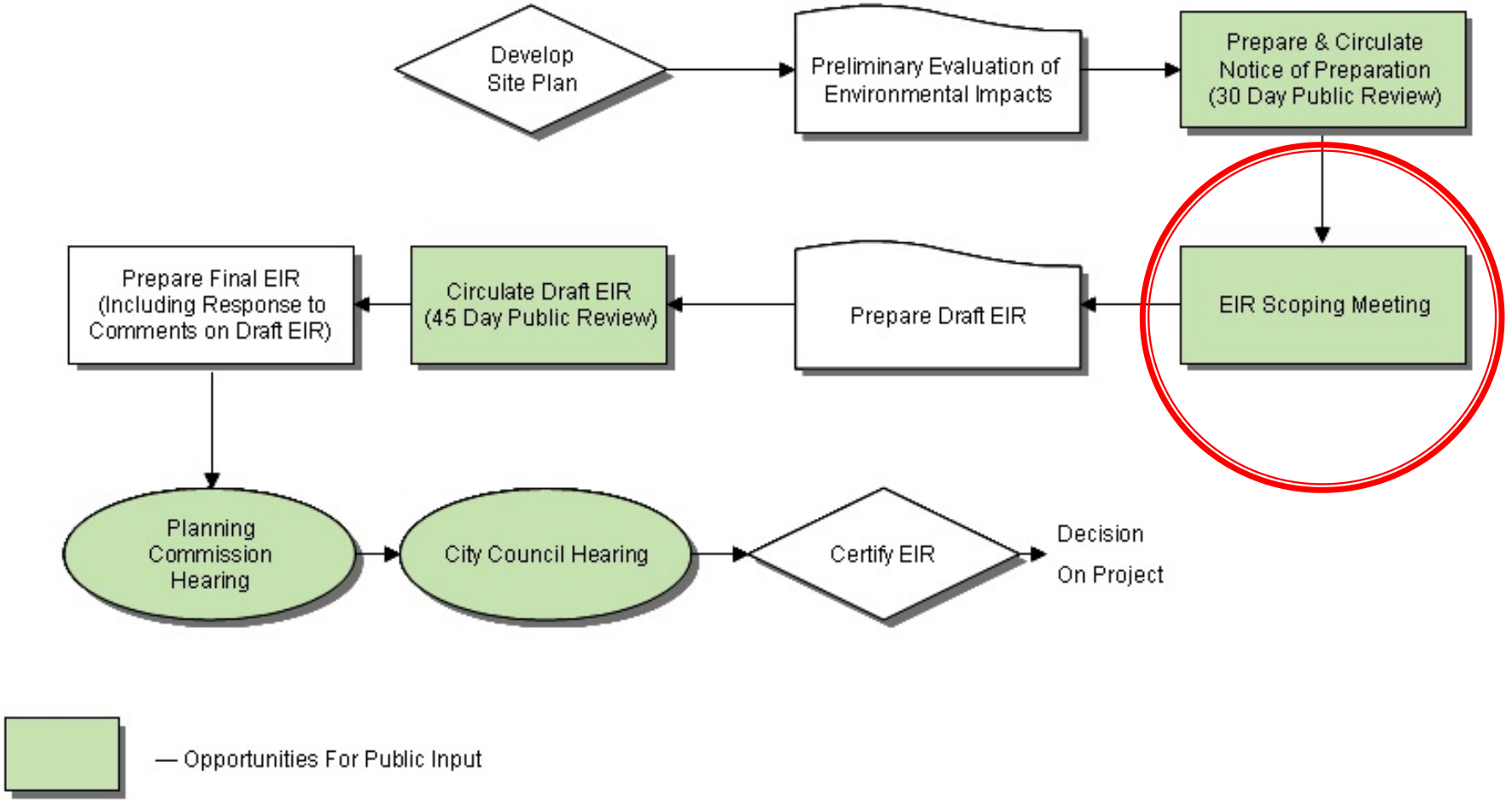
Draft Environmental Impact Report

- No Initial Study has been prepared, therefore the Draft EIR will evaluate the issues identified in the 2019 CEQA Guidelines (Appendix G).

- Based on established thresholds, the following conclusions may be identified for each issue:
  - No Impact
  - Less than Significant Impact
  - Less than Significant Impact with Mitigation
  - Significant Impact

- The Draft EIR will incorporate relevant comments received during public review of the NOP and this Public Scoping Meeting

CEQA Process



Environmental Impact Report Process

- Prepare Project Description
- 30-day Notice of Preparation (NOP)
- **Public Scoping Meeting**
- Prepare Technical Studies and Draft EIR
- 45-day Draft EIR Public Review
- Prepare Final EIR (Response to Comments, findings, etc.)
- Public Hearings/Action on Project

Environmental Issues Addressed in the Draft EIR

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

Also addressed:

- Cumulative Impacts
- Project Alternatives

Supporting Technical Studies

- Supporting Technical Analyses Prepared (or to be) Prepared Include:

  - Geotechnical Investigation
  - Traffic Impact Analysis
  - Cultural Resources Records Search
  - Biological Resources Assessment
  - Air Quality/Greenhouse Gas Emissions (GHG) Analysis
  - Noise and Vibration Analysis
  - Hydraulics/Drainage Study
  - Water Quality Management Plan
  - Phase I Environmental Site Assessment (Hazardous Materials)

Next Steps

- Prepare the Draft EIR. Comments raised during the comment period and public scoping will be identified, possibly incorporated and appropriately addressed in the Draft EIR
- The Draft EIR analysis will be supported project-specific technical studies and modeling data.
- Project impacts will be measured against established local and/or regional thresholds.
- As warranted, mitigation will be identified to reduce the level of significant of project impacts.
- The City will exercise independent review of project-specific technical studies and the Draft EIR prior to public review.

Next Steps (cont'd)

- Distribute Draft EIR for Public Review and Comment (45 days)
- After closure of the review period, the City will respond to all concerns raised during the Public Review period.
- Responses to all comments received in the Draft EIR will be made available at least 10 days prior to the first public hearing
- The Final EIR will then be submitted to the Planning Commission for recommendation and City Council for consideration and certification.

Public Comments

Reche Canyon Plaza Project Environmental Impact Report

Contact Information

Mr. Steve Weiss, AICP, Planning Manager
Community Development Department
659 N. La Cadena Drive
Colton, CA 92324
(909) 370-5523
sweiss@coltonca.gov

City of Colton
Reche Canyon Plaza Project
Environmental Impact Report

Public Scoping Meeting
April 3, 2019

Thank you for attending!

Sign In Sheet

Reche Canyon Community Meeting #2 - April 3, 2019

	Name	Address	Phone #	Email
1	Anthony & Bonnie Duenez	2120 Hill Ct.	909-915-4547	cathouse03@roadrunner.com
2	GARY + GERALDINE FARRIS	Reche Canyon Rd, Colton	909-677-6290	gfarris2@msn.com
3	Charlie Debra Weeks	8850 Reche Can Rd	909 800 4704	cweeks1@farmersAgent.com
4	Dottie Cordua	26520 Kelssel Reche can.	909-835-3977	coyotespirit2003@yahoo.com
5	Jack Woods		909	Jwoods@coltonca.gov
6	Michael Jackson	3032 Canyon Vista	9097090341	
7	Brandon Tolo	11548 Reche Canyon	951-660-6443	Hockey27bt@Aol.com
8	Lavry Rivas	2505 S. McCarty PR	961 515-3858	Sapopccacl.com
9	Ed Marjory Montgomery	2000 S Glenwood Colton	909 824-9173	
10	CHARLES DeVera	26520 KIESSEL RD	909 835-3154	
11	Elizabeth Skates	3017 Michelle Dr	909 663 7554	colorcodingdots@sbcglobal.net
12	Alma Rivas	2505 S. McCarty Dr. Colton	951-733-888	mariaalma77@yahoo.com
13	Cindy Turner	7288 Ashley St Coltonca	909-370-2447	dressage2001@yahoo.com
14	Freddie Ballal	2651 Reche canyon rd	760 963-4691	ballatf@yahoo.com
15	ZIAD DANDOUCH	2651 Reche CANYON RD	9095196928	DANDOUCH25@AOL.com
16	MARWAN DANDOUCH	2651 Reche Canyon RD	9099948212	
17	Samaher Donial	2850 19st AL CA 91737	909 660 1809	—
18	Amira Kassab	2810 Cambria st. colton	909 660 1803	Thedandouch@hotmail.com

19	Sharon Brengh	2130 Cordillera Ave	909-824-5569	dshasta82@gmail.com
20	Bob Goodrich	2506 McCarty	(909) 824-9207	robertlymangoodrich@icloud.com
21	Lee Reynolds	3027 Canyon Vista Drive	951-533-0853	knujon@sbcglobal.net
22	Janet Leung	1707 Ridge View	4220811	capri09jtL@aol.com
23	Jack Veronica Phillips	1705 Tara Rdg. Ct	909-370-0671	19lucky@sbcglobal.net
24	Jack Phillips	1705 Tara Ridge Ct	909/370-0671	
25	Laura ~~Lewis~~	2574 Topanga way	909/272-5555	goldfellow.laura@gmail.com.
26	Kit Miller Randfriberg	23621 Westwood St	9098253193	kitrand@aol.com
27	5 MI STEVEN, CC	2257 ROCHE CLYD RD	909 825-1274	
28	Kathy & Noah Newman	2751 Roche Clyd Rd #3	909 824 7057	bailienewman@yahoo.com
29	Cathy & Ludwig	3013 Shadid	909 2233361	CLudwig.2@Juno.com
30	Lori Davis	1992 Center St.	909 825-3053	
31	Jim REDFIELD	23846 PRADO LANE	909-824-7121	
32	Faye Pribble	1803 Myrtlewood	9098258206	cacowgirl@ymail.com
33	Ken Wallen	" "	"	
34	Anthony Garrett	26520 Keissel	9092600738	antmak1@hotmail.com
35	TERRY & PAT DAVIS	3016 CRYSTAL RIDGE	9094339086	TLDAVIS47@SBCGLOBAL.NET
36	Lorrie BLACKLEY	26520 Keissel Rd	909-213-3134	
37	JOHN STANLEY	12490 Roche Clyd Rd	951-312-9021	
38	MARELLA VAN DIKEN	12490 Roche Clyd Rd	909-514-6433	

39	John Hellis	26520 KEISSEL RD COLTON	714-856-778	
40	Meg Farrell	26520 KEISSEL RD. Colton	714-803-8887	
41	John Riesenman	1707 Tara Ridge Ct. Colton	909-747-7775	
42	Terri S. Riesenman	1707 Tara Ridge Ct. Colt	909 227 3384	
43	Elizabeth Alcaraz	3051 Canyon Vista Dr Colton	909835-7500	
44	Sheila Preciado	3039 Prado Ln Colton	909 422-1457	
45	Matthew Wilson	11545 Reche Canyon Rd Colton.		
46	DIANE DOWLING	7140 WINSHIP WAY Colt	909-824-24	1
47	Jason Egan	7140 winship way	909-824-2411	
48	MUPIH DANDOLOH	2651 Reche canyon Rd	909-660-1807	
49	Francisco J Rentaria	2594 Reche canyon Rd	909 915 57-87	
50	Laura N Mendez	2594 R. Canyon Rd	9091837 4834	
51	PETE TASAKA	7180 Ashley St Colton CA	909 370 4470	
52	DEBBIE TASAKA	7180 Ashley St Colton CA	909 370 4470	
53	DANIELLE TASAKA	7180 Ashley St Colton CA	909 370 4470	
54	Charles Kimball	26520 KEISSEL RD.	909 571 2487	charles_Kimball2007@yahoo
55	EDGUARDO ROMAN	2761 Dark Sky Rd	9098242147	
56	RANDY & SHERRY HAKES	7665 STEWART RD	909-835-0412	
57	Lois Neese	7290 Ashley St Colton	909-783-0195	
58	LARRY Neese	7290 ashley St Colton	900-783-0195	

59	Kimberlee E. Van	2255 Cordillera Ave Colton 92324	9095334247	ZTAStrawberrypie@aol.com
60	Joy Nichols	11995 Reche Cyn Rd.	909 534-5694	joygnichols@gmail.com
61	James Nichols	11995 Reche Canyon Rd Colton 92324	324-289-2204	jnichols@3m@mac.com.
62	FREDDIE VAN AKEN	12490 RECHE CNY RD	436-7951	
63		(ACROSS THE STREET FROM		
64		SAID PROJECT! NO!)		
65	Erik Yeuloyis	2574 Bryce Ct colton ca	(909) 213-7635	erikyeuloyis@gmail.com
66	Bill Gause	2586 Bryce Ct Colton	(909) 213-4094	Billgause@gmail.com
67	Patricia Palacios	2586 Bryce Ct Colton	(909) 213-4094	ppalacios47@gmail.com
68	~~HEATHER TILTON~~	7330 RCR 92324	951-202-7616	heather@ecoskan.com
69	Brian + Lori Langford	12400 S. Reche Cyn Rd		
70	MARK RUSSELL	24240 WOODSOME RD., COLTON		MARK@RUSSELLFENCING.COM
71				
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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: John Rosenman

Address: 1707 Tara Ridge Ct., Colton

Phone #: 909-747-7775

Email: udream@roadrunner.com

Comments/Suggestions:

Main problem is Traffic congestion during 3pm – 6:30 pm. IT has changed a 15 minute commute home from work to 45 minutes due to Moreno Valley commuters bypassing the freeway. The project would increase traffic congestion. IT is already unacceptable.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Kent Linda Black

Address: 1595 Lovelwood Ave Colton

Phone #: 909 254 3728

Email: LindaBlack@KLBONLINE.com

Comments/Suggestions:

What I hear from citizens @ this Mtg:

- Residents don't trust Project / City officials to help them with Traffic Team issues.
- I think Residents are not totally against (all) development, they are tired of Traffic
- City / developers should come back + Communicate with residents on solutions for traffic issues in Canyon.
- Why ~~does~~ is Loma Linda city allowed to pass a measure that does not allow traffic pass through Loma Linda? when ~~most~~ alot of Traffic is generated because of ~~them~~ them.

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

OVER →

- As part of development - can't city require infrastructure upgrades?
- Maybe part of a ~~traffic~~ solution District residents also share burden of infrastructure upgrades.
-

Its all ABOUT TRUST BETWEEN CITY + RESIDENTS!

Thank You for opportunity to voice my concerns.

Linda Black

Ken E Black

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Terri Riesenmay

Address: 1707 Tara Ridge Ct., Colton, Ca

Phone #: 909 227 3384

Email:

Comments/Suggestions:

#1 Traffic

We are sick of 2 mile drive taking 45 to 1 hr. routinely!!!

Are there any other roads proposed to divert off Reche.

#2 Endangered Rose Boa studies

#3) alternative exists if a fire storm occurs.

Fix the traffic issue then people would be more receptive.

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

-Traffic
-Safety

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Cindy Turner

Address: 7289 Ashley St. Colton, Ca 92324

Phone #: 909-370-2447

Email: dressage2001@yahoo.com

Comments/Suggestions:

The Canyon is Not Set up to handle any additional traffic. Currently at 15K Cars a day per Study it is Inconcievable to add more traffic. When School is out for the Summer traffic is tolerable, When School is in session, it is Not. I Live in The Canyon and it feels that City of Colton is Not Listening to us as Residents that we Can Not tolerate more traffic. I am on the Straight away and have just missed a head on Collision many times. Please dont make us Scream that we really Cant have more traffic on this Canyon

Cindy Turner

No more Dead Donkeys - Save our Canyon.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: CHARLES DEVERE

Address: 26520 KIESSEL RD
COLTON, CA. 92324

Phone #: 909-835-3154

Email:

Comments/Suggestions:

(1) Effect that it has on high ground water levels, there is a natural spring present. Possible storage tanks for instances.

(2) Water runoff in rainy area, will it drain to rear of development onto existing residents.

(3) Aesthetic impact to residents behind development, right of dumpsters ect. The rear of these places do not allway look good. Will it degrade property value.

(4) Traffic congestion increase.

(5) Effect on existing business, Hitching Post Motel which is also a gas station allready there. Were they included in these plans. Will it put them out of business. It is an excelent store, visit is some time.

Please mail to address below with Attention to Haylie Alcorn

City of Colton
N. La Cadena
659
Colton, Ca

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Geraldine G. Farris

Address: Reche Canyon Rd, Colton

Phone #: 909. 677- 6290

Email: gfarris2 @ msn.com

Comments/Suggestions:

1. What is the estimate of FATALITIES on Reche Canyon Rd. in the last six years?
2. Who was the zone changed from residential to commercial?
3. What is the estimate TRAFFIC @ this Point and what is the increase
4. Concern is loosing lives of canyon residents. Too many dead neighbors,
5. Did you not HEAR the residence
6. Do you care about living people

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Robert Goodrich

Address: 2506 McCarty, Colton, CA 92324

Phone #: (909) 824-9207

Email: robertlyman goodrich@icloud.com

Comments/Suggestions:

1) The project should be considered a project of statewide significance.
2) The scope of the environmental/Biological review should include winter and nocturnal assessments, including vernal pool riparian habitat.
3) February 2019 I and my son discovered over a dozen Spea hammondi (western spadefoots) in the pond area at the site. I believe the state of California considers that "toad" to be of special significance.
4) also, nearby (<1/10 mile) I have observed Say's Phoebes and Orange-throated whiptail lizards, which are considered to be significant to the state.
5) The area contains riparian habitat – a vernal pool
6) The assessment for species will have to be undertaken wet winter evenings

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Elizabeth Skates

Address: 3017 Michelle Dr

Phone #:

Email: colorcodingdots@sbcglobal.net

Comments/Suggestions:

3 concerns:

(1) traffic: Reche canyon is already extremely impacted by commuter traffic. Night time traffic will be troublesome.

(2) Drainage: infiltration pond currently is not drained well. It is covered with green scum most of the time. It needs have a STORM DRAIN

(3) Noise: This is a CANYON. Noise at night echos up the canyon. A 24 hr business is unacceptable. & Soot, gas, fumes.

I live 3 doors from this and cannot imagine how this will improve our area.

Please mail to address below with Attention to Haylie Alcorn

Over

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: PATRICIA PALACIOS

Address: 2586 Bryce Ct. Colton CA 92324

Phone #: 951-941-5412

Email: ppalacios47@gmail.com

Comments/Suggestions:

Please forward any and all notices about this project to the email above.

Thank you

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Bill Gause

Address: 2586 Bryce Ct

Phone #: 909.213-4094

Email: Billgause@Gmail.com

Comments/Suggestions:

Please forward any and all notices to the above email/Address

Thanks

Please mail to address below with Attention to Haylie Alcorn

Reche Canyon Community Meeting #2
Re: Reche Canyon Plaza Project

To:
Steve Weiss
Planning Manager
City of Colton
sweiss@coltonca.gov

Environmental Impact Report: Concerns of a Reche Canyon Resident

Peter Tasaka
7180 Ashley Street
Colton, CA 92324
pvtasaka@gmail.com

Comments / Suggestions:

Public Meeting: A main concern of the residents of Reche Canyon, I believe we spoke clearly at the meeting on April 3, 2019 at Reche Canyon Elementary School at 6:00pm, deals with the issues of traffic, safety, aesthetics, cultural, and hydrology.

Traffic & Safety:
Comparative data should be reviewed regarding traffic flow over the last few years. One person mentioned 230,000 vehicles travel through the canyon on a daily basis. I don't know how accurate this is (I thought it was more like 15-18k), but a comparative study would reveal the incremental increase of traffic flow through the canyon (just 9-10k just a few years ago). Given this perspective over the next few years this will increase traffic beyond what Reche Canyon Road can handle. Adding an additional light with services may cause a greater hinderance to the already congested traffic flow. During the busy hours a traffic light is usually backed up to consecutive traffic lights. The frenzy this creates with out of canyon drivers is dangerous. There are several times when drivers currently pass on the right or even the left violating traffic laws. I have personally witnessed cars driving in the lane of on coming traffic almost causing a head on collision. Reche Canyon Road also experiences setbacks as traffic is backed up for those to enter from the north at the end of a work day. Anyone who experiences the congestion from Fiesta Village to a right turn on Reche Canyon Road realizes drivers begin to get aggravated and drive recklessly. Drivers cut into the single lane entrance coming from the west or just decide to turn from the #2 lane (middle) and jam up traffic as they enter into the canyon. Patience may be a virtue but unexperienced by drivers who disrespect the 2-lane canyon road. Traffic safety is a major concern! Frantic drivers trying to get a 15 foot advantage by cutting others off is not a safe issue. Their aggravation extends from waiting through 10-15 stops of traffic lights as drivers converge on Reche Canyon Road.
As you know there have been these types of accidents in Reche Canyon including fatalities. This may not be a measurable item, the fanaticism of drivers, but when you take a country road with

individuals who feel privileged and want to unjustly speed or drive dangerously it creates more problems. Perhaps an alternate route should be considered for those who just want to take advantage of Reche Canyon Road like extending Reche Vista to the north to pass by Reche Canyon Road for many drivers seem to go in the San Bernardino, Loma Linda or Redlands direction when they leave the canyon. Again, this data is probably already available to you. I have spoken with Law Enforcement officers who dread coming to Reche Canyon Road to handle an accident because they know with a simple 2 lane road it will cause major traffic delays up to several hours which only aggravates the careless drivers of the canyon. There have been fatalities in Reche Canyon that are uncalled for given a country road unless you are looking at travelers who attempt to take advantage of passing illegally and causing a dangerous issue. The additional light and the already busy traffic indicate the safety of drivers is at-risk. Now drivers will be pulling into and out of an additional facility causing an already dangerous environment to become more dangerous because of reckless driving as safety is already a concern. Reche Canyon is a single road with one entrance and exit. It's not made to be a thoroughfare for agitated drivers trying to get somewhere in an unreasonable amount of time. A country 2 lane road of this nature does not need to be "modernized" with a 24-hour gas station / convenience store, car wash & other businesses. There should be a moratorium of businesses entering into the canyon with more reasons to stop and cause traffic issues.
What about existing businesses – there must be an ordinance preventing a power take-over of a current gas station & convenience store that takes care of the community. What about the presence of Law Enforcement – we all realize our Law Enforcement Officers are too busy taking care of the main roads of our community. Reche Canyon Road is not considered a main road, yet the density of traffic would indicate the necessity of patrol. Since it is only a 2-lane road it is already too difficult for Law Enforcement to deal with speedy / dangerous traffic.

Aesthetics & Cultural:
A modern looking business has no place on a country road. Reche Canyon is a country environment and not a hungry business environment where people try to get rich off of the community by taking over other business ventures. The focus of the plaza may be to address the 80% (now probably 90-95%) of the travelers of Reche Canyon Road who do not reside in the canyon, but are traveling through the canyon. This may be a considered business perspective, but are we attacking the aesthetics of a rural community? Are we trying to take over a long time standing existing business?
How do we preserve the country aesthetic – cultural environment of a rural community? It doesn't come by bringing in a business environment that contradicts the already existing aesthetic-cultural perspective of horses, donkeys, and dirt. It's just not a business, money-making venture where the picture of success is how much money can you make.

The anger and ferocity of the Reche Canyon Community may show a side of disapproval to a business venture where the goal is the almighty dollar. It is not the intention of the canyon dwellers to buy into this type of a business venture. How does a business venture of this nature attempt to contribute back to the community? Perhaps this type of business venture should be established outside of the canyon on the Moreno Valley side or before you enter into the canyon on the Colton side.

Hydrology:
I have no specific data regarding hydrology in the canyon environment. I know Reche Canyon Mutual Water Company buys water from the City of Colton as a backup for fire prevention in the canyon. I also am aware of the “swamp” that exists after a rainy season. It takes a long time for the water to drain or evaporate. The existing water drainage along with water usage on the area of Reche Canyon Plaza is a concern. I’m sure the Planning Department has or will address this matter.

I believe specific issues are being addressed by the community of Reche Canyon; however, we also realize we are not professionals regarding the specific demands of the Environmental Impact Report. We do have a voice and I believe it’s being vocalized. I realize it may appear that the current traffic issues can’t be blamed on a potential business venture, unless you consider the impact it would have given the current circumstances. The issues of traffic congestion and unsafe driving creates problems that may be hindered by preventing additional means of traffic issues.

From: Faye Pribble <fpribble@roadrunner.com>
Sent: Wednesday, April 10, 2019 11:28 AM
To: sweiss@coltonca.gov; Carl Winter
Subject: Reche Canyon Plaza Project

Faye Pribble
1803 S. Myrtlewood Ave., Colton (Reche Canyon), CA 92324 since 1977
Telephone: (909) 825-8206

Re: Proposed "Reche Canyon Plaza" Environmental Issues - Aesthetics

At the April 3, 2019 public meeting, I believe I heard "C2" convenience store mentioned as one of the probable major proposed businesses in the anticipated Reche Canyon Plaza. If that, or anything similar is truly expected, I object.

At least 3 similar "conveniences" are established within 3 to 4 miles of the proposed Plaza site near high density apartment complexes on Washington Ave. and are recognizable as "ghetto" attractions. At least 2 car washing businesses are in the same vicinity.

In my limited personal travels throughout nearby areas, I notice that these locations are often "trashy" and populated by vagrants and loiterers. While I am not personally aware, it can be reasonably anticipated that these populations would increase during late night hours. Clerks, alone in an open-all-night business, could certainly be in peril, not to mention the risk to nearly residences.

While drawings and promises are attractive, this isn't my "first rodeo". Similar beautiful sketches and promises have been proposed and scrapped once the project had approval. I hope you can forgive my bitterness and my propensity to blame you for the transgressions of your predecessors, but please understand that bringing "city" commerce into Reche Canyon is tantamount to destroying what little remains of our rural atmosphere. Please don't allow it.

Respectfully,

Faye Pribble

In God We Trust . . .

God Bless America!

From: Faye Pribble <fpribble@roadrunner.com>
Sent: Wednesday, April 10, 2019 11:44 AM
To: sweiss@coltonca.gov; Carl Winter
Subject: Reche Canyon Plaza Project

Faye Pribble
1803 S. Myrtlewood Ave., Colton (Reche Canyon), CA 92324 since 1977
Telephone: (909) 825-8206

Re: Proposed "Reche Canyon Plaza" Environmental Issues - Land Use / Planning

I am personally opposed to changing existing zoning and/or use of the proposed site, and believe many others feel as I do.

Such a change appears to be contrary to the existing Reche Canyon Specific Plan, and appears to respond to the monetary desires of the requestor and the City of Colton rather than the needs of the residents. The well-established Hitchin' Post Market and gas station continues to serve those needs adequately.

The current site owner was aware of residential zoning when the property was purchased; therefore increased personal profit is certainly his only purpose in requesting a zone/use change. Residents were previously told that this project was the "lifelong dream" of an old man. It was later learned that the gentleman already owns more than one similar operation in nearby areas. The "old man's dream" would conceivably become local residents' nightmare. More recently, residents were told the site owner is a "successful businessman". He has reportedly canvassed local neighborhoods declaring his project is "for you", will not increase traffic, and will employ local residents. I personally reject this hogwash and implore city officials to reject this proposal.
Respectfully,

Faye Pribble

In God We Trust . . .

God Bless America!

From: Faye Pribble <fpribble@roadrunner.com>
Sent: Wednesday, April 10, 2019 12:36 PM
To: sweiss@coltonca.gov; Carl Winter
Subject: Reche Canyon Plaza Project

Faye Pribble
1803 S. Myrtlewood Ave., Colton (Reche Canyon), CA 92324 since 1977
(909) 825-8206

Re: Proposed "Reche Canyon Plaza" Environmental Issues -
Hazards/Hazardous Materials

Traffic hazards are obvious. Despite the property owner's assertion that his project will attract no additional traffic, the gasoline tanker truck(s), supply and re-supply vehicles required for his convenience store and others on-site are undeniable. Such carriers routinely supplying the well-established Hitchin' Post are assimilated and accepted. Even if no additional automobile traffic is created, patrons of the Plaza strip mall will necessarily disrupt the current traffic flow. A signal light at the site, will only ripple in both directions, producing serious clogs at peak hours.

Hazardous materials? Each business, whether it's a liquor store, a smoke shop, a 99-cent store or other high-class enterprise customarily associated with strip malls, will produce trash. The car wash will obviously produce water, wax, detergent waste which, unless emptied into some sort of holding tank, will drain into precious water tables. If captured, yet another heavy truck to remove it. Gasoline spills and leaks? More fumes? Just because the site is within city limits, it doesn't really need to be "citified". Please don't.

Faye Pribble

In God We Trust . . .

God Bless America!

From: Steve Weiss <sweiss@coltonca.gov>
Sent: Wednesday, April 10, 2019 1:58 PM
To: Carl Winter
Cc: david.mlynarski@transtech.org
Subject: Fwd: Reche Canyon Plaza Project

Same email #4

Sent from my iPhone

Begin forwarded message:

From: Faye Pribble <fpribble@roadrunner.com>
Date: April 10, 2019 at 1:46:33 PM PDT
To: <sweiss@coltonca.gov>, <carl.winter@lsa.net>
Subject: Reche Canyon Plaza Project

Faye Pribble
1803 S. Myrtlewood Ave., Colton (Reche Canyon), CA 92324 since 1977
(909) 825-8206

Re: Proposed "Reche Canyon Plaza" Environmental Issues - Hydrology/Water Quality

According to drawings, the northern entrance to the proposed Plaza strip mall, facing Shadid Dr., will be through or over the existing water collection gully at the northern tip of the property. While I have no substantiation, I've heard that a previous prospective buyer of the Hitchin' Post Market reneged because the city of colton required him to provide drainage for that "pond". Perhaps he intended to purchase that property as well as the Hitchin' Post? On the surface, it "appeared" that the city was covertly attempting to drive that business out of business. Ultimately, the Hitchin' Post was sold and I'm certain the tax bracket changed dramatically. The "pond" still exists and, if filled, will simply divert the natural water flow elsewhere, possibly onto nearby residential properties. I didn't ask for this project, therefore, I feel no obligation to suggest alternatives, solutions or mitigations, but I know the water that naturally runs off to, or possibly springs into, that rather large puddle will be a problem that, unless addressed correctly, will become a complication.

The water from a car wash, with its detergents and waxes, will go where? Spilled or leaked gasoline will go where? Into the wells of nearby residents? Don't we have enough pollution already?
Respectfully,

Faye Pribble

In God We Trust . . .

God Bless America!

From: Faye Pribble <fpribble@roadrunner.com>
Sent: Wednesday, April 10, 2019 3:36 PM
To: sweiss@coltonca.gov; Carl Winter
Subject: Reche Canyon Plaza Project

Faye Pribble
1803 S. Myrtlewood Ave., Colton (Reche Canyon), CA 92324 since 1977
(909) 825-8206

Re: Proposed "Reche Canyon Plaza" Environmental Issues - Wildfire / Earthquake

Wild Fire ! Earthquake ! Catastrophe !

People in panic trying to get to or from their homes, their families, their animals. Wildlife (including herds of donkeys) fleeing for their lives. Open land and homes, including pockets of very dense populations, in peril. The only road clogged with no way except by air for emergency responders to get in (or get out).

And, amid all this you want ANOTHER gasoline station, 6 pumps, huge reservoirs of fuel??? The profit for one at the risk of many?? Perhaps one of the proposed "shops" could be a City Fire Department sub-station. Pity the poor people who live nearby.

Respectfully,

Faye Pribble

In God We Trust . . .

God Bless America!

From: Faye Pribble <fpribble@roadrunner.com>
Sent: Wednesday, April 10, 2019 3:38 PM
To: sweiss@coltonca.gov; Carl Winter
Subject: Reche Canyon Plaza Project

Faye Pribble
1803 S. Myrtlewood Ave., Colton (Reche Canyon), CA 92324 since 1977
(909) 825-8206

Re: Proposed "Reche Canyon Plaza" Environmental Issues -
Utilities / Service Systems

Since the proposed Plaza site is within Colton City Limits, I presume it will be served by city utilities and services. More questions than comments: Will water for that car wash be provided by the city? Or, will it require a well, diminishing local water levels? Will sewage from all those separate businesses be removed by city sewer lines? Or will huge septic tanks be installed with concomitant leach lines?

Will Colton Police Department patrol the area even though they can barely get through to multiple traffic accidents?
Respectfully,

Faye Pribble

In God We Trust . . .

God Bless America!

April 16, 2019

Steve Weiss
AICP Planning Manager
Community Development Dept, Planning Division
659 N. La Cadena Drive
Colton CA 92324
sweiss@coltonca.gov.

William R. Gause MSN, RN, APRN, PHN
2586 Bryce Ct
Colton, Ca. 92324
909-213-4094
billgause@gmail.com

Subject: Proposed Reche Canyon Plaza Project

Dear Mr. Weiss,

The purpose of this communique is to express my concern with the above-named proposed project in Reche Canyon. My concern is the multiple potential negative impacts such a project would have on the environment and citizens in Reche Canyon. I and my neighbors strongly suspect such a project would have significant impacts on ground water, traffic, biologic species, noise, and general safety in the canyon.

The short amount of time between notification and the deadline to submit the community concerns severely limits the amount of data that would contribute to legitimize these concerns, however, it is our expressed wish that these concerns would be exhaustively addressed in the draft EIR with in -depth scientific data and research.

It is also of concern that the scoping meeting was

1) Ill advertised
2) Not recorded or minutes taken
3) Not designed to register the input of the community at risk

Chief among my concerns would be the potential impact of storing large amounts of gasoline underground above an aquifer that supplies irrigation and well water to a very large portion of San Bernardino and Riverside Counites. Approximately 30 years ago Reche Canyon, in order to promote housing construction, was channelized under older regulations by the US Army Corp of Engineers. It is unclear whether a Section 404 permit was ever granted, and this would have to be addressed in the draft EIR. However, the old flood plan is still considered “waters of the U.S.” by the US Army Corp of Engineers. This area was wetlands and still is, as the channel provides no barrier between ground water and water in the channel. Consequently, the US Army Corp of Engineers would have to be consulted in order to ensure preservation of what is still wetlands. Secondly, California Fish and Game should be consulted on the many species environmentally impacted by commercial growth in the canyon. My

feeling is the current Clean Water Act would not be adhered to particularly with storage of large amounts of gasoline underground.

The ecological integrity of the canyon has already been negatively impacted by the number of homes and excessive traffic in the canyon. The additional ecological impact of this project needs to be exhaustively addressed in the draft EIR. It is already known that several species endangered and/or critical species are present in the canyon. Others have exhaustively listed these for you in their reports. This aspect would have to be researched extensively in any draft EIR and scientific evidence of its impact documented. The canyon's ecology has already been devastated in recent years. Several birds, large numbers of bees, multiple insects and snakes that were common in the canyon a few years ago are conspicuously absent now. Studies need to be done to assess the damage done in order to accurately estimate potential damage incurred as a result of the proposed project. This is of great importance and will be scrutinized heavily in any EIR. Any cursory or perfunctory evaluation should be avoided at all cost.

Another potential major impact of such a project in the canyon is obviously traffic. Exhaustive scientific studies need to be done before any such building in the canyon should take place. At this point in time the traffic load on Reche Canyon Road during commute hours is excessive, already negatively impacting quality of life for residents, the ecology, and severely reducing personal safety of those living in the canyon and commuting every day. Traffic load in the canyon is overly saturated especially during commute hours where it may take up to one hour to drive one mile into the canyon. The small secondary country road has been opened as a commuter byway between other bedroom communities and San Bernardino County. Thus, it is imperative that traffic studies be conducted at peak times not just at low traffic hours as this is a commuter's byway now. Police patrol is wholly inadequate and traffic collisions occur with great frequency in the canyon. On the street on which I live there are approximately 14 other homes. In the last two years approximately six people on this street have been involved in serious traffic collisions, struck by persons running red lights or driving recklessly. Almost every day there is a traffic accident in the canyon and yet it is relatively rare to see a patrol car in the canyon. Residents have pleaded with Colton Police Dept. for more patrol and for them to issue citations for infractions in the canyon. This has by and large fallen on deaf ears and the traffic conditions are extremely hazardous for those living in the canyon. When discussed with the Police department their excuse is that they do not have enough man power. Thus, the potential for increasing traffic, increasing egress and ingress onto the road, or establishing volume-based businesses would produce an even more hazardous environment for the citizens in the canyon. Thus, potential impacts backed by realistic scientific data would have to be addressed in the draft EIR and sufficiently mitigated without increasing environmental and safety deficits. Our children come and go to school every day on this road.

The proposed plan would build a larger commercial automobile fueling station next door to a small single owner country grocery store that already has small volume fuel capacity. It has served the canyon for over 40 years. There is no need to enlarge or increase it to service the canyon. The proposed project however would in all probability, close down this locally owned and community active small business with no obvious benefit to people in the canyon. Any project would have to be sufficiently mitigated so as to preserve the economic viability of a small business that has supported the canyon for 40 years.

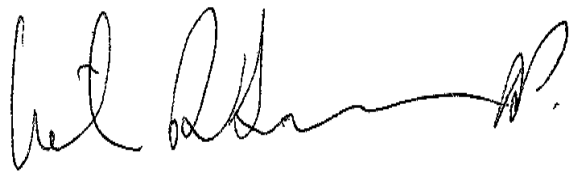
Presently under the Reche Canyon Specific Plan the proposed area is considered estate density land use. This was the designation when the owner of said property purchased the property and it was decided upon 30 years ago by the people in the canyon who wanted to preserve the noncommercial, agrarian atmosphere of the canyon. The preservation of this life style is dependent upon the restrictions decided by the residents of the canyon. We have purchased homes and properties under that safeguard. It is

neither ethical nor in good keeping with local government to undermine the wishes expressed by the canyon property owners in the specific plan for one entity's personal gain by changing this to commercial property. This should not be changed to commercial property. The present property owners do not wish to "take" from the commercial interest/owner. It is acceptable for the new owner to build homes on the property as the property is already zoned for such. Other less commercial uses for the land should be explored in order to allow the property owner to benefit from his investment however negatively impacting the safety, security, wellbeing, of the persons who live in the canyon, negatively impacting traffic, negatively impacting ecology and water source to support a commercial venture is not appropriate.

In addition, we the property owners are expected to allow multiple businesses to be allowed to operate in the canyon. Yet we are not told what these businesses are. It is unrealistic to propose an environmental report on the impact of businesses when we don't know what the businesses are. Any deviation from overtly identifying the exact businesses to be allowed should be disallowed and all businesses should be identified before the EIR is written. Otherwise, the Draft EIR will be useless in identifying or addressing potential impacts.

It is my hopes that these concerns and the concerns of other residents will be thoroughly, and scientifically investigated and exhaustive studies will be done before drafting an EIR. It is also my hope that the US Army Corp of Engineers will be consulted to ensure adherence to the Federal Clean Water Act and the possibility of a violation in obtaining a 404 permit be explored and corrected. It is also my hope that Fish and Game and other pro ecology resources be consulted, and their opinions be included in the draft EIR. It is imperative that impartial and expert resources be utilized in establishing sound and exhaustive scientific data. This EIR will be looked at extensively by professional consultants in order to ensure the integrity of the scientific process that underlies the SEQA philosophy and regulation.
Thank you for your time.

Respectfully,



William R. Gause

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Maria E Loera

Address: 2243 Crescent cr.

Phone #: (909) 721-7046

Email: marialoera@ymail.com

Comments/Suggestions:

I think is a great idea.
I supported the idea and will be great For our community.
And also the prices of our homes will increased. So I will be happy to talk to you in case if you have any questions.
I being living here For 20 years.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Marlene Mancha

Address: 2592 Garnison way Colton CA 92324

Phone #: 909 825 6036

Email: marlene mancha @ yahoo . comm

Comments/Suggestions:

I reviewed the plans and it is a great idea. We are in total support as this will greatly help the community and will create more jobs for this area.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Ismael Cisneros

Address: 2189 CANYON Dr Colton Ca. 92324

Phone #: (909) 289-3952

Email:

Comments/Suggestions:

1- will be helpful
2- Good Idea
3- more income For Community

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Glenn Martin

Address: 7594 Garrison way

Phone #: (909) 864-1152

Email: Gmar77@gmail.com

Comments/Suggestions:

I would like to see the Abandoned area be taken care of with more security & the convenience of shopping. If this can reduce crime it will be a great benefit.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Nancy Olan

Address: 3086 Crystal Ridge

Phone #: (909) 653 5797

Email: nancyolan60@gmail.com

Comments/Suggestions:

- Starbucks
- Convenience
- totally support the project
- gas station convenient

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Kristelle Alvarez

Address: 3086 Crystal Ridge Ln

Phone #: (909) 409 0128

Email: Krissalv2@gmail.com

Comments/Suggestions:

Create some jobs
Convenience
Improving Image
Starbucks

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Samira Saad

Address: 2583 GUNNISON WAY colton

Phone #: (909) 422 1126

Email:

Comments/Suggestions:

I believe it is a great idea to bring in commerce, modernize the area, create job opportunities, and add an element of convenience. I 100% support this project and I hope it gets completed soon.

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Davon Webb

Address: 2580 E Gunnison, Colton, CA

Phone #: 909 489 0067

Email: Wdavon24@gmail.com

Comments/Suggestions:

~~Comments~~ I support this project because it will be convenient for the community around it.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Jared Quiroz

Address: 2578 Garrison Way

Phone #: (909)222-7834

Email: dinebagcfb101@yahoo.com

Comments/Suggestions:

Brings small businesses back.
Would make things convinient
Brings more jobs

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Harry Johnson

Address: 2221 Canyon Dr Colton San Bernadino Ca

Phone #: (443) 252-0773

Email: candyce johnson@msn.com

Comments/Suggestions:

I would love to see a new strip center for the jobs & convenience. Shopping restaurants etc. It would help the community.

Sincerely

Harry Johnson

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Joshua Peterson

Address: 2201 Canyon Dr. Colton CA 92324

Phone #: 650 793 5151

Email: joshuaandsuzanne@gmail.com

Comments/Suggestions:

I would like to see development of this area that promotes a walkable community so surrounding neighborhoods do not have to get in the car to access services.

This area seems like a good area for development. I would like to see a traffic light w/ this development.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Angel Madrid

Address: 2203 canyon Dr

Phone #: 909 213-8682

~~Email:~~

Comments/Suggestions:

I think it would help a lot of Job and more convenience bring more help for the community I support this project

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Suzanne Peterson

Address: 2201 Canyon Drive, Colton, CA

Phone #: 909.800.5729

Email: sromo.peterson@gmail.com

Comments/Suggestions:

Overall great concept. A small commercial area I think would overall reduce the Vehicle Miles Traveled for Reche Canyon residents... therefore lessening our env. footprint and GHG.

Additionally it would mean residential could not be built in this location which is good for safety- (Reche Canyon Rd is not safe).

Reccomendations: ensure rural character to match the community, ensure maintenance.

Long range reccomendation for the city: make it walkable (but also safe) for residents, promote mixed use development and infill

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Edie Friesen

Address: 2572 topanga way

Phone #: Colton Ca 92324

Email: 909-824-1955

Comments/Suggestions:

I will go shopping there

we support the project.

Edie

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: ANTONIO HERNANDEZ

Address: 2570 TOPANGA

Phone #:

Email: antoniohdez1@yahoo.com

Comments/Suggestions:

Convinience to the community

Jobs

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Andrew Lima

Address: 2565 Topanga Ct

Phone #: 480-290-4597

Email:

Comments/Suggestions:

Modernize community
Ease of access to services.
Job opportunities.

Please mail to address below with Attention to Haylie Alcorn

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Reche Canyon Community Meeting #2

Comment Sheet

Name: Harlond Nalbandian

Address: 2567 Topanga Way, Colton CA 92324

Phone #: (~~909~~)

Email: harlond@gmail.com

Comments/Suggestions:

I agree and support this Project.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: MR. & MRS. TYLER

Address: 2573 TOPANGA COURT, COLTON 92324-9797

Phone #: 909-219-5575

Email: BEBE_TYLER55@YAHOO.COM

Comments/Suggestions:

WE WOULD CERTAINLY WELCOME A TRADER JOE'S STORE, OR ANOTHER TYPE GROCERY STORE, A CLEANERS, GAS STATION AND A PLAYGROUND/PARK, AND LAST BUT NOT LEAST, A POST OFFICE.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Emelia Gonzalez

Address: 2105 Cordillera Ave

Phone #: 909 - 792-3384

Email: speedyemmee@gmail.com

Comments/Suggestions:

We like the project and support the idea because it will be great to have local comunent stores here ~~at~~ in Reche Canyon

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: CANDYCE JOHNSON

Address: 2221 CANYON DR COLTON 92324

Phone #: 443-252-0773

Email: CMCJohnson410@gmail.com

Comments/Suggestions:

Looks wonderful! Very Convenient. Love the idea!

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: David M. Saad

Address: 2583 Gunnison Way Colton, CA 92324

Phone #: 951-251-2530

Email: dglegacycorp@gmail.com

Comments/Suggestions: YES ON THE PROJECT.

I agree on the Project, it will do good for the area.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Gina Bosch Sandi

Address: 2583 Gunnison Way

Phone #: 909-522-6554

Email: dglegacycorp@gmail.com

Comments/Suggestions:

I agree on the Project, brings work to the area, Close by Shops We have nothing in the area.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Austin Kent

Address: 3077 Prado Ln. Colton, CA 92324

Phone #: (909) 954-1759

Email: austinmkent@gmail.com

Comments/Suggestions:

I believe that this plaza will be a benefit to the community, helping small businesses, local job opportunities will become available, and hopefully this will be more convenient for everyone who lives here. As a resident of Reche Canyon, I support this idea and plan.

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: DEAN KENT

Address: 3077 PRADO LN

Phone #: 909 825-9742

Email: drkent3@gmail.com

Comments/Suggestions:

As a resident of Reche Canyon, the traffic coming through the canyon to get to Moreno Valley makes it very difficult to get gas, go shopping, etc. This is because of the design of the road entering Reche Canyon that merges from two lanes into one. The only viable option for gas and food is to leave the canyon and then fight traffic coming back.
I would very much like to have the option to shop & get gas in the canyon. This would help reduce some of the traffic trying to exit and re-enter the canyon.
In addition developing the local area would allow for jobs and better property values. Since it is likely that more houses will be built here, we need local retail outlets.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Norbert Kawas

Address: 3077 Rodeo Court Colton

Phone #: 909-213-6377

Email: KOKOKONDA@Gmail.com

Comments/Suggestions:

- Good for the community
- Extremely convenient
- Good for small businesses

I support this 100%!

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: BESHOY SHEHATA

Address: 2281 CRESCENT CIRCLE, COLTON

Phone #: 951-816-7704

Email: B@TEMECULADIVORCE.COM

Comments/Suggestions:

I BELIEVE THIS PROJECT IS NEEDED IN THIS COMMUNITY. THE BENEFITS OUTWEIGH THE BURDEN. THE PROJECT HAS A LOT OF POTENTIAL.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Michael Flores

Address: 2269 crescent cir Colton Ca 92324

Phone #: 909 - 835 · 6350

Email: michaelFlores360@gmail.com

Comments/Suggestions:

- convenience and traffic management
- good for business

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Pierre Gomez

Address: 2273 Crescent Cir Colton CA 92324

Phone #: 909 234 5238

Email: joelg411@gmail.com

Comments/Suggestions:

So a small shopping center would be convenient for gas, washing cars and small grocery items. If this helps the flow of traffic up and down reche Canyon that would be a plus. I hope this doesnt create more traffic but helps the flow of traffic.

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Hannah Shehata

Address: 2281 S Crescent Circle Colton 92324

Phone #: 7142673709

Email:

Comments/Suggestions:

I agree we need a new center with small shops and restaurants to suppat the reche canyon community and would love to come partake in these places

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Gary Avila

Address: 2591 Gunnison Way, Colton

Phone #:

Email: generations1939@yahoo.com

Comments/Suggestions:

- Additional signal lights at this proposed plaza.
- Right turn signs
- Properly close off Reche Canyon Road in back of proposed plaza. Limit activity in back of proposed plaza.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Deborah Bonner

Address: 2589 Gunnison Way

Phone #: 909.222 4137

Email: EJBonner@hotmail.com

Comments/Suggestions:

Please improve traffic

improve home value

more — job to area.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Lilia Loredo

Address: 3010 Crystal Ridge Ln

Phone #: 909-936-7321

Email: lloredolilia3@gmail.com

Comments/Suggestions:

Having traffic improvement & ~~case~~ improving the looks of area. Joy.

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: John Sutton

Address: 2578 Topanga Way

Phone #:

Email:

Comments/Suggestions:

At the present I have ~~or~~ nothing to say one way or the other. The store and that area is ~~in~~ need of a up grade

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: DAVID SWINSON

Address: 2135 Cordilleras Ave

Phone #: 909 322 4329

Email: ~~d.swinson@me.com~~ d.swinson@me.com

Comments/Suggestions:

Draw with me

City needs to extend trunks

on NB Reche Cyn Rd

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Sandy pound

Address: 2170 madge Ave. colton, CA. 92324

Phone #: (909) 882-8178

Email: N/A

Comments/Suggestions:

NO comments

Please mail to address below with Attention to Haylie Alcorn

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TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Jason Maynard Jr.

Address: 12490 Reche Canyon Rd.

Phone #: (909) 219-2304

Email: XXjjasonXX19@icloud.com

Comments/Suggestions:

So, lets start here. Our house is ~~to~~behind the area of where the shops would be. Right behind dumbsters and loading docks. It will decrease the value of our home and cause way more traffic. It would also ~~dester~~ destroy any peace or quiet. This can also affect wildlife. Donkeys eat from the meadow where the City of Colton plans to put this "strip mall." It can scare them into the road and cause accidents. Another thing is how are people going to enter the mall? How? There is a concrete island dividing the lanes so its impossible to enter. Don't even think about re-opening our road. They closed the road due to morons crashing into our gate and we don't need it again. Also, what kind of flood control is planned? we don't need all your garbage. It can spook horse in near by areas and cause more pollution.

This "stip mall" is completely unnessacary and outrageous.

Jason Maynard 80 April 15, 2019

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Jacob Maynard

Address: 2490 Reche Canyon RD

Phone #: N/A

Email:

Comments/Suggestions:

I would not like to look at garbage cans when I wake up in the morning. I also like the View of the donkeys and othe wildlife around this place. But if theres a damn shpip mall across the way, It will toatly kill my vibe. Also the traffic will get really bad and pollute our air. Our nice street will probably reopen and we cant walk our dogs.

4/15/19

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: JOHN STANLEY

Address: 12490 RECHE CANYON Rd.

Phone #: 951-312-9021

Email: coolcruisersrodbarn@att.net

Comments/Suggestions:

I AM WRITING THIS AS A PERSONAL PLEA. NOT BECAUSE I, ALONG WITH THE VAST MAJORITY WHO ARE TRYING to LIVE IN RECHE CANYON BUT TO IMPRESS UPON YOU THE SAFETY ISSUES THAT NEED TO BE INVESTIGATED AND ACT UPON Immediatly AND Put the MONEY ISSUES ASIDE And DEAL WITH LIVES AND PROPERTY.
I AM REFERRING to POLICE And FIRE.
Both POLICE AND FIRE ARE MANDATED BY LAW TO BE ABLE TO PROVIDE SERVICES TO THE COMMUNITY IN WHICH THEY SERVE.
THE CALLS FOR SERVICES (both emergency + Routine) ARE FAR EXCEEDING WHAT THEY CAN COVER AT THIS TIME.
ACCIDENT Related deaths + INJURIES
FIRE Response And medical emergencies to name a few. By adding MORE Fuel to the fire WILL GAIN the city EXTRA REVENUE But become COUNTER productive on an already burdened community.

Please mail to address below with Attention to Haylie Alcorn

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04-14-19

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: JOHN STAHLE

Address: 12490 RECHE CANYON RD. COLTON CA 92324

Phone #: 951-312-9021

Email: J.STAHLE@GMAIL.COM

Comments/Suggestions:

STATE OF CALIF. AS WELL AS CITY AND COUNTIES WITHIN HAVE STRICT LAWS | RESTRICTIONS FOR TRAFFIC CONTROL, THOROUGHFARES AND RIGHT OF WAYS MANDATING AMOUNT OF TRAFFIC FLOW AND INTEGRATED TRAFFIC SIGNALS BY POPULATION.

RECHE CANYON IS AND HAS BEEN IN VIOLATION OF NUMEROUS CVC SECTIONS AND CODES AND HAS DONE VERY LITTLE TO BELIEVE THE FLOW AND CONGESTION ALL ALONG THE ROADWAY - GET THIS STRAIGHT FOLKS - WHAT PART DON'T YOU UNDERSTAND (IGNORE) THIS IS A MAJOR SAFETY ISSUE AND NEEDS TO BE ADDRESS.

IT IS INCONCEIVABLE TO ME HOW ANYONE COULD EVEN CONSIDER A STRIP MALL MUCH LESS A GAS STATION WHICH WOULD INVITE MORE CONGESTION. ADDING TO MORE VIOLATIONS OF CVC CODES.

THE ACCIDENT AND DEATH RATE ON RECHE CANYON IS FAR BEYOND ANY STANDARDS.

YOURS TRULY

JOHN STAHLE

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: MAJELLA VAN AKEN

Address: 12490 RECHE CANYON RD. COLTON, CA. 92324

Phone #: 909-213-7093

Email: RockinNana@att.net

Comments/Suggestions:

MY RESIDENCE WOULD BE SITUATED TO THE REAR OF THE PROPOSED GAS STATION/CARWASH. LEAVING ME A WONDERFUL VIEW OF ALL TRASH DUMPS AND GARBAGE SMELL AND DISCARDS OF THE BUSINESS. IT IS A WELL KNOWN FACT THAT EVERYONE USES THE REAR OF THESE COMPLEXES FOR UNWANTED TRASH DUMP.

I HAVE ALERGIES AND CANNOT BE AROUND ANY AIRBORNE FUMES AND DETERGENTS RAISED FROM THE CAR WASH.

THIRD POINT IS THE THE NOISE LEVEL CREATED. MY AREA/RESIDENCE AND ADJOINING NEIGHORHOOD IS/WAS AND STILL CONTINUES TO BE DESIGNATED FOR SMALL RANCHETTE/HORSE PROPERTIES.

Majella Van Aken 4-15-19

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Arline King

Address: 2575 Gunnison Way, Colton, CA 92324

Phone #: 909-824-3114

Email: acwking@aol.com

Comments/Suggestions:

Bottom Line: No new development without FIRST doing something about traffic

My main concern is continued growth without adequate infrastructure. Reche Canyon Road is beyond grid-locked during rush hours — now starting at 3:30pm to 6pm. Adding proposed buildings without additional widening of road and more traffic lights needs to happen. So many people run the red light (esp at Topanga) Growth of mall/gas station will encourage more traffic !! Not just local residents. I'm not against growth, it will happen BUT concern of road traffic What about the possible development of new houses east of Crystal Ridge ???

Please mail to address below with Attention to Haylie Alcorn

Not buses or mass transit !!!

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RECEIVED
APR 1 1 2019
CITY OF COLTON
DEVELOPMENT SERVICES DEPARTMENT

April 9, 2019

To: Steve Weiss

c/o Carl Winter

I was at the environmental meeting on April 3rd, and I really don't understand all of the 20 environmental issues, but what I can say is what is happening in the canyon, I live on Shadid Drive, and since the road got straightened out, there have been many accidents at Shadid and Reche Canyon Road, some very serious accidents because people want to pass in order to get one or two cars ahead, they pass on the right side, I've seen this happen so many times, since the road got straighten people drive like it's the Indy Five Hundred, there is no safe place to pull anyone over, there is very rarely police present, and when they do show up it's during the day when the traffic is light.

Putting in a gas station, car wash, businesses, would cause more traffic, more thief, more homeless, my mailbox has been broken into so many times along with my neighbors, one of my neighbors truck and trailer was stolen, the Hitching Post has been in the canyon for so long with new gas pumps, why do we need another one for? Why can't the Hitching Post reopen their restaurant?

I will not be able to ride my horse anymore, as it is right now I have to cross over Reche Canyon Road, there are times that the cars come right up on me to watch the horses spook and then they laugh, putting in this new project I will never be able to ride, I've been promised horse trails, flashing lights, and so far this has not happened, and I have lived in the canyon for 16 years now, they have talked about putting in a stop light at Shadid, that's a joke, the cars run the stop lights all the time. There is serious issues that needs to be addressed before this business goes in.

RECEIVED
APR 1 - 2019
CITY OF COLTON
DEVELOPMENT SERVICES DEPARTMENT

What happens if the new gas station has a problem with a leaking tank or whatever and the gas or whatever goes into the ground, I am along with 10 other families that live on Shadid that are on well water, then what? what about the noise from the traffic going by, the lights from the gas station advertising blaring into the families homes that are right there by this site? what about the donkeys that come to graze in the field? More of them are just going to get hit and die because people don't respect them.

There are a lot of serious issues, with all of the empty land why Reche Canyon? I could go on and on but as you can see from the meeting NO ONE WANTS THIS, YOU NEEDS TO LISTEN TO THE RESIDENTS AND NOT THE MONEY TALKING.

If you don't live in the canyon, you need to in order to see what is happening and then you wouldn't want this either.

Thank you

Cathy Ludwig

3013 Shadid Dr

From:	Steve Weiss
To:	Carl Winter
Cc:	david.mlynarski@transtech.org
Subject:	Fwd: EIP Reche Canyon
Date:	Friday, April 19, 2019 6:10:17 PM

Sent from my iPhone

Begin forwarded message:

From: psy2seme@aol.com
Date: April 19, 2019 at 5:56:25 PM PDT
To: sweiss@coltonca.gov
Subject: EIP Reche Canyon

Mr. Weiss,

I am writing this letter in response to the EIR for the triangle property on Reche Canyon Rd.

My concerns are:

● Noise pollution: increase traffic, increase pedestrian, noise associated with 24/7 365 day business; as opposed to the quietness currently after approx. 7 pm, deliveries made at early hours, vehicle traffic

● Light pollution: street light added, business lights added all night, parking lots lights, passenger vehicle lights, delivery truck lights

● Increase criminal activity: property crime, store theft, beer runs, trespassing, vagrence, alcohol consumption, truancy, nuisance, homeless, loitering, disturbing the peace, also increases criminal activity to residences adjacent to businesses.

● Neighborhood culture aesthetics: this is a country canyon a new business would change that and an erosion runoff / flooding issues. For example, flooding to the streets and nearby housing along with affecting traffic canyon wide.

● Other projects/concerns that conflict with canyon culture: other potential housing project developments, the proposed housing project between Loma Linda and Colton adjacent to Crystal Ridge and Prado.

● Wildlife: the canyon has our wild burros that come down to the triangle to eat, the burros are federally protected. The canyon also has coyotes, bobcats, mountain lions, various birds, blue birds, woodpeckers, snakes, lizards, raccoons, etc. This is a habitat where all these animals come down to the triangle and feed and drink .

● Land use/planning: this area is under the Reche Canyon Specic Plan

that was adopted by the council and supported by the residents and any change is against the council, residences, and law.

● Mineral Resources: There is a large amount of people living in Reche Canyon that have their own water well septic systems. Most of the wells are based on ground saturated resources.

● Hydrology/water quaility: There is a underground natural water spring that runs along the length of the canyon that could be affected by the complex. For example, burying large gasoline tanks for a gas station, and interfering in resident's water wells where they take their water from the spring.

If you have any questions or concerns please email me and I would be happy to speak to you.

Regards,
Mr. & Mrs. Banasiak
Bananava@aol.com

Sent from AOL Mobile Mail

From:	Steve Weiss
To:	Carl Winter; david.mlynarski@transtech.org; Mark Tomich
Subject:	Fwd: Reche Canyon Plaza Project
Date:	Sunday, April 07, 2019 7:50:27 PM

Sent from my iPhone

Begin forwarded message:

From: Amira k Dandouch <thedandouch@hotmail.com>
Date: April 7, 2019 at 7:29:09 PM PDT
To: "sweiss@coltonca.gov" <sweiss@coltonca.gov>
Cc: Amira k Dandouch <thedandouch@hotmail.com>
Subject: Reche Canyon Plaza Project

To whom it may concern,
My name is Mutih Dandouch, my address is 2651 Reche canyon Rd Colton,CA.
I don't want more traffic on Reche Canyon Rd, opening a new business well exceed the traffic in this area. Opening a new business will increase the population which leads to an increase in traffic, accidents, and air pollution! we already suffer from traffic during the rush hours, and noise from cars on the Reche Canyon Rd, plus the pollution. Opening a new business will make things worse. I have asthma, and with all the construction to build the Reche Canyon Plaza it will make it hard for me to breath, because the owners will dig in the ground to make the underground gasoline tank.

We have the historical Hitching Post that can serve our community with gasoline , and food, so why we need to have another gas station. as a community We don't want more stores that create more traffic.
sincerely yours,
Mutih Dandouch
4/7/19

From:	Steve Weiss
To:	Carl Winter; david.mlynarski@transtech.org; Mark Tomich
Subject:	Fwd: Reche Canyon Plaza Project
Date:	Sunday, April 07, 2019 8:08:51 PM

Sent from my iPhone

Begin forwarded message:

From: Amira Kassab <akassab3817@panther.chaffey.edu>
Date: April 7, 2019 at 7:49:27 PM PDT
To: sweiss@coltonca.gov
Cc: amirakassab4@gmail.com
Subject: Reche Canyon Plaza Project

Amira Kassab
2810 Cambria Ct
Colton, CA 92324
909-660-1808
akassab3817@panther.chaffey.edu

April 7, 2019

Steve Weiss
AICP, planning Manager
659 N. La Cadena Drive
Colton, CA 92324

Dear Mr. Weiss,
I write this litter to explain my opinion on building Reche Canyon Plaza Project. I live with my brother in this lovely area in Colton. Everyday on my way to and from work, I face a lot of traffic. No matter how early I leave my house, the traffic is the same. I would wait about 10-15 minutes just to get access to the Reche Canyon road. When I go home after I pick up my kids, if one of them wants to return a book to library, or needs to go last minute shopping, the regular journey that usually takes me 20 minutes on regular hours day takes me 60-75 minutes.
I enjoyed watching the wild burros, these donkeys need to be protected. The animal's environment will be deeply affected due to the result of removing their natural habitat and homes. By removing their living source such as trees, and building the Reche Canyon Plaza, this will destroy their homes.
So please protect Burros home.
Sincerely,

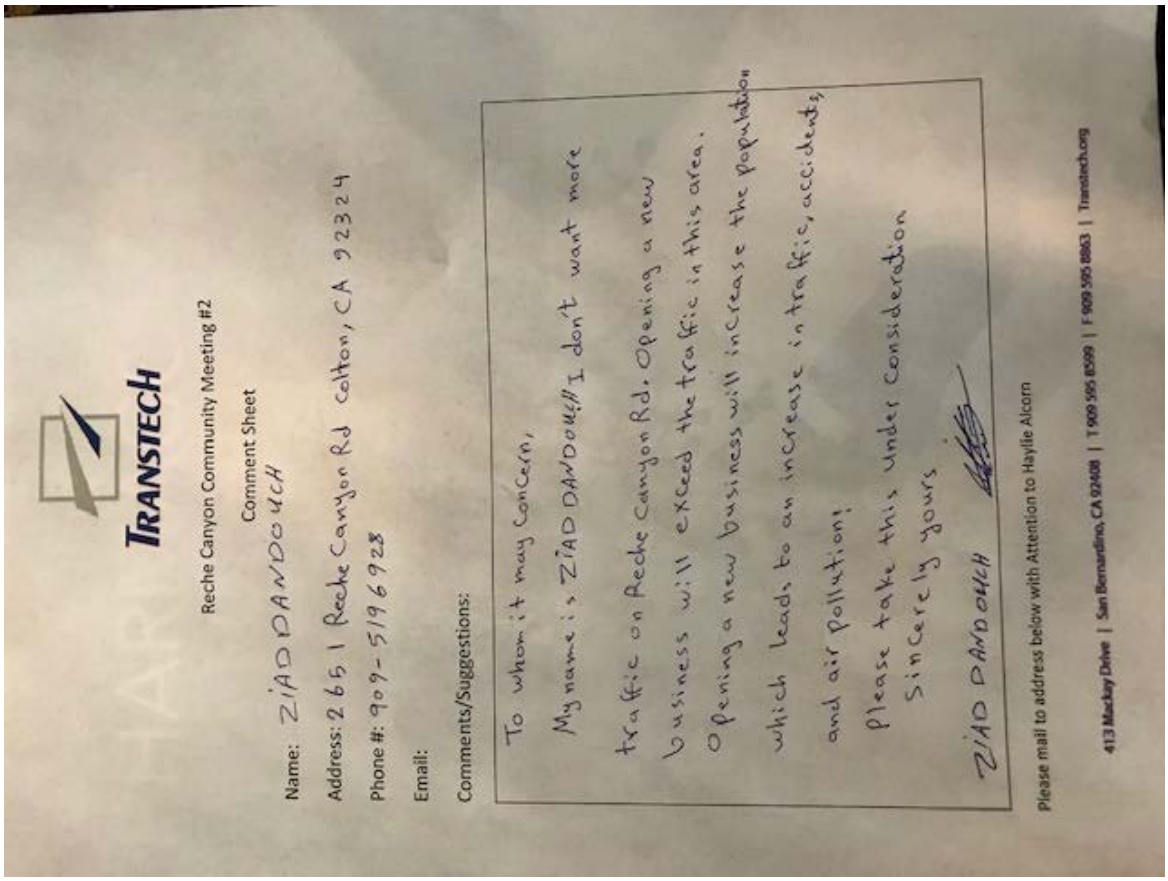
Amira Kassab

From: Steve Weiss
To: Carl Winter; david.mlynarski@transtech.org; Mark Tomich
Subject: Fwd: Reche Canyon plaza project
Date: Tuesday, April 09, 2019 1:03:29 AM

Sent from my iPhone

Begin forwarded message:

> **From:** Ziad Dandouch <ziaddandouch25@gmail.com>
> **Date:** April 8, 2019 at 10:58:20 PM PDT
> **To:** sweiss@coltonca.gov
> **Cc:** ziaddandouch25@gmail.com
> **Subject: Reche Canyon plaza project**



TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: ZIAD DANDOUCH

Address: 2651 Reche Canyon Rd Colton, CA 92324

Phone #: 909-519 6928

Email:

Comments/Suggestions:

To whom it may concern,
My name is ZIAD DANDOUCH I don't want more traffic on Reche Canyon Rd. Opening a new business will exceed the traffic in this area. Opening a new business will increase the population which leads to an increase in traffic, accidents, and air pollution!
Please take this under consideration
Sincerely yours
ZIAD DANDOUCH

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

---

Sent from my iPhone

From:	Steve Weiss
To:	Suzanne Peterson
Cc:	Carl Winter
Subject:	RE: Reche Canyon Plaza Project
Date:	Thursday, April 11, 2019 2:14:17 PM
Attachments:	Scoping PPT 04 03 2019 SW rev.pdf Reche Canyon Plaza CEQANet 03 21 2019.PDF Reche Canyon Plaza NOP signed 03 19 2019.pdf NOC 03 19 2019.pdf

---

Hi Suzanne,

At this point, we are receiving comments for the Notice of Preparation. Attached is how the process works and notice..

Sincerely,

Steve Weiss, AICP
Planning Manager

City of Colton, Development Services Department
Planning | Building | Business License
659 N. La Cadena Drive, Colton, CA 92324
Office Hours: Mon-Thursday from 7:00 a.m. to 6:00 p.m.
(909) 370-5523 direct
(909) 370-5079 general / (909) 783-0875 fax
Email: sweiss@coltonca.gov

From: Suzanne Peterson <sromo.peterson@gmail.com>
Sent: Thursday, April 11, 2019 12:40 PM
To: Steve Weiss <sweiss@coltonca.gov>
Subject: Reche Canyon Plaza Project

Good afternoon,

I had a hard time finding information on the City's website, maybe you could point me in the right direction. Is the Draft EIR available for this project? or are you still in the comment period for the NOP? And could you send me a link to where this information can be found online.

Thank you,
Suzanne

From: Steve Weiss
To: Carl Winter
Subject: RE: Regarding Project Proposal at 2621 Reche Canyon Road - Reasons Opposing Project
Date: Monday, April 29, 2019 5:11:25 PM

Did you get this one?

From: Lori Langford <lorilangford@earthlink.net>
Sent: Thursday, April 18, 2019 5:48 PM
To: Steve Weiss <sweiss@coltonca.gov>
Subject: Regarding Project Proposal at 2621 Reche Canyon Road - Reasons Opposing Project

Hello Steve,

I am writing to you regarding the property located at 2621 Reche Canyon Road. I am writing to state that I strongly oppose this project and do not want it to happen at all.

Please find below a list of the reasons why:

1. Transportation: In the morning when I leave for work between 7:30 - 7:50 a.m. it takes between 45 seconds and up to 3+ minutes to get onto Reche Canyon Road. If I come home from work during my lunch hour at noon, it takes me about 7 minutes to get home and 7 minutes to return (it takes me about about 10 seconds to 20 second to get on the road). When I leave work at 5pm it takes between 30 minutes to an hour and fifteen minutes to get home. Once I am home, I choose not to leave again due to the terrible traffic. If I do need to go somewhere I go after 7 p.m. when it won't take me more than 30 minutes to get home. If I do need to leave my house in the 5 or 6 o'clock hour it can take anywhere from 3 minutes to 6 minutes to get onto Reche Canyon Road from my house. I feel that increased traffic in and out of that area will make it even longer to leave and arrive at my house.
2. Noise: When I purchased my house, 9 years ago, the lot across the street from me was empty. I knew that it was zoned residential and at worse, it would have a few houses located on it. Not a big deal in my opinion. Never did I imagine that I would be facing the possible 24-hour noise pollution that is associated with having businesses right across the street from me. A noisy car wash, cars with music at all levels, delivery trucks, people's voices at all levels, cars screeching out of the driveway to get onto Reche Canyon Road without getting hit, etc. Yes, I was aware of the existence of the Hitching Post when I moved in, but that is a very small location with not a lot of noise associated with it from my house. If this project is approved, I will have to face the possibility of having noise at all different levels 24 hours a day. Our house has bedroom windows facing the street and I believe this 24-hour noise will be disruptive to our family.
3. Aesthetics: This project will provide an eyesore to our rural community. This canyon is filled with residential properties and having one more business in the canyon with the look of a gas station and a strip mall is not in line with the existing landscape. I will be staring at the back of these buildings every day when I look out my window. Not at all what I imagined my neighborhood would look like when I purchased my house, my forever home. Even after seeing the drawings of what it will look like, I am not convinced that it will be fitting in our neighborhood. The back of it is going to be plain and industrial looking, not ok for our beautiful residential neighborhood and the view that I will see every day.
4. I do not want people to stop at that location because of crime. Crime already exists and I firmly believe it would only increase if the proposed project goes through. We were already victims of a forced entry burglary and a high dollar amount was stolen from us. People have stolen many things from our property. People randomly wander onto our property (we have

no fence around it, which is our right to not have a fence) and help themselves to it. Mail is being stolen in our area. People park in the cul-de-sac across from our house and just sit there in their car and watch our house at all hours of the day. If this project gets approved I fear for the safety of my family and for our neighbors. It will give the people legal right to be across the street from us (in the park like setting with tables and chairs or even in the parking lot) and stare at our home. There are several sex offenders that live in the canyon and many more that live within a 10 mile radius with many of them charged with crimes against minors (I have two minors that live in my house). They can easily watch our every move and I can't tell them to go away because they have the right to be there. Not okay and very scary. This is a safety hazard.

5. Agriculture: This land is currently zoned Residential and it should remain Residential. We do not need and do not want another business in the canyon.

6. Pollutants: We do not need the added pollutants that this project will bring to the area. Businesses create more trash, which is already a big issue in the canyon. For years I have picked up hundreds and hundreds of cigarettes that have been discarded in front of our house, complete bags of fast food waste, dirty diapers, alcoholic bottles, etc. Too much trash already and we do not need more.

Thank you for reading my concerns and for your consideration.

Sincerely,

Lori Langford
12400 S. Reche Canyon Road

APPENDIX B-1

AIR QUALITY AND GREENHOUSE GAS EMISSIONS

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: December 9, 2021

TO: Mr. Mario Suarez, AICP, CNU-A, Planning Manager
City of Colton Development Services Department

FROM: Ronald Brugger, Senior Air Quality Specialist, LSA

SUBJECT: Air Quality Update for the Reche Canyon Plaza Project in Colton, California

This Air Quality and Greenhouse Gas Emissions Analysis has been prepared to evaluate the impacts associated with the proposed Reche Canyon Plaza Project (project). The analysis includes modeling of air pollutant and greenhouse gas (GHG) emissions using the latest version of the California Emissions Estimator Model (CalEEMod version 2020.4.0) and follows the South Coast Air Quality Management District's (SCAQMD) CEQA Air Quality Handbook guidelines. The results of the modeling have been compared to SCAQMD emissions thresholds.

The project site is located in the southeast portion of the City of Colton (City), on the west side of Reche Canyon Road just south of Crystal Ridge Lane. The approximately 2.90 acre site includes of four parcels (Assessor's Parcel Numbers [APNs] 0284-211-70, 71, 72, and 1178-371-27). The triangular shaped site was created subsequent to the realignment of Reche Canyon Road. Old Reche Canyon Road forms the western and southern boundaries of the site. Other site boundaries include Crystal Ridge Lane to the north and Reche Canyon Road to the east. The regional and project location is shown on Figure 1 (all figures attached).

The proposed project would develop approximately 18,770 square feet (sf) of commercial uses including a 1,750 sf drive through car wash, an approximately 3,000 sf convenience store, 3,570 sf fueling station with six fueling dispensers (12 pumps), and approximately 9,800 sf of neighborhood commercial retail space for approximately six different businesses as shown on Figure 2. Adequate parking would be provided for the retail space and gas station; approximately 42 spaces for the retail and 25 spaces for the gas station. Construction was planned to start in November 2022 and finish in June 2023, however, construction may occur later than planned. No soil import or export is expected.

Existing and Adjacent Land Use

The project site is undeveloped land in an area primarily surrounded by rural residential development. There are several existing residences surrounding the project site, the closest of which is approximately 85 feet from the project boundary.

CONSTRUCTION IMPACT ANALYSIS

The CalEEMod model is designed to model construction emissions for land development projects and allows for the input of project-specific information, such as the number of equipment, hours of operations, duration of construction activities, and selection of emission control measures. Construction would require heavy equipment during mass grading, utility installations, building construction and paving. Construction is planned to start in November 2022 and finish in June 2023, however, construction may occur later than was modeled. Using earlier construction dates than might actually occur produces a conservative estimate of emissions due to equipment emissions generally lowering over time. The project would have balanced grading activity, which means that no soil would be transported off site for disposal nor would soil be transported on site for use in construction activities. Other than these parameters, CalEEMod defaults were used in the analysis.

Table A shows the anticipated peak daily construction emissions. These results are from the CalEEMod output tables listed as "Mitigated Construction," even though the only measures that have been applied to the analysis are the SCAQMD required construction emissions control measures, or standard conditions. CalEEMod outputs are included in in the attachment to this memo.

Table A, *Estimated Construction Emissions,* provides a summary of the peak daily construction emission estimates by construction activity.

Table A: Estimated Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Site Preparation	1	16	10	<1	<1	<1
Grading	2	17	10	<1	3	1
Building Construction	2	16	17	<1	<1	<1
Architectural Coating	2	1	2	<1	<1	<1
Paving	1	9	12	<1	<1	<1
Peak Daily Emissions	**2**	**17**	**17**	**<1**	**4**	**2**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Significant Emissions?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2021).

CO = carbon monoxide
CO_2e = carbon dioxide equivalent
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. The proposed project will be required to comply with SCAQMD Rule 403 to control fugitive dust. Table A includes implementation of fugitive dust control measures required by SCAQMD under Rule 403,

including watering disturbed areas a minimum of three times per day, reducing speed limit to 15 miles per hour on unpaved surfaces and replacing ground cover quickly.

The anticipated peak daily construction emissions shown in Table A indicate the construction emissions from the proposed project would not exceed the corresponding SCAQMD daily emission thresholds for criteria pollutants. Therefore, construction air quality impacts would be less than significant.

Localized Impacts Analysis

The SCAQMD has issued guidance on applying CalEEMod modeling results to localized impacts analyses. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. There are several existing residences surrounding the project site, the closest of which is approximately 82 feet (25 m) from the project site boundary. Using the LST guidance from SCAQMD, Table B shows that the on-site emissions of the pollutants on the peak day of construction will result in concentrations of pollutants at these nearest residences that are all below the SCAQMD thresholds of significance.

Table B: Construction Localized Impacts Analysis

Emissions Sources	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
On-Site Emissions (lbs/day)	17	14	4	2
LST Thresholds (lbs/day)	**200**	**1,204**	**9**	**5**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2021).
Note: SRA – Central San Bernardino Valley, 2.9 acres, 25-meter distance
CO = carbon monoxide
lbs/day = pounds per day
LST = local significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

OPERATIONAL IMPACT ANALYSIS

Operational emissions from area sources include the combustion of natural gas for heating and hot water and engine emissions from landscape maintenance equipment. Mobile source emissions are associated with project-related vehicle trip generation. Based on the Traffic Impact Analysis prepared for the project (LSA 2021), at full buildout the project would generate 1,246 average daily trips (ADT). The CalEEMod default vehicle fleet mix was used for the purpose of this analysis. Table C presents the estimated operational emissions for the proposed project.

Table C: Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project						
Area Sources	<1	<1	<1	0	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Mobile Sources	4	5	39	<1	8	2
Total Project Emissions	**4**	**5**	**39**	**<1**	**8**	**2**
SCAQMD Thresholds	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: Compiled by LSA Associates, Inc. (November 2021).
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

As shown in Table C, criteria pollutant emissions from operational activities associated with the proposed project would be below the SCAQMD thresholds. Therefore, project related operational emissions would be less than significant.

Localized Impacts Analysis

Table D shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. By design, the localized impacts analysis only includes on-site sources; however, the CalEEMod model outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table D include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that will occur on site. All off-site emissions are subtracted out from the total emissions.

Table D: Long-Term Operational Localized Impacts Analysis

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions[1]	<1	2	<1	<1
LST Thresholds	**200**	**1,204**	**3**	**1**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (November 2021).
Note: SRA – Central San Bernardino Valley, 2.9 acres, 25-meter distance, on-site traffic 5 percent of total mobile source trips within the project area (i.e., driveways and parking lots).
CO = carbon monoxide
LST = Local Significance Thresholds
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

A total of 5 percent is considered conservative as the average worker trip lengths assumed are 14.7 miles for home to work, and 40 miles for all truck trips. It is unlikely that the average on-site distance driven will be even 1,000 feet, which is approximately 2 percent of the total miles traveled. Considering the total trip length included in the CalEEMod model, the 5 percent assumption is conservative.

Table D shows that the operational emission rates would not exceed the LSTs for receptors at 82 feet (25 m). Therefore, the proposed operational activity would not result in a locally significant air quality impact.

GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS

Construction and operation of the project would result in the emission of GHG emissions as described below.

Construction Greenhouse Gas Emissions

Construction activities produce combustion emissions from various sources, such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.
See the CalEEMod modeling output in in the attachment to this memo for details. The construction phase in Table E shows GHG emissions from equipment exhaust and energy use. Results indicate that project construction would generate approximately 246 MT of CO_2e. Amortized over 30 years, the total construction emissions would generate approximately 8 MT of CO_2e/yr.

Table E: Estimated Construction GHG Emissions

Construction Phase	Peak Annual Emissions (mt/yr)			Total Emissions ($MTCO_2e$)
	CO_2	CH_4	N_2O	
2022	54	<1	0	55
2023	189	<1	0	191
Total Construction Emissions				**246**
Total Construction Emissions Amortized over 30 years				**8**

Source: Compiled by LSA Associates, Inc. (November 2021).
CO_2 = carbon dioxide
CH_4 = methane
N_2O = nitrous oxide
$MTCO_2e$ = metric tons of carbon dioxide equivalent
mt/yr = metric tons per year
CO_2e = carbon dioxide equivalent

Operational Greenhouse Gas Emissions

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption.

Mobile-source emissions of GHGs would include project-generated vehicle trips associated with on-site facilities and customers/visitors to the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary-source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

The GHG emission estimates presented in Table F show the emissions associated with the level of development envisioned by the proposed project at opening. The attachment to this memo includes the model outputs. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for space heating.

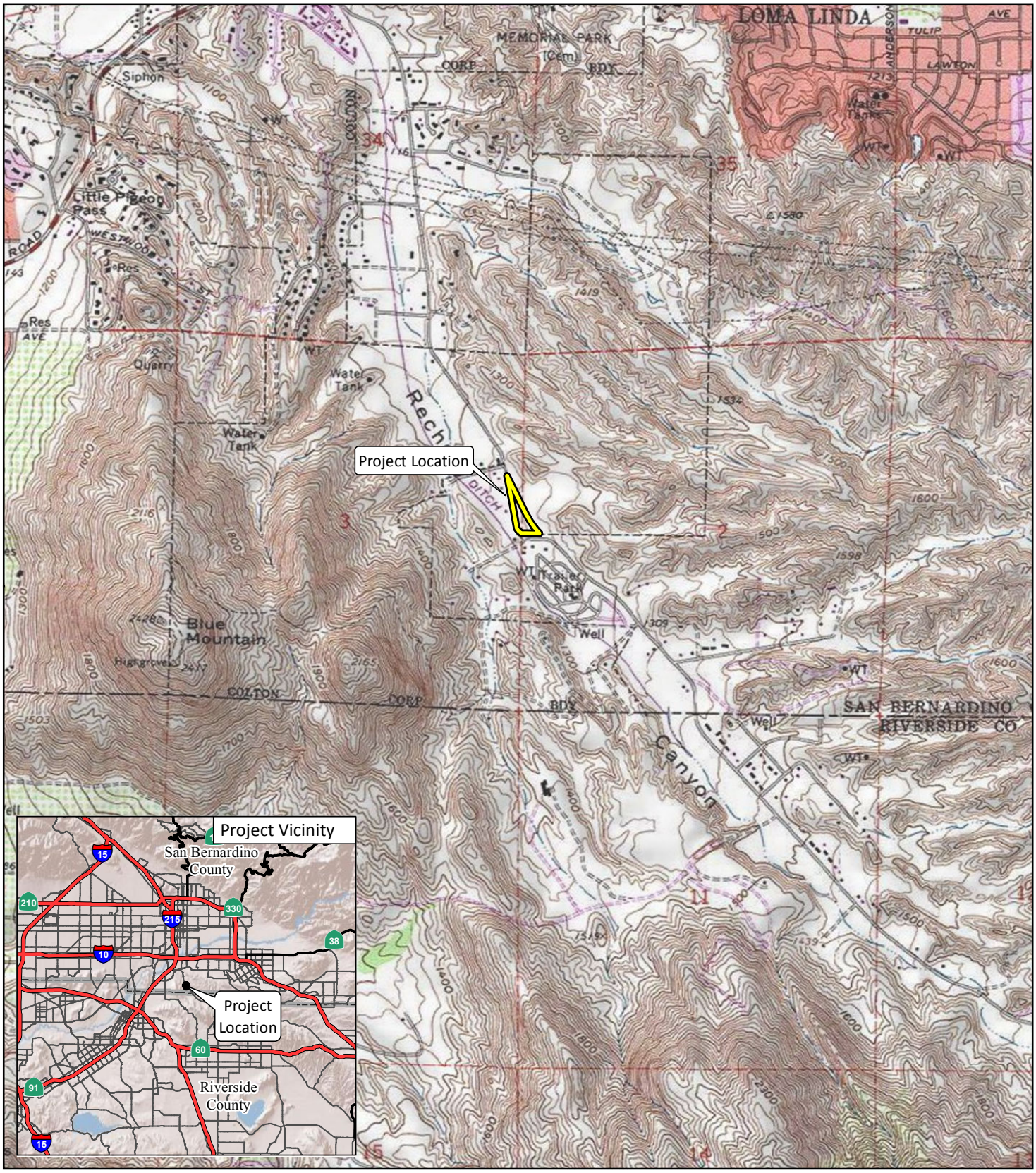
Table F: Estimated Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/yr)			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Construction emissions amortized over 30 years				8
Operational Emissions				
Area Sources	<1	0	0	<1
Energy Sources	35	<1	<1	35
Mobile Sources	1,326	<1	<1	1,348
Waste Sources	3	<1	0	9
Water Usage	4	<1	<1	5
Total Project Emissions	**1,365**	**<1**	**<1**	**1,405**
SCAQMD GHG Threshold	-	-	-	**3,000**
Significant Emissions?	-	-	-	**No**

Source: Compiled by LSA Associates, Inc. (November 2021).
Note:
MT/yr = metric tons per year
CH_4 = methane
N_2O = nitrous oxide
CO_2e = carbon dioxide equivalent
CO_2 = carbon dioxide

As shown in Table F, the project will result in a net increase of 1,405 MT of CO_2e/yr. The emissions level of 1,405 MT CO_2e/yr is less than the SCAQMD Tier 3 threshold of 3,000 MT CO_2e/yr; thus, project-level and cumulative GHG emissions would be less than significant.

Attachments: Figures
CalEEMod model output



LSA

LEGEND

Project Location

FIGURE 1

N

0 1000 2000

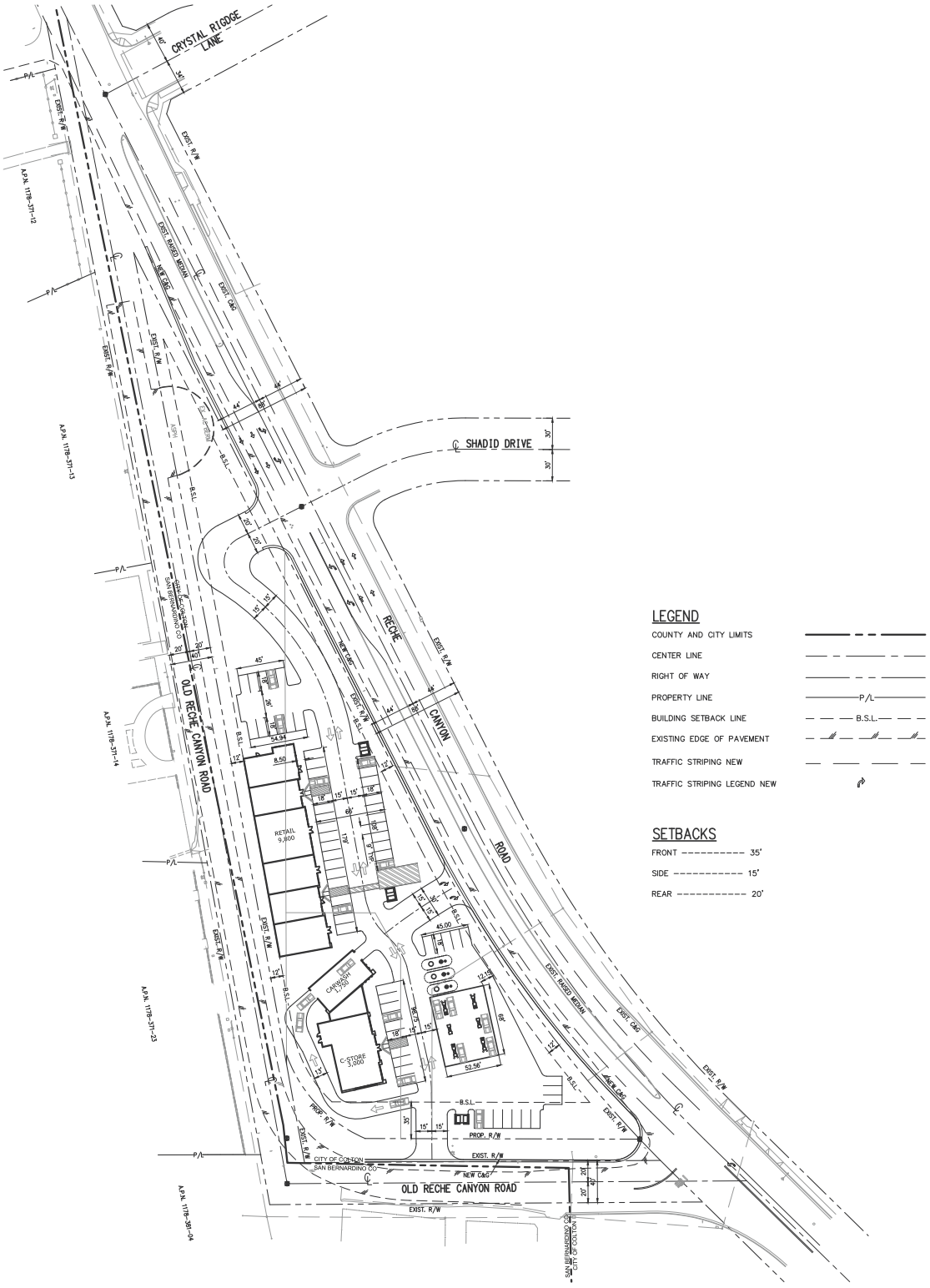
FEET

SOURCE: USGS 7.5' Quad - San Bernardino South (1980), CA

I:\CLT1802.06\GIS\MXD\ProjectLocation.mxd (9/14/2021)

Reche Canyon Plaza Project

Regional and Project Location



LSA

FIGURE 2

N

0 80 160

FEET

SOURCE: Transtech

Reche Canyon Plaza Project

Proposed Site Plan

I:\CLT1802.06\G\Site Plan.cdr (11/2/2021)

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

Colton Reche Canyon Plaza

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.20	Acre	1.20	52,272.00	0
Other Non-Asphalt Surfaces	1.40	Acre	1.40	60,984.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	3,000.00	0
Strip Mall	9.80	1000sqft	0.22	9,800.00	0
Automobile Care Center	1.75	1000sqft	0.04	1,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The car wash was modeled as an Automotive Care Center. Asphalt and non-asphalt surfaces acreage determined from site plan. Total acreage adds up to 2.9 acres.

Construction Phase - Schedule per project plans.

Architectural Coating - Assume all coatings comply with SCAQMD Rule 1113

Vehicle Trips - Trip generation rates from Traffic Study, they include the pass-by reductions.

Area Coating - Assume compliance with SCAQMD Rule 1113

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

Energy Use -

Construction Off-road Equipment Mitigation - Dust control measures assume compliance with SCAQMD Rule 403

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	50	100
tblAreaMitigation	UseLowVOCPaintParkingValue	50	100
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	220.00	150.00
tblConstructionPhase	NumDays	10.00	54.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	10/19/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	10/5/2023	6/29/2023
tblConstructionPhase	PhaseStartDate	10/6/2023	4/3/2023
tblConstructionPhase	PhaseStartDate	9/22/2023	6/16/2023
tblLandUse	LandUseSquareFeet	1,694.10	3,000.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	42.04	24.08
tblVehicleTrips	ST_TR	322.50	84.17
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	20.43	24.08
tblVehicleTrips	SU_TR	322.50	84.17
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	44.32	24.08
tblVehicleTrips	WD_TR	322.50	84.17

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					
2022	0.0392	0.3183	0.3006	6.3000e-004	0.0350	0.0142	0.0492	0.0136	0.0135	0.0271	0.0000	54.2223	54.2223	9.3800e-003	1.0900e-003	54.7816
2023	0.1681	0.9439	1.0836	2.2000e-003	0.0456	0.0411	0.0867	0.0123	0.0394	0.0517	0.0000	189.4597	189.4597	0.0276	4.0200e-003	191.3464
Maximum	**0.1681**	**0.9439**	**1.0836**	**2.2000e-003**	**0.0456**	**0.0411**	**0.0867**	**0.0136**	**0.0394**	**0.0517**	**0.0000**	**189.4597**	**189.4597**	**0.0276**	**4.0200e-003**	**191.3464**

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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0392	0.3183	0.3006	6.3000e-004	0.0206	0.0142	0.0348	7.1700e-003	0.0135	0.0207	0.0000	54.2222	54.2222	9.3800e-003	1.0900e-003	54.7815
2023	0.1681	0.9439	1.0836	2.2000e-003	0.0456	0.0411	0.0867	0.0123	0.0394	0.0517	0.0000	189.4596	189.4596	0.0276	4.0200e-003	191.3463
Maximum	**0.1681**	**0.9439**	**1.0836**	**2.2000e-003**	**0.0456**	**0.0411**	**0.0867**	**0.0123**	**0.0394**	**0.0517**	**0.0000**	**189.4596**	**189.4596**	**0.0276**	**4.0200e-003**	**191.3463**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**17.89**	**0.00**	**10.61**	**24.81**	**0.00**	**8.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	11-7-2022	2-6-2023	0.5690	0.5690
2	2-7-2023	5-6-2023	0.5604	0.5604
3	5-7-2023	8-6-2023	0.3284	0.3284
		Highest	0.5690	0.5690

2.2 Overall Operational

Unmitigated Operational

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0641	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.5000e-004	6.5000e-004	0.0000	0.0000	6.9000e-004
Energy	4.6000e-004	4.1500e-003	3.4900e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	35.1587	35.1587	2.6700e-003	4.0000e-004	35.3436
Mobile	0.6452	1.0157	6.5763	0.0142	1.4410	0.0116	1.4526	0.3849	0.0108	0.3958	0.0000	1,325.9303	1,325.9303	0.0789	0.0682	1,348.2241
Waste						0.0000	0.0000		0.0000	0.0000	3.4448	0.0000	3.4448	0.2036	0.0000	8.5342
Water						0.0000	0.0000		0.0000	0.0000	0.3223	3.5732	3.8956	0.0334	8.2000e-004	4.9747
Total	**0.7098**	**1.0198**	**6.5801**	**0.0142**	**1.4410**	**0.0119**	**1.4529**	**0.3849**	**0.0111**	**0.3961**	**3.7671**	**1,364.6629**	**1,368.4300**	**0.3186**	**0.0694**	**1,397.0773**

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	0.0641	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.5000e-004	6.5000e-004	0.0000	0.0000	6.9000e-004
Energy	4.6000e-004	4.1500e-003	3.4900e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	35.1587	35.1587	2.6700e-003	4.0000e-004	35.3436
Mobile	0.6452	1.0157	6.5763	0.0142	1.4410	0.0116	1.4526	0.3849	0.0108	0.3958	0.0000	1,325.9303	1,325.9303	0.0789	0.0682	1,348.2241

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Waste						0.0000	0.0000		0.0000	0.0000	3.4448	0.0000	3.4448	0.2036	0.0000	8.5342
Water						0.0000	0.0000		0.0000	0.0000	0.3223	3.5732	3.8956	0.0334	8.2000e-004	4.9747
Total	**0.7098**	**1.0198**	**6.5801**	**0.0142**	**1.4410**	**0.0119**	**1.4529**	**0.3849**	**0.0111**	**0.3961**	**3.7671**	**1,364.6629**	**1,368.4300**	**0.3186**	**0.0694**	**1,397.0773**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/7/2022	11/9/2022	5	3	
2	Grading	Grading	11/10/2022	11/17/2022	5	6	
3	Building Construction	Building Construction	11/18/2022	6/15/2023	5	150	
4	Architectural Coating	Architectural Coating	4/3/2023	6/15/2023	5	54	
5	Paving	Paving	6/16/2023	6/29/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 2.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,825; Non-Residential Outdoor: 7,275; Striped Parking Area: 6,795

OffRoad Equipment

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

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	52.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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Architectural Coating		1	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.3000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1055	0.1055	0.0000	0.0000	0.1065
Total	**5.0000e-005**	**4.0000e-005**	**4.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1055**	**0.1055**	**0.0000**	**0.0000**	**0.1065**

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					9.3000e-004	0.0000	9.3000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**9.3000e-004**	**8.9000e-004**	**1.8200e-003**	**1.0000e-004**	**8.2000e-004**	**9.2000e-004**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.3000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1055	0.1055	0.0000	0.0000	0.1065
Total	**5.0000e-005**	**4.0000e-005**	**4.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1055**	**0.1055**	**0.0000**	**0.0000**	**0.1065**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0213**	**2.2300e-003**	**0.0235**	**0.0103**	**2.0500e-003**	**0.0123**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

Unmitigated Construction Off-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.0600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2639	0.2639	1.0000e-005	1.0000e-005	0.2663
Total	**1.1000e-004**	**9.0000e-005**	**1.0600e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2639**	**0.2639**	**1.0000e-005**	**1.0000e-005**	**0.2663**

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					8.2900e-003	0.0000	8.2900e-003	4.0100e-003	0.0000	4.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**8.2900e-003**	**2.2300e-003**	**0.0105**	**4.0100e-003**	**2.0500e-003**	**6.0600e-003**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

Mitigated Construction Off-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.0600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2639	0.2639	1.0000e-005	1.0000e-005	0.2663
Total	**1.1000e-004**	**9.0000e-005**	**1.0600e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2639**	**0.2639**	**1.0000e-005**	**1.0000e-005**	**0.2663**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0288	0.2264	0.2225	3.9000e-004		0.0109	0.0109		0.0104	0.0104	0.0000	32.1904	32.1904	6.2100e-003	0.0000	32.3457
Total	**0.0288**	**0.2264**	**0.2225**	**3.9000e-004**		**0.0109**	**0.0109**		**0.0104**	**0.0104**	**0.0000**	**32.1904**	**32.1904**	**6.2100e-003**	**0.0000**	**32.3457**

Unmitigated Construction Off-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0150	5.3200e-003	6.0000e-005	2.0500e-003	1.7000e-004	2.2200e-003	5.9000e-004	1.6000e-004	7.5000e-004	0.0000	5.9106	5.9106	1.6000e-004	8.8000e-004	6.1754
Worker	3.0400e-003	2.3800e-003	0.0286	8.0000e-005	8.8400e-003	5.0000e-005	8.8800e-003	2.3500e-003	4.0000e-005	2.3900e-003	0.0000	7.0890	7.0890	2.0000e-004	2.0000e-004	7.1548
Total	**3.5900e-003**	**0.0174**	**0.0339**	**1.4000e-004**	**0.0109**	**2.2000e-004**	**0.0111**	**2.9400e-003**	**2.0000e-004**	**3.1400e-003**	**0.0000**	**12.9996**	**12.9996**	**3.6000e-004**	**1.0800e-003**	**13.3301**

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	0.0288	0.2264	0.2225	3.9000e-004		0.0109	0.0109		0.0104	0.0104	0.0000	32.1904	32.1904	6.2100e-003	0.0000	32.3456
Total	**0.0288**	**0.2264**	**0.2225**	**3.9000e-004**		**0.0109**	**0.0109**		**0.0104**	**0.0104**	**0.0000**	**32.1904**	**32.1904**	**6.2100e-003**	**0.0000**	**32.3456**

Mitigated Construction Off-Site

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0150	5.3200e-003	6.0000e-005	2.0500e-003	1.7000e-004	2.2200e-003	5.9000e-004	1.6000e-004	7.5000e-004	0.0000	5.9106	5.9106	1.6000e-004	8.8000e-004	6.1754
Worker	3.0400e-003	2.3800e-003	0.0286	8.0000e-005	8.8400e-003	5.0000e-005	8.8800e-003	2.3500e-003	4.0000e-005	2.3900e-003	0.0000	7.0890	7.0890	2.0000e-004	2.0000e-004	7.1548
Total	**3.5900e-003**	**0.0174**	**0.0339**	**1.4000e-004**	**0.0109**	**2.2000e-004**	**0.0111**	**2.9400e-003**	**2.0000e-004**	**3.1400e-003**	**0.0000**	**12.9996**	**12.9996**	**3.6000e-004**	**1.0800e-003**	**13.3301**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1020	0.8106	0.8458	1.4900e-003		0.0365	0.0365		0.0350	0.0350	0.0000	123.5827	123.5827	0.0234	0.0000	124.1670
Total	**0.1020**	**0.8106**	**0.8458**	**1.4900e-003**		**0.0365**	**0.0365**		**0.0350**	**0.0350**	**0.0000**	**123.5827**	**123.5827**	**0.0234**	**0.0000**	**124.1670**

Unmitigated Construction Off-Site

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4100e-003	0.0461	0.0187	2.2000e-004	7.8800e-003	3.3000e-004	8.2100e-003	2.2700e-003	3.2000e-004	2.5900e-003	0.0000	21.7767	21.7767	5.7000e-004	3.2200e-003	22.7499
Worker	0.0108	8.0500e-003	0.1007	2.9000e-004	0.0339	1.7000e-004	0.0341	9.0100e-003	1.6000e-004	9.1700e-003	0.0000	26.4957	26.4957	7.0000e-004	7.2000e-004	26.7274
Total	**0.0122**	**0.0542**	**0.1193**	**5.1000e-004**	**0.0418**	**5.0000e-004**	**0.0423**	**0.0113**	**4.8000e-004**	**0.0118**	**0.0000**	**48.2724**	**48.2724**	**1.2700e-003**	**3.9400e-003**	**49.4772**

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	0.1020	0.8106	0.8458	1.4900e-003		0.0365	0.0365		0.0350	0.0350	0.0000	123.5826	123.5826	0.0234	0.0000	124.1669
Total	**0.1020**	**0.8106**	**0.8458**	**1.4900e-003**		**0.0365**	**0.0365**		**0.0350**	**0.0350**	**0.0000**	**123.5826**	**123.5826**	**0.0234**	**0.0000**	**124.1669**

Mitigated Construction Off-Site

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4100e-003	0.0461	0.0187	2.2000e-004	7.8800e-003	3.3000e-004	8.2100e-003	2.2700e-003	3.2000e-004	2.5900e-003	0.0000	21.7767	21.7767	5.7000e-004	3.2200e-003	22.7499
Worker	0.0108	8.0500e-003	0.1007	2.9000e-004	0.0339	1.7000e-004	0.0341	9.0100e-003	1.6000e-004	9.1700e-003	0.0000	26.4957	26.4957	7.0000e-004	7.2000e-004	26.7274
Total	**0.0122**	**0.0542**	**0.1193**	**5.1000e-004**	**0.0418**	**5.0000e-004**	**0.0423**	**0.0113**	**4.8000e-004**	**0.0118**	**0.0000**	**48.2724**	**48.2724**	**1.2700e-003**	**3.9400e-003**	**49.4772**

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1700e-003	0.0352	0.0489	8.0000e-005		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	0.0000	6.8938	6.8938	4.1000e-004	0.0000	6.9041
Total	**0.0468**	**0.0352**	**0.0489**	**8.0000e-005**		**1.9100e-003**	**1.9100e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**6.8938**	**6.8938**	**4.1000e-004**	**0.0000**	**6.9041**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4000e-004	7.0000e-004	8.7900e-003	2.0000e-005	2.9600e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.3122	2.3122	6.0000e-005	6.0000e-005	2.3324
Total	**9.4000e-004**	**7.0000e-004**	**8.7900e-003**	**2.0000e-005**	**2.9600e-003**	**1.0000e-005**	**2.9800e-003**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**2.3122**	**2.3122**	**6.0000e-005**	**6.0000e-005**	**2.3324**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1700e-003	0.0352	0.0489	8.0000e-005		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	0.0000	6.8938	6.8938	4.1000e-004	0.0000	6.9041
Total	**0.0468**	**0.0352**	**0.0489**	**8.0000e-005**		**1.9100e-003**	**1.9100e-003**		**1.9100e-003**	**1.9100e-003**	**0.0000**	**6.8938**	**6.8938**	**4.1000e-004**	**0.0000**	**6.9041**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4000e-004	7.0000e-004	8.7900e-003	2.0000e-005	2.9600e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.3122	2.3122	6.0000e-005	6.0000e-005	2.3324
Total	**9.4000e-004**	**7.0000e-004**	**8.7900e-003**	**2.0000e-005**	**2.9600e-003**	**1.0000e-005**	**2.9800e-003**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**2.3122**	**2.3122**	**6.0000e-005**	**6.0000e-005**	**2.3324**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179
Paving	1.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

Total	**5.9700e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8179**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	2.4400e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6423	0.6423	2.0000e-005	2.0000e-005	0.6479
Total	**2.6000e-004**	**2.0000e-004**	**2.4400e-003**	**1.0000e-005**	**8.2000e-004**	**0.0000**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6423**	**0.6423**	**2.0000e-005**	**2.0000e-005**	**0.6479**

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178

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

Paving	1.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.9700e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8178**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.0000e-004	2.4400e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6423	0.6423	2.0000e-005	2.0000e-005	0.6479
Total	**2.6000e-004**	**2.0000e-004**	**2.4400e-003**	**1.0000e-005**	**8.2000e-004**	**0.0000**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6423**	**0.6423**	**2.0000e-005**	**2.0000e-005**	**0.6479**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6452	1.0157	6.5763	0.0142	1.4410	0.0116	1.4526	0.3849	0.0108	0.3958	0.0000	1,325.9303	1,325.9303	0.0789	0.0682	1,348.2241
Unmitigated	0.6452	1.0157	6.5763	0.0142	1.4410	0.0116	1.4526	0.3849	0.0108	0.3958	0.0000	1,325.9303	1,325.9303	0.0789	0.0682	1,348.2241

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	235.98	235.98	235.98	813,988	813,988
Convenience Market with Gas Pumps	1,010.04	1,010.04	1010.04	3,007,635	3,007,635
Total	1,246.02	1,246.02	1,246.02	3,821,623	3,821,623

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	100	0	0
Convenience Market with Gas	16.60	8.40	6.90	0.80	80.20	19.00	100	0	0

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Other Non-Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Strip Mall	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Convenience Market with Gas Pumps	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.6368	30.6368	2.5900e-003	3.1000e-004	30.7949
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.6368	30.6368	2.5900e-003	3.1000e-004	30.7949
NaturalGas Mitigated	4.6000e-004	4.1500e-003	3.4900e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5219	4.5219	9.0000e-005	8.0000e-005	4.5488
NaturalGas Unmitigated	4.6000e-004	4.1500e-003	3.4900e-003	2.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	4.5219	4.5219	9.0000e-005	8.0000e-005	4.5488

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	56577.5	3.1000e-004	2.7700e-003	2.3300e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	3.0192	3.0192	6.0000e-005	6.0000e-005	3.0371
Convenience Market with Gas	6600	4.0000e-005	3.2000e-004	2.7000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3522	0.3522	1.0000e-005	1.0000e-005	0.3543
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	21560	1.2000e-004	1.0600e-003	8.9000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1505	1.1505	2.0000e-005	2.0000e-005	1.1574
Total		**4.7000e-004**	**4.1500e-003**	**3.4900e-003**	**3.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**4.5219**	**4.5219**	**9.0000e-005**	**9.0000e-005**	**4.5488**

Mitigated

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

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

Automobile Care Center	56577.5	3.1000e-004	2.7700e-003	2.3300e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	3.0192	3.0192	6.0000e-005	6.0000e-005	3.0371
Convenience Market with Gas	6600	4.0000e-005	3.2000e-004	2.7000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3522	0.3522	1.0000e-005	1.0000e-005	0.3543
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	21560	1.2000e-004	1.0600e-003	8.9000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1505	1.1505	2.0000e-005	2.0000e-005	1.1574
Total		**4.7000e-004**	**4.1500e-003**	**3.4900e-003**	**3.0000e-005**		**3.1000e-004**	**3.1000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**4.5219**	**4.5219**	**9.0000e-005**	**9.0000e-005**	**4.5488**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	17360	3.0787	2.6000e-004	3.0000e-005	3.0946
Convenience Market with Gas	36420	6.4589	5.5000e-004	7.0000e-005	6.4923
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	118972	21.0992	1.7800e-003	2.2000e-004	21.2080
Total		**30.6368**	**2.5900e-003**	**3.2000e-004**	**30.7949**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	17360	3.0787	2.6000e-004	3.0000e-005	3.0946
Convenience Market with Gas	36420	6.4589	5.5000e-004	7.0000e-005	6.4923
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	118972	21.0992	1.7800e-003	2.2000e-004	21.2080
Total		**30.6368**	**2.5900e-003**	**3.2000e-004**	**30.7949**

6.0 Area Detail

6.1 Mitigation Measures Area

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0641	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.5000e-004	6.5000e-004	0.0000	0.0000	6.9000e-004
Unmitigated	0.0641	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.5000e-004	6.5000e-004	0.0000	0.0000	6.9000e-004

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	4.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.5000e-004	6.5000e-004	0.0000	0.0000	6.9000e-004
Total	**0.0641**	**0.0000**	**3.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.5000e-004**	**6.5000e-004**	**0.0000**	**0.0000**	**6.9000e-004**

Mitigated

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.5000e-004	6.5000e-004	0.0000	0.0000	6.9000e-004
Total	**0.0641**	**0.0000**	**3.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.5000e-004**	**6.5000e-004**	**0.0000**	**0.0000**	**6.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.8956	0.0334	8.2000e-004	4.9747
Unmitigated	3.8956	0.0334	8.2000e-004	4.9747

7.2 Water by Land Use

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.164642 / 0.10091	0.6313	5.4100e-003	1.3000e-004	0.8061
Convenience Market with Gas Pumps	0.125486 / 0.0769109	0.4811	4.1300e-003	1.0000e-004	0.6144
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.725911 / 0.444913	2.7832	0.0239	5.8000e-004	3.5542
Total		**3.8956**	**0.0334**	**8.1000e-004**	**4.9747**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.164642 / 0.10091	0.6313	5.4100e-003	1.3000e-004	0.8061
Convenience Market with Gas Pumps	0.125486 / 0.0769109	0.4811	4.1300e-003	1.0000e-004	0.6144

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.725911 / 0.444913	2.7832	0.0239	5.8000e-004	3.5542
Total		**3.8956**	**0.0334**	**8.1000e-004**	**4.9747**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.4448	0.2036	0.0000	8.5342
Unmitigated	3.4448	0.2036	0.0000	8.5342

8.2 Waste by Land Use

Unmitigated

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	6.68	1.3560	0.0801	0.0000	3.3594
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.29	2.0888	0.1234	0.0000	5.1749
Total		**3.4448**	**0.2036**	**0.0000**	**8.5342**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	6.68	1.3560	0.0801	0.0000	3.3594
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	10.29	2.0888	0.1234	0.0000	5.1749
Total		**3.4448**	**0.2036**	**0.0000**	**8.5342**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Annual

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

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Colton Reche Canyon Plaza

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.20	Acre	1.20	52,272.00	0
Other Non-Asphalt Surfaces	1.40	Acre	1.40	60,984.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	3,000.00	0
Strip Mall	9.80	1000sqft	0.22	9,800.00	0
Automobile Care Center	1.75	1000sqft	0.04	1,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The car wash was modeled as an Automotive Care Center. Asphalt and non-asphalt surfaces acreage determined from site plan. Total acreage adds up to 2.9 acres.

Construction Phase - Schedule per project plans.

Architectural Coating - Assume all coatings comply with SCAQMD Rule 1113

Vehicle Trips - Trip generation rates from Traffic Study, they include the pass-by reductions.

Area Coating - Assume compliance with SCAQMD Rule 1113

Date: 11/30/2021 4:10 PM

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Energy Use -

Construction Off-road Equipment Mitigation - Dust control measures assume compliance with SCAQMD Rule 403

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	50	100
tblAreaMitigation	UseLowVOCPaintParkingValue	50	100
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	220.00	150.00
tblConstructionPhase	NumDays	10.00	54.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	10/19/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	10/5/2023	6/29/2023
tblConstructionPhase	PhaseStartDate	10/6/2023	4/3/2023
tblConstructionPhase	PhaseStartDate	9/22/2023	6/16/2023
tblLandUse	LandUseSquareFeet	1,694.10	3,000.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	42.04	24.08
tblVehicleTrips	ST_TR	322.50	84.17
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	20.43	24.08
tblVehicleTrips	SU_TR	322.50	84.17
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	44.32	24.08
tblVehicleTrips	WD_TR	322.50	84.17

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					
2022	2.1123	17.0104	16.8329	0.0343	7.1944	0.7429	7.9372	3.4544	0.6864	4.1378	0.0000	3,255.2012	3,255.2012	0.7704	0.0758	3,289.4569
2023	3.7128	15.8098	18.6727	0.0380	0.8276	0.6934	1.5210	0.2225	0.6673	0.8898	0.0000	3,607.4340	3,607.4340	0.5456	0.0744	3,641.4958
Maximum	**3.7128**	**17.0104**	**18.6727**	**0.0380**	**7.1944**	**0.7429**	**7.9372**	**3.4544**	**0.6864**	**4.1378**	**0.0000**	**3,607.4340**	**3,607.4340**	**0.7704**	**0.0758**	**3,641.4958**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1123	17.0104	16.8329	0.0343	2.8740	0.7429	3.6169	1.3653	0.6864	2.0487	0.0000	3,255.2012	3,255.2012	0.7704	0.0758	3,289.4569
2023	3.7128	15.8098	18.6727	0.0380	0.8276	0.6934	1.5210	0.2225	0.6673	0.8898	0.0000	3,607.4340	3,607.4340	0.5456	0.0744	3,641.4958
Maximum	**3.7128**	**17.0104**	**18.6727**	**0.0380**	**2.8740**	**0.7429**	**3.6169**	**1.3653**	**0.6864**	**2.0487**	**0.0000**	**3,607.4340**	**3,607.4340**	**0.7704**	**0.0758**	**3,641.4958**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.86**	**0.00**	**45.68**	**56.82**	**0.00**	**41.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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					

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Area	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Energy	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750
Mobile	4.1247	5.1508	38.7555	0.0829	8.0699	0.0635	8.1334	2.1524	0.0594	2.2118		8,538.0867	8,538.0867	0.4602	0.3972	8,667.9608
Total	**4.4784**	**5.1735**	**38.7773**	**0.0831**	**8.0699**	**0.0652**	**8.1352**	**2.1524**	**0.0612**	**2.2136**		**8,565.4051**	**8,565.4051**	**0.4608**	**0.3977**	**8,695.4419**

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	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Energy	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750
Mobile	4.1247	5.1508	38.7555	0.0829	8.0699	0.0635	8.1334	2.1524	0.0594	2.2118		8,538.0867	8,538.0867	0.4602	0.3972	8,667.9608
Total	**4.4784**	**5.1735**	**38.7773**	**0.0831**	**8.0699**	**0.0652**	**8.1352**	**2.1524**	**0.0612**	**2.2136**		**8,565.4051**	**8,565.4051**	**0.4608**	**0.3977**	**8,695.4419**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/7/2022	11/9/2022	5	3	
2	Grading	Grading	11/10/2022	11/17/2022	5	6	
3	Building Construction	Building Construction	11/18/2022	6/15/2023	5	150	
4	Architectural Coating	Architectural Coating	4/3/2023	6/15/2023	5	54	
5	Paving	Paving	6/16/2023	6/29/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 2.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,825; Non-Residential Outdoor: 7,275; Striped Parking Area: 6,795

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	52.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0339	0.0215	0.3296	8.3000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		83.9654	83.9654	2.1800e-003	2.0900e-003	84.6427
Total	**0.0339**	**0.0215**	**0.3296**	**8.3000e-004**	**0.0894**	**4.7000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0242**		**83.9654**	**83.9654**	**2.1800e-003**	**2.0900e-003**	**84.6427**

Mitigated Construction On-Site

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.6204**	**0.5952**	**1.2156**	**0.0670**	**0.5476**	**0.6146**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0339	0.0215	0.3296	8.3000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		83.9654	83.9654	2.1800e-003	2.0900e-003	84.6427
Total	**0.0339**	**0.0215**	**0.3296**	**8.3000e-004**	**0.0894**	**4.7000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0242**		**83.9654**	**83.9654**	**2.1800e-003**	**2.0900e-003**	**84.6427**

3.3 Grading - 2022

Unmitigated Construction On-Site

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.0826**	**0.7423**	**7.8249**	**3.4247**	**0.6829**	**4.1076**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0424	0.0268	0.4120	1.0300e-003	0.1118	5.9000e-004	0.1124	0.0296	5.4000e-004	0.0302		104.9568	104.9568	2.7300e-003	2.6100e-003	105.8034
Total	**0.0424**	**0.0268**	**0.4120**	**1.0300e-003**	**0.1118**	**5.9000e-004**	**0.1124**	**0.0296**	**5.4000e-004**	**0.0302**		**104.9568**	**104.9568**	**2.7300e-003**	**2.6100e-003**	**105.8034**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

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					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.7622**	**0.7423**	**3.5045**	**1.3357**	**0.6829**	**2.0186**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0424	0.0268	0.4120	1.0300e-003	0.1118	5.9000e-004	0.1124	0.0296	5.4000e-004	0.0302		104.9568	104.9568	2.7300e-003	2.6100e-003	105.8034
Total	**0.0424**	**0.0268**	**0.4120**	**1.0300e-003**	**0.1118**	**5.9000e-004**	**0.1124**	**0.0296**	**5.4000e-004**	**0.0302**		**104.9568**	**104.9568**	**2.7300e-003**	**2.6100e-003**	**105.8034**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0366	0.9196	0.3375	3.9200e-003	0.1345	0.0109	0.1455	0.0387	0.0105	0.0492		420.1446	420.1446	0.0114	0.0622	438.9564
Worker	0.2202	0.1395	2.1422	5.3700e-003	0.5812	3.0500e-003	0.5843	0.1542	2.8100e-003	0.1570		545.7753	545.7753	0.0142	0.0136	550.1775
Total	**0.2568**	**1.0591**	**2.4797**	**9.2900e-003**	**0.7158**	**0.0140**	**0.7298**	**0.1929**	**0.0133**	**0.2062**		**965.9199**	**965.9199**	**0.0256**	**0.0758**	**989.1339**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0366	0.9196	0.3375	3.9200e-003	0.1345	0.0109	0.1455	0.0387	0.0105	0.0492		420.1446	420.1446	0.0114	0.0622	438.9564
Worker	0.2202	0.1395	2.1422	5.3700e-003	0.5812	3.0500e-003	0.5843	0.1542	2.8100e-003	0.1570		545.7753	545.7753	0.0142	0.0136	550.1775
Total	**0.2568**	**1.0591**	**2.4797**	**9.2900e-003**	**0.7158**	**0.0140**	**0.7298**	**0.1929**	**0.0133**	**0.2062**		**965.9199**	**965.9199**	**0.0256**	**0.0758**	**989.1339**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0246	0.7366	0.3091	3.7600e-003	0.1345	5.5400e-003	0.1401	0.0387	5.3000e-003	0.0440		403.0282	403.0282	0.0105	0.0595	421.0274
Worker	0.2033	0.1227	1.9610	5.1900e-003	0.5812	2.8700e-003	0.5841	0.1542	2.6400e-003	0.1568		531.2676	531.2676	0.0127	0.0125	535.3077
Total	**0.2279**	**0.8593**	**2.2701**	**8.9500e-003**	**0.7158**	**8.4100e-003**	**0.7242**	**0.1929**	**7.9400e-003**	**0.2008**		**934.2958**	**934.2958**	**0.0232**	**0.0720**	**956.3351**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0246	0.7366	0.3091	3.7600e-003	0.1345	5.5400e-003	0.1401	0.0387	5.3000e-003	0.0440		403.0282	403.0282	0.0105	0.0595	421.0274
Worker	0.2033	0.1227	1.9610	5.1900e-003	0.5812	2.8700e-003	0.5841	0.1542	2.6400e-003	0.1568		531.2676	531.2676	0.0127	0.0125	535.3077
Total	**0.2279**	**0.8593**	**2.2701**	**8.9500e-003**	**0.7158**	**8.4100e-003**	**0.7242**	**0.1929**	**7.9400e-003**	**0.2008**		**934.2958**	**934.2958**	**0.0232**	**0.0720**	**956.3351**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.5405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**1.7322**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0391	0.0236	0.3771	1.0000e-003	0.1118	5.5000e-004	0.1123	0.0296	5.1000e-004	0.0302		102.1669	102.1669	2.4400e-003	2.4000e-003	102.9438

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Total	**0.0391**	**0.0236**	**0.3771**	**1.0000e-003**	**0.1118**	**5.5000e-004**	**0.1123**	**0.0296**	**5.1000e-004**	**0.0302**		**102.1669**	**102.1669**	**2.4400e-003**	**2.4000e-003**	**102.9438**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.5405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**1.7322**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Worker	0.0391	0.0236	0.3771	1.0000e-003	0.1118	5.5000e-004	0.1123	0.0296	5.1000e-004	0.0302		102.1669	102.1669	2.4400e-003	2.4000e-003	102.9438
Total	**0.0391**	**0.0236**	**0.3771**	**1.0000e-003**	**0.1118**	**5.5000e-004**	**0.1123**	**0.0296**	**5.1000e-004**	**0.0302**		**102.1669**	**102.1669**	**2.4400e-003**	**2.4000e-003**	**102.9438**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1946**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0354	0.5657	1.5000e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		153.2503	153.2503	3.6600e-003	3.6000e-003	154.4157
Total	**0.0587**	**0.0354**	**0.5657**	**1.5000e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**153.2503**	**153.2503**	**3.6600e-003**	**3.6000e-003**	**154.4157**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1946**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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					

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0354	0.5657	1.5000e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		153.2503	153.2503	3.6600e-003	3.6000e-003	154.4157
Total	**0.0587**	**0.0354**	**0.5657**	**1.5000e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**153.2503**	**153.2503**	**3.6600e-003**	**3.6000e-003**	**154.4157**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1247	5.1508	38.7555	0.0829	8.0699	0.0635	8.1334	2.1524	0.0594	2.2118		8,538.0867	8,538.0867	0.4602	0.3972	8,667.9608
Unmitigated	4.1247	5.1508	38.7555	0.0829	8.0699	0.0635	8.1334	2.1524	0.0594	2.2118		8,538.0867	8,538.0867	0.4602	0.3972	8,667.9608

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	235.98	235.98	235.98	813,988	813,988
Convenience Market with Gas Pumps	1,010.04	1,010.04	1010.04	3,007,635	3,007,635
Total	1,246.02	1,246.02	1,246.02	3,821,623	3,821,623

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	100	0	0
Convenience Market with Gas	16.60	8.40	6.90	0.80	80.20	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Other Non-Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Strip Mall	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Convenience Market with Gas Pumps	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750
NaturalGas Unmitigated	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	155.007	1.6700e-003	0.0152	0.0128	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003		18.2361	18.2361	3.5000e-004	3.3000e-004	18.3445
Convenience Market with Gas ...	18.0822	2.0000e-004	1.7700e-003	1.4900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.1273	2.1273	4.0000e-005	4.0000e-005	2.1400
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	59.0685	6.4000e-004	5.7900e-003	4.8600e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		6.9492	6.9492	1.3000e-004	1.3000e-004	6.9905
Total		**2.5100e-003**	**0.0228**	**0.0191**	**1.3000e-004**		**1.7200e-003**	**1.7200e-003**		**1.7200e-003**	**1.7200e-003**		**27.3127**	**27.3127**	**5.2000e-004**	**5.0000e-004**	**27.4750**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.155007	1.6700e-003	0.0152	0.0128	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003		18.2361	18.2361	3.5000e-004	3.3000e-004	18.3445
Convenience Market with Gas Pumps	0.0180822	2.0000e-004	1.7700e-003	1.4900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.1273	2.1273	4.0000e-005	4.0000e-005	2.1400
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0590685	6.4000e-004	5.7900e-003	4.8600e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		6.9492	6.9492	1.3000e-004	1.3000e-004	6.9905
Total		**2.5100e-003**	**0.0228**	**0.0191**	**1.3000e-004**		**1.7200e-003**	**1.7200e-003**		**1.7200e-003**	**1.7200e-003**		**27.3127**	**27.3127**	**5.2000e-004**	**5.0000e-004**	**27.4750**

6.0 Area Detail

6.1 Mitigation Measures Area

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Unmitigated	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Total	**0.3513**	**2.0000e-005**	**2.6700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7200e-003**	**5.7200e-003**	**2.0000e-005**		**6.1000e-003**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

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	0.0228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Total	**0.3513**	**2.0000e-005**	**2.6700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7200e-003**	**5.7200e-003**	**2.0000e-005**		**6.1000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Summer

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

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Colton Reche Canyon Plaza

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.20	Acre	1.20	52,272.00	0
Other Non-Asphalt Surfaces	1.40	Acre	1.40	60,984.00	0
Convenience Market with Gas Pumps	12.00	Pump	0.04	3,000.00	0
Strip Mall	9.80	1000sqft	0.22	9,800.00	0
Automobile Care Center	1.75	1000sqft	0.04	1,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The car wash was modeled as an Automotive Care Center. Asphalt and non-asphalt surfaces acreage determined from site plan. Total acreage adds up to 2.9 acres.

Construction Phase - Schedule per project plans.

Architectural Coating - Assume all coatings comply with SCAQMD Rule 1113

Vehicle Trips - Trip generation rates from Traffic Study, they include the pass-by reductions.

Area Coating - Assume compliance with SCAQMD Rule 1113

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Energy Use -

Construction Off-road Equipment Mitigation - Dust control measures assume compliance with SCAQMD Rule 403

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	50	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	50	100
tblAreaMitigation	UseLowVOCPaintParkingValue	50	100
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	220.00	150.00
tblConstructionPhase	NumDays	10.00	54.00
tblConstructionPhase	PhaseEndDate	9/21/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	10/19/2023	6/15/2023
tblConstructionPhase	PhaseEndDate	10/5/2023	6/29/2023
tblConstructionPhase	PhaseStartDate	10/6/2023	4/3/2023
tblConstructionPhase	PhaseStartDate	9/22/2023	6/16/2023
tblLandUse	LandUseSquareFeet	1,694.10	3,000.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	42.04	24.08
tblVehicleTrips	ST_TR	322.50	84.17
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	20.43	24.08
tblVehicleTrips	SU_TR	322.50	84.17
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	44.32	24.08
tblVehicleTrips	WD_TR	322.50	84.17

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					
2022	2.1022	17.0118	16.4623	0.0338	7.1944	0.7429	7.9372	3.4544	0.6864	4.1378	0.0000	3,204.1955	3,204.1955	0.7704	0.0763	3,238.6121
2023	3.7022	15.8588	18.2686	0.0374	0.8276	0.6934	1.5210	0.2225	0.6673	0.8899	0.0000	3,548.8525	3,548.8525	0.5456	0.0751	3,583.1104
Maximum	**3.7022**	**17.0118**	**18.2686**	**0.0374**	**7.1944**	**0.7429**	**7.9372**	**3.4544**	**0.6864**	**4.1378**	**0.0000**	**3,548.8525**	**3,548.8525**	**0.7704**	**0.0763**	**3,583.1104**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1022	17.0118	16.4623	0.0338	2.8740	0.7429	3.6169	1.3653	0.6864	2.0487	0.0000	3,204.1955	3,204.1955	0.7704	0.0763	3,238.6121
2023	3.7022	15.8588	18.2686	0.0374	0.8276	0.6934	1.5210	0.2225	0.6673	0.8899	0.0000	3,548.8525	3,548.8525	0.5456	0.0751	3,583.1104
Maximum	**3.7022**	**17.0118**	**18.2686**	**0.0374**	**2.8740**	**0.7429**	**3.6169**	**1.3653**	**0.6864**	**2.0487**	**0.0000**	**3,548.8525**	**3,548.8525**	**0.7704**	**0.0763**	**3,583.1104**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.86**	**0.00**	**45.68**	**56.82**	**0.00**	**41.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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					

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Area	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Energy	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750
Mobile	3.5772	5.4695	34.6912	0.0769	8.0699	0.0635	8.1335	2.1524	0.0595	2.2119		7,922.3411	7,922.3411	0.4729	0.4074	8,055.5659
Total	**3.9309**	**5.4923**	**34.7130**	**0.0770**	**8.0699**	**0.0653**	**8.1352**	**2.1524**	**0.0612**	**2.2136**		**7,949.6595**	**7,949.6595**	**0.4735**	**0.4079**	**8,083.0470**

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	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Energy	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750
Mobile	3.5772	5.4695	34.6912	0.0769	8.0699	0.0635	8.1335	2.1524	0.0595	2.2119		7,922.3411	7,922.3411	0.4729	0.4074	8,055.5659
Total	**3.9309**	**5.4923**	**34.7130**	**0.0770**	**8.0699**	**0.0653**	**8.1352**	**2.1524**	**0.0612**	**2.2136**		**7,949.6595**	**7,949.6595**	**0.4735**	**0.4079**	**8,083.0470**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/7/2022	11/9/2022	5	3	
2	Grading	Grading	11/10/2022	11/17/2022	5	6	
3	Building Construction	Building Construction	11/18/2022	6/15/2023	5	150	
4	Architectural Coating	Architectural Coating	4/3/2023	6/15/2023	5	54	
5	Paving	Paving	6/16/2023	6/29/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 2.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,825; Non-Residential Outdoor: 7,275; Striped Parking Area: 6,795

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	52.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0326	0.0226	0.2707	7.5000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		76.0471	76.0471	2.1800e-003	2.1600e-003	76.7445
Total	**0.0326**	**0.0226**	**0.2707**	**7.5000e-004**	**0.0894**	**4.7000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0242**		**76.0471**	**76.0471**	**2.1800e-003**	**2.1600e-003**	**76.7445**

Mitigated Construction On-Site

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.6204**	**0.5952**	**1.2156**	**0.0670**	**0.5476**	**0.6146**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0326	0.0226	0.2707	7.5000e-004	0.0894	4.7000e-004	0.0899	0.0237	4.3000e-004	0.0242		76.0471	76.0471	2.1800e-003	2.1600e-003	76.7445
Total	**0.0326**	**0.0226**	**0.2707**	**7.5000e-004**	**0.0894**	**4.7000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0242**		**76.0471**	**76.0471**	**2.1800e-003**	**2.1600e-003**	**76.7445**

3.3 Grading - 2022

Unmitigated Construction On-Site

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.0826**	**0.7423**	**7.8249**	**3.4247**	**0.6829**	**4.1076**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0407	0.0282	0.3384	9.3000e-004	0.1118	5.9000e-004	0.1124	0.0296	5.4000e-004	0.0302		95.0589	95.0589	2.7200e-003	2.7000e-003	95.9306
Total	**0.0407**	**0.0282**	**0.3384**	**9.3000e-004**	**0.1118**	**5.9000e-004**	**0.1124**	**0.0296**	**5.4000e-004**	**0.0302**		**95.0589**	**95.0589**	**2.7200e-003**	**2.7000e-003**	**95.9306**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

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					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.7622**	**0.7423**	**3.5045**	**1.3357**	**0.6829**	**2.0186**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0407	0.0282	0.3384	9.3000e-004	0.1118	5.9000e-004	0.1124	0.0296	5.4000e-004	0.0302		95.0589	95.0589	2.7200e-003	2.7000e-003	95.9306
Total	**0.0407**	**0.0282**	**0.3384**	**9.3000e-004**	**0.1118**	**5.9000e-004**	**0.1124**	**0.0296**	**5.4000e-004**	**0.0302**		**95.0589**	**95.0589**	**2.7200e-003**	**2.7000e-003**	**95.9306**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0352	0.9654	0.3494	3.9200e-003	0.1345	0.0110	0.1455	0.0387	0.0105	0.0492		420.6080	420.6080	0.0113	0.0623	439.4502
Worker	0.2116	0.1467	1.7597	4.8600e-003	0.5812	3.0500e-003	0.5843	0.1542	2.8100e-003	0.1570		494.3063	494.3063	0.0142	0.0140	498.8389
Total	**0.2467**	**1.1121**	**2.1090**	**8.7800e-003**	**0.7158**	**0.0140**	**0.7298**	**0.1929**	**0.0133**	**0.2062**		**914.9143**	**914.9143**	**0.0254**	**0.0763**	**938.2891**

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Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0352	0.9654	0.3494	3.9200e-003	0.1345	0.0110	0.1455	0.0387	0.0105	0.0492		420.6080	420.6080	0.0113	0.0623	439.4502
Worker	0.2116	0.1467	1.7597	4.8600e-003	0.5812	3.0500e-003	0.5843	0.1542	2.8100e-003	0.1570		494.3063	494.3063	0.0142	0.0140	498.8389
Total	**0.2467**	**1.1121**	**2.1090**	**8.7800e-003**	**0.7158**	**0.0140**	**0.7298**	**0.1929**	**0.0133**	**0.2062**		**914.9143**	**914.9143**	**0.0254**	**0.0763**	**938.2891**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0229	0.7780	0.3186	3.7700e-003	0.1345	5.5600e-003	0.1401	0.0387	5.3200e-003	0.0441		404.0056	404.0056	0.0105	0.0597	422.0577
Worker	0.1959	0.1290	1.6140	4.7000e-003	0.5812	2.8700e-003	0.5841	0.1542	2.6400e-003	0.1568		481.3150	481.3150	0.0127	0.0129	485.4751
Total	**0.2187**	**0.9070**	**1.9326**	**8.4700e-003**	**0.7158**	**8.4300e-003**	**0.7242**	**0.1929**	**7.9600e-003**	**0.2009**		**885.3205**	**885.3205**	**0.0232**	**0.0726**	**907.5329**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0229	0.7780	0.3186	3.7700e-003	0.1345	5.5600e-003	0.1401	0.0387	5.3200e-003	0.0441		404.0056	404.0056	0.0105	0.0597	422.0577
Worker	0.1959	0.1290	1.6140	4.7000e-003	0.5812	2.8700e-003	0.5841	0.1542	2.6400e-003	0.1568		481.3150	481.3150	0.0127	0.0129	485.4751
Total	**0.2187**	**0.9070**	**1.9326**	**8.4700e-003**	**0.7158**	**8.4300e-003**	**0.7242**	**0.1929**	**7.9600e-003**	**0.2009**		**885.3205**	**885.3205**	**0.0232**	**0.0726**	**907.5329**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

3.5 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.5405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**1.7322**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0377	0.0248	0.3104	9.0000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.1000e-004	0.0302		92.5606	92.5606	2.4400e-003	2.4800e-003	93.3606

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Total	**0.0377**	**0.0248**	**0.3104**	**9.0000e-004**	**0.1118**	**5.5000e-004**	**0.1123**	**0.0296**	**5.1000e-004**	**0.0302**		**92.5606**	**92.5606**	**2.4400e-003**	**2.4800e-003**	**93.3606**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.5405					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**1.7322**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Worker	0.0377	0.0248	0.3104	9.0000e-004	0.1118	5.5000e-004	0.1123	0.0296	5.1000e-004	0.0302		92.5606	92.5606	2.4400e-003	2.4800e-003	93.3606
Total	**0.0377**	**0.0248**	**0.3104**	**9.0000e-004**	**0.1118**	**5.5000e-004**	**0.1123**	**0.0296**	**5.1000e-004**	**0.0302**		**92.5606**	**92.5606**	**2.4400e-003**	**2.4800e-003**	**93.3606**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1946**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0372	0.4656	1.3600e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		138.8409	138.8409	3.6600e-003	3.7200e-003	140.0409
Total	**0.0565**	**0.0372**	**0.4656**	**1.3600e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**138.8409**	**138.8409**	**3.6600e-003**	**3.7200e-003**	**140.0409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1946**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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					

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0372	0.4656	1.3600e-003	0.1677	8.3000e-004	0.1685	0.0445	7.6000e-004	0.0452		138.8409	138.8409	3.6600e-003	3.7200e-003	140.0409
Total	**0.0565**	**0.0372**	**0.4656**	**1.3600e-003**	**0.1677**	**8.3000e-004**	**0.1685**	**0.0445**	**7.6000e-004**	**0.0452**		**138.8409**	**138.8409**	**3.6600e-003**	**3.7200e-003**	**140.0409**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5772	5.4695	34.6912	0.0769	8.0699	0.0635	8.1335	2.1524	0.0595	2.2119		7,922.3411	7,922.3411	0.4729	0.4074	8,055.5659
Unmitigated	3.5772	5.4695	34.6912	0.0769	8.0699	0.0635	8.1335	2.1524	0.0595	2.2119		7,922.3411	7,922.3411	0.4729	0.4074	8,055.5659

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	235.98	235.98	235.98	813,988	813,988
Convenience Market with Gas Pumps	1,010.04	1,010.04	1010.04	3,007,635	3,007,635
Total	1,246.02	1,246.02	1,246.02	3,821,623	3,821,623

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	100	0	0
Convenience Market with Gas	16.60	8.40	6.90	0.80	80.20	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Other Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Other Non-Asphalt Surfaces	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Strip Mall	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071
Convenience Market with Gas Pumps	0.537785	0.055838	0.172353	0.139003	0.027005	0.007196	0.011392	0.017285	0.000559	0.000254	0.025303	0.000954	0.005071

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750
NaturalGas Unmitigated	2.5000e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003		27.3127	27.3127	5.2000e-004	5.0000e-004	27.4750

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	155.007	1.6700e-003	0.0152	0.0128	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003		18.2361	18.2361	3.5000e-004	3.3000e-004	18.3445
Convenience Market with Gas ...	18.0822	2.0000e-004	1.7700e-003	1.4900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.1273	2.1273	4.0000e-005	4.0000e-005	2.1400
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	59.0685	6.4000e-004	5.7900e-003	4.8600e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		6.9492	6.9492	1.3000e-004	1.3000e-004	6.9905
Total		**2.5100e-003**	**0.0228**	**0.0191**	**1.3000e-004**		**1.7200e-003**	**1.7200e-003**		**1.7200e-003**	**1.7200e-003**		**27.3127**	**27.3127**	**5.2000e-004**	**5.0000e-004**	**27.4750**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.155007	1.6700e-003	0.0152	0.0128	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003		18.2361	18.2361	3.5000e-004	3.3000e-004	18.3445
Convenience Market with Gas Pumps	0.0180822	2.0000e-004	1.7700e-003	1.4900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.1273	2.1273	4.0000e-005	4.0000e-005	2.1400
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0590685	6.4000e-004	5.7900e-003	4.8600e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		6.9492	6.9492	1.3000e-004	1.3000e-004	6.9905
Total		**2.5100e-003**	**0.0228**	**0.0191**	**1.3000e-004**		**1.7200e-003**	**1.7200e-003**		**1.7200e-003**	**1.7200e-003**		**27.3127**	**27.3127**	**5.2000e-004**	**5.0000e-004**	**27.4750**

6.0 Area Detail

6.1 Mitigation Measures Area

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Unmitigated	0.3512	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Total	**0.3513**	**2.0000e-005**	**2.6700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7200e-003**	**5.7200e-003**	**2.0000e-005**		**6.1000e-003**

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

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	0.0228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7200e-003	5.7200e-003	2.0000e-005		6.1000e-003
Total	**0.3513**	**2.0000e-005**	**2.6700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7200e-003**	**5.7200e-003**	**2.0000e-005**		**6.1000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Colton Reche Canyon Plaza - San Bernardino-South Coast County, Winter

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

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B-2

ENERGY CALCULATIONS

Construction Off-Road Equipment											
Phase	**Off-Road Equipment Type**	**Amount**	**Usage Hour/Day**	**Total Usage Days**	**Total Usage Hours/Equipment**	**Horsepower**	**Load Factor**	**Total Usage Hours/ Equipment**	**Horsepower-Hour**	**Fuel Usage (gallons)**	
Site Preparation	Graders	1	8	3	24	187	0.41	24	1840.08	94.212096	
	Scrapers	1	8	3	24	367	0.48	24	4227.84	216.465408	
	Tractors/Loaders/Backhoes	1	8	3	24	97	0.37	24	861.36	44.101632	
Grading	Graders	1	8	6	48	187	0.41	48	3680.16	188.424192	
	Rubber Tired Dozers	1	8	6	48	247	0.4	48	4742.4	242.81088	
	Tractors/Loaders/Backhoes	2	7	6	84	97	0.37	84	3014.76	154.355712	
Building Construction	Cranes	1	8	150	1200	231	0.29	1200	80388	4115.8656	
	Forklifts	2	7	150	2100	89	0.2	2100	37380	1913.856	
	Generator Sets	1	8	150	1200	84	0.74	1200	74592	3819.1104	
	Tractors/Loaders/Backhoes	1	6	15	90	97	0.37	90	3230.1	165.38112	
	Welders	3	8	150	3600	46	0.45	3600	74520	3815.424	
Paving	Cement and Mortar Mixers	1	8	10	80	9	0.56	80	403.2	20.64384	
	Pavers	1	8	10	80	130	0.42	80	4368	223.6416	
	Paving Equipment	1	8	10	80	132	0.36	80	3801.6	194.64192	
	Rollers	2	8	10	160	80	0.38	160	4864	249.0368	
	Tractors/Loaders/Backhoes	1	8	10	80	97	0.37	80	2871.2	147.00544	
Architectural Coating	Air Compressors	1	6	54	324	78	0.48	324	12130.56	621.084672	
									Total	**16226.06131**	Diesel

Construction Truck and Construction Worker Vehicle Fuel Efficiency				
		EMFAC 2021 Outputs		
Vehicle Type	Vehicle Class	Fuel Consumption (1,000 gallons/day)	VMT (miles/ day)	Fuel Efficency (miles/gallon)
Construction Truck	MHDT	87.3	783257.2	9.0
	HHDT	703.5	4194213	6.0
	HHDT/MHDT	-	-	7.5
Construction Worker Vehicle	LDA	1157.5	32956006.0	28.5
	LDT1	108.0	238748	2.2
	LDT2	554.6	12649675	22.8
	Worker Mix	-	-	20.5

Notes:

[1] For construction trucks assumes 50 percent HHDT and 50 percent MHDT vehicles, consistent with assumptions in CalEEMod for hauling trucks. For construction worker vehicles assumes 50 percent LDA, 25 percent LDT1, and 25 percent LDT2 vehicles, consistent with assumptions in CalEEMod for worker vehicles.

[2] EMFAC2021 was run for San Bernardino County for the construction year 2022. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Vehicle Fuel Use - Diesel Vehicles						
Phase	Trip Type	Total Trips	Trip Length (miles)	Total VMT	Diesel Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Building Construction	Vendor	6300	6.9	43470	7.5	5796.0
					Total	**5796.0**

Diesel

[1] Assumes 100 percent HHDT vehicles for haul trucks and 50 percent HHDT/50 percent MHDT vehicles for MHDT, consistent with assumptions in CalEEMod.

[2] EMFAC2021 was run for San Bernardino County for the construction year 2022. Data was aggregated over all vehicle model years and speed bins.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Construction Worker Vehicle Fuel Use - Gasoline Vehicles							
Phase	Total One-Way Trips/Day	Total Days	Total Trips	Trip Length (miles)	Total VMT	Gasoline Fuel Effiency (miles/gallon)	Fuel Usage (gallons/year)
Site Preparation	8	3	48	14.7	705.6	20.5	34.4
Grading	10	6	120	14.7	1764	20.5	86.0
Building Construction	52	150	15600	14.7	229320	20.5	11186.3
Paving	15	10	300	14.7	4410	20.5	215.1
Architectural Coating	10	54	1080	14.7	15876	20.5	774.4
						Total	**12296.4**

Gas

Total Construction Gasoline Usage	12296.4
Total Construction Diesel Usage	22022.1

Proposed Project Operational Trips			
Vehicle Class	CalEEMod	Total Project Trips	Total Trips per Vehicle Class
LDA	0.537785	1246	670.1
LDT1	0.055838	1246	69.6
LDT2	0.172353	1246	214.8
MDV	0.139003	1246	173.2
LHD1	0.027005	1246	33.6
LHD2	0.007196	1246	9.0
MHD	0.011392	1246	14.2
HHD	0.017285	1246	21.5
OBUS	0.000559	1246	0.7
UBUS	0.000254	1246	0.3
MCY	0.025303	1246	31.5
SBUS	0.000954	1246	1.2
MH	0.005071	1246	6.3

Proposed Project Operational Trips – Fuel Efficiency						
Fuel	Vehicle Class	EMFAC2021 Outputs1				
		Fleet Mix (%)2	Consumption (1,000 gallons/day)	VMT (miles/day)	Fuel Efficiency3 (miles/gallon)	
Gas	LDA	69%	1,140.9	33,073,440.0	29.0	19.9
	LDT1	5%	104.7	2,503,906.0	23.9	1.2
	LDT2	3%	561.9	1,316,023.0	2.3	0.1
	MDV	21%	520.9	9,891,875.0	19.0	3.9
	LHD1	2%	86.1	1,119,164.0	13.0	0.3
	MCY	0%	5.6	229,041.2	41.3	0.2
	MH	0%	12.5	60,515.3	4.8	0.0
	Fleet Mix	–	–	–	25.6	25.6
Diesel	LHD2	7%	21.6	366,079.8	17.0	1.1
	MHDT	15%	88.8	797,273.2	9.0	1.3
	HHDT	79%	711.5	4,294,976.0	6.0	4.7
	Fleet Mix	–	–	–	7.2	7.2

Notes:

[1] EMFAC2021 was run for San Bernardino County for the year 2023. Data was aggregated over all vehicle model years and speed bins.

[2] Fleet mix is based on assumptions made in CalEEMod for the proposed project.

[3] The fuel efficiency was calculated by dividing the VMT (miles/day) by the fuel consumption (gallons/day).

Proposed Project Operational Trips – Fuel Usage						
Land Use	Total Annual VMT2 (miles/year)	Fuel Type	Portion of Fleet3 (%)	VMT by Fuel Type (miles/year)	Fleet Mix Efficiency4 (miles/gallon)	Fuel Usage (gallons/ year)
Strip Mall	813,988.00	Gas	96%	784331	25.6	30635.0
		Diesel	4%	29200	7.2	4055.9
Convenience Strip Market with Gas	3,007,635.00	Gas	96%	2898055	25.6	113194.3
		Diesel	4%	107893	7.2	14986.3
					Total Gasoline/year	**143829.2**
					Total Diesel/year	**19042.2**

Notes:

[1] Calculated for year 2023 only. Future years will likely use less fuel due to more efficient cars.

[2] Total VMT is based on project's trip generation and trip lengths.

[3] Fleet distribution is based on EMFAC2021 output and CalEEMod assumptions.

[4] Fuel efficiency is based on fuel consumption and VMT data from EMFAC2021 for San Bernardino County and total VMT.

Electricity Usage	
Electricity by Land Use	**kWh/year**
Automobile Cara Center	17360
Convenience Market with Gas Station	36420
Other Asphalt susrfaces	0
Other Non-Asphalt surfaces	0
Strip Mall	118972
Total	**172,752**

Natural Gas Usage			
Natural Gas by Land Use	**kBTU/year**	**BTU/year**	**therms/year**
Automobile Cara Center	56,578	56,577,500	566
Convenience Market with Gas Station	6600	6,600,000	66
Other Asphalt susrfaces	0	-	-
Other Non-Asphalt surfaces	-	-	-
Strip Mall	21560	21,560,000	216
Total	**84,738**	**84,737,500**	**848**

APPENDIX C

BIOLOGICAL RESOURCES ASSESSMENT

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

September 14, 2021

Mr. Mario Suarez, AICP, CNU-A, Planning Manager
City of Colton Development Services Department
659 N. La Cadena Drive
Colton, California 92324

Subject: Biological Resources Assessment for the Reche Canyon Plaza Commercial Project, City of Colton, California (LSA Project No. CLT1802.06)

Dear Mr. Suarez:

This letter serves to document the results of a biological resources assessment of the 2.9-acre project site located northwest of the intersection of Reche Canyon Road and Old Reche Canyon Road in the City of Colton, San Bernardino County. The project site consists of four parcels, Assessor's Parcel Numbers (APNs) 0284-211-70, 71, 72, and 1178-371-27. The project site is located in Section 3 in Township 2 South, Range 4 West as shown on the U.S. Geological Survey (USGS) *San Bernardino South, California* 7.5-minute quadrangle as shown in Figure 1, Project Location (all figures attached).

The project proposes the development of approximately 18,770 square feet of commercial uses including a 3,574-square foot fueling station with 6 fueling dispensers, a 3,000-square foot convenience store, 9,800 square feet of neighborhood commercial retail space, and a 1,750-square foot drive through car wash.

METHODS

A literature review was conducted to investigate the potential occurrence of sensitive species on or near the project site. Database records for *San Bernardino South, California* USGS 7.5-minute quadrangle and surrounding quadrangles within a one-mile radius of the project were searched on September 7, 2021, using *Rarefind* 5 version 5.2.14, California Department of Fish and Wildlife (CDFW), Natural Diversity Database,[1] and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system.[2] Soil types were determined using the WebSoil Survey.[3]

The general biological resources assessment included a site visit on August 16, 2021, by LSA biologist Denise Woodard between 2:45 and 3:45 p.m. Notes were taken on general site conditions, vegetation, and suitability of habitat for various special-status elements. Weather conditions included clear skies, hot temperatures (96 degrees Fahrenheit), and mild winds.

1 California Department of Fish and Wildlife. California Natural Diversity Database. https://wildlife.ca.gov/Data/CNDDB (accessed September 7, 2021).
2 United States Fish and Wildlife Service. IPaC Information for Planning and Consultation. https://ecos.fws.gov/ipac/ (accessed September 7, 2021).
3 Soil Survey Staff, Natural Resources Conservation Service (NRCS), United States Department of Agriculture. Web Soil Survey ver. 3.4.0. https://websoilsurvey.sc.egov.usda.gov/ (accessed September 7, 2021).

RESULTS

Environmental Setting

Existing and Adjacent Land Use

The project site is vacant land in an area primarily surrounded by rural residential development. Reche Canyon Road borders the northeasterly side of the project site and Old Reche Canyon Road borders the southwesterly side of the project site. The project site has been affected by weed abatement practices and by surrounding land use practices.

Elevation, Topography, and Soils

The project site is flat at an elevation is 1,250 feet above mean sea level. A temporary retention basin occurs on the northerly portion of the project site. The soils over the majority of the project site are mapped as San Emigdio fine sandy loam, 2 to 9 percent slopes and the southwest corner is mapped as Tujunga loamy sand, 0 to 5 percent slopes. Soils observed on the site appeared consistent with these designations despite having been previously graded.

Vegetation and Land Use

Vegetation and land use on the project site has been highly disturbed as a result of weed abatement practices and use by feral ass (*Equuas asinus*). Developed/disturbed areas resulting from vehicular use occur on northerly end of project site. The vegetation present consists of non-native grasslands over the majority of the project site and freshwater marsh vegetation within the retention basin. The non-native grasslands are dominated by mouse barley (*Hordeum murinum*). Other species noted include pigweed (*Amaranthus* sp.), annual bur-sage (*Ambrosia acanthicarpa*), Maltese star-thistle (*Centaurea melitensis*), California encelia (*Encelia californica*), common sunflower (*Helianthus annuus*), sacred thorn-apple (*Datura wrightii*), common knotweed (*Polygonum aviculare*), and annual yellow sweetclover (*Melilotus indicus*). The freshwater marsh vegetation was dominated by narrowleaf cattail (*Typha angustifolia*) and tall flatsedge (*Cyperus involucratus*). Other species noted in the retention basin include Bermuda grass (*Cynodon dactylon*), shortpod mustard (*Hirschfeldia incana*), and pigweed.

Figure 2 shows vegetation, land use, and photograph locations and Figure 3 provides site photographs.

Wildlife

Sign of two wildlife species, California ground squirrel (*Spermophilus beecheyi*) and feral ass, was observed during the field visit.

Special-status Species

This section discusses special-status species observed or potentially occurring within a one-mile radius of the project site. Legal protection for special-status species varies widely, from the comprehensive protection extended to listed threatened/endangered and candidate species to no legal status at present. The CDFW, USFWS, local agencies, and special-interest groups, such as the California Native Plant Society, publish watch lists of declining species. Species on watch lists can be included as part of

the special-status species assessment. Inclusion of species described in the special-status species analysis is based on the following criteria:

- Direct observation of the species or its sign in the study area or immediate vicinity during previous biological studies;
- Sighting by other qualified observers;
- Record reported by the CNDDB, published by the CDFW;
- Presence or location information for specific species provided by private groups; and/or
- The study area lies within known distribution of a given species and contains appropriate habitat.

Table A summarizes special-status species known to occur in the region, along with their status, habitat and distribution, activity/bloom period, and probability of occurrence.

Table A: Special-Status Species Occurrence Probability

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Plants				
Senecio aphanactis **Chaparral ragwort**	US: – CA: 2B	Openings (especially alkaline flats) in cismontane woodland, coastal sage scrub, and chaparral at 15 to 800) meters (50 to 2,600 feet) elevation. Known in California from Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, Santa Barbara, Santa Clara, San Diego, San Luis Obispo, Solano, and Ventura Counties. Also occurs in Baja California.	Blooms January through April (annual herb)	**Absent.** No suitable alkaline flats or vegetation.
Amphibians				
Spea hammondii **Western spadefoot**	US: – CA: SSC	Grasslands and occasionally hardwood woodlands; largely terrestrial but requires rain pools or other ponded water persisting at least three weeks for breeding; burrows in loose soils during dry season. Occurs in the Central Valley and adjacent foothills, the non-desert areas of southern California, and Baja California.	October through April (following onset of winter rains)	**Absent.** Although grasslands and a ponded area (retention basin) are present, this species is not expected to occur based on the high level of on-site disturbance and surrounding land uses.
Reptiles				
Aspidoscelis hyperythra **Orangethroat whiptail**	US: – CA: SA	Prefers washes and other sandy areas with patches of brush and rocks, in chaparral, coastal sage scrub, juniper woodland, and oak woodland from sea level to	March through July with reduced activity August	**Absent.** No suitable soils or vegetation occur.

Table A: Special-Status Species Occurrence Probability

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		915 meters (3,000 feet) elevation. Perennial plants required. Occurs in Riverside, Orange, San Diego Counties west of the crest of the Peninsular Ranges, in extreme southern San Bernardino County near Colton, and in Baja California.	through October	
Aspidoscelis tigris stejnegeri **Coastal western whiptail**	US: – CA: SSC	Woodlands, riparian areas, and sparsely vegetated areas in a wide variety of habitats including coastal sage scrub and sparse grassland. Occurs in valleys and foothills from Ventura County to Baja California.	April through August	**Absent.** No suitable vegetation occurs.
Birds				
Aimophila ruficeps canescens **Southern California rufous-crowned sparrow**	US: – CA: SA	Steep, rocky coastal sage scrub and open chaparral habitats, particularly scrubby areas mixed with grasslands. From Santa Barbara County to northwestern Baja California.	Year-round, diurnal activity	**Absent.** No suitable vegetation occurs.
Athene cunicularia (burrow sites) **Burrowing owl**	US: – CA: SSC (breeding)	Open country in much of North and South America. Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. They avoid thick, tall vegetation, brush, and trees, but may occur in areas where brush or tree cover is less than 30 percent.	Year-round	**Absent.** Although grasslands and ground squirrel burrows are present, due to the small size (2.9 acres) of the project site, disturbance by ongoing weed abatement/grazing activities and surrounding land uses, the burrowing owl is not expected to occur. No burrowing owls or burrowing owl sign (e.g., whitewash, pellets, scat, tracks, and/or feathers) were observed during the August 2021 field visit.
Polioptila californica californica	US: FT CA: SSC	Inhabits coastal sage scrub in low-lying foothills and valleys up to about 500 meters (1,640 feet) elevation in cismontane	US: FT CA: SSC	**Absent**. No suitable coastal sage scrub vegetation occur.

Table A: Special-Status Species Occurrence Probability

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Coastal California gnatcatcher		southwestern California and Baja California.		
Vireo bellii pusillus **Least Bell's vireo**	US: FE CA: SE	Riparian forests and willow thickets. The most critical structural component of least Bell's vireo habitat in California is a dense shrub layer 2 to 10 feet (0.6–3.0 meter) above ground. Willows usually dominant. Nests from central California to northern Baja California. Winters in southern Baja California.	April through September	**Absent**. No suitable riparian vegetation occurs.
Mammals				
Chaetodipus fallax pallidus **Pallid San Diego pocket mouse**	US: – CA: SSC	Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in desert wash, desert scrub, desert succulent scrub, pinyon-juniper woodlands, etc. in desert border areas of Southern California into Mexico.	Nocturnal, active year-round	**Absent.** No suitable soils or vegetation occurs.
Dipodomys stephensi **Stephens' kangaroo rat**	US: FE CA: ST	Found in plant communities transitional between grassland and coastal sage scrub, with perennial vegetation cover of less than 50%. Most commonly associated with *Artemisia tridentata, Eriogonum fasciculatum,* and *Erodium*. Requires well-drained soils with compaction characteristics suitable for burrow construction (neither sandy nor too hard). Not found in soils that are highly rocky or sandy, less than 20 inches deep, or heavily alkaline or clay, or in areas exceeding 25% slope. Occurs only in western Riverside County, northern San Diego County, and extreme southern San Bernardino County, below 915 meters (3,000 feet) elevation. In northwestern Riverside County, known only from east of Interstate 15. Reaches its northwest limit in south Norco, southeast Riverside, and in the	Year-round, nocturnal	**Absent**. No suitable vegetation occurs, and soils are highly disturbed due to weed abatement/ grazing activities and surrounding land uses.

Table A: Special-Status Species Occurrence Probability

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		Reche Canyon area of Riverside and extreme southern San Bernardino Counties		

US: Federal Classifications
FE Listed as Endangered.
FT Listed as Threatened.

CA: State Classifications
SE State-listed as Endangered.
ST State-listed as Threatened.
SSC Species of Special Concern. Refers to animals with vulnerable or seriously declining populations.
SA Special Animal. Refers to any other animal monitored by the Natural Diversity Database, regardless of its legal or rarity status.
2B California Rare Plant Rank 2B – rare, threatened or endangered in California, but more common elsewhere.

As identified in Table A, 10 special-status species are reported from the project vicinity. Three of these are federally/State listed species: coastal California gnatcatcher, least Bell's vireo, and Stephens' kangaroo rat. These three species are considered absent based on lack of suitable habitat. In addition, no USFWS-designated critical habitat is present on the project site. The other seven non-listed special-status species known from the project vicinity are also considered absent based on lack of suitable habitat due to on-site and surrounding land use practices. Therefore, the project will have no effects on the special-status species identified above.

CEQA COMPLIANCE

Adopted Habitat Conservation Plans

The site does not lie within an adopted Habitat Conservation Plan (HCP) area. Therefore, the project will have no effect on adopted conservation plans.

Threatened and Endangered Species

No threatened or endangered species or their designated critical habitat are present. Therefore, the project will have no effect on threatened and endangered species or their designated critical habitat.

Other Special-Status Species

Suitable habitat is absent from the project site for other non-listed special-status species. Therefore, the proposed project will have no effects on other special-status species.

Wildlife Movement, Corridors, and Nursery Sites

The project site does not provide for regional wildlife movement and does not contain nursery sites. The project site is relatively small (2.9 acres) and isolated by surrounding development and associated roadway infrastructure. Therefore, the proposed project will have no effects related to wildlife movement, corridors, or nursery sites.

Sensitive Natural Communities

There are no sensitive natural communities on the project site. Therefore, the proposed project will have no effects related to sensitive natural communities.

Potential Jurisdictional Waters, Wetlands and Streambeds

The U.S. Army Corps of Engineers (USACE), under Section 404 of the Federal Clean Water Act (CWA), regulates discharges of dredged or fill material into "waters of the United States." These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a connection to interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or it may be indirect (through a connection identified in USACE regulations). The USACE typically regulates as non-wetland waters of the U.S. any body of water displaying an "ordinary high water mark" (OHWM). In order to be considered a "jurisdictional wetland" under Section 404, an area must possess hydrophytic vegetation, hydric soils, and wetland hydrology. The CDFW, under Sections 1600 et seq. of the California Fish and Game Code, regulates alterations to lakes, rivers, and streams. A stream is defined by the presence of a channel bed and banks and at least an occasional flow of water. The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA, through water quality certification of any activity that may result in a discharge to jurisdictional waters of the U.S. The RWQCB may also regulate discharges to "waters of the State," including wetlands, under the California Porter-Cologne Water Quality Control Act.

The on-site retention basin was constructed in uplands, as part of the Reche Canyon Road realignment project in 2014, to capture localized storm water runoff. The retention basin receives runoff collected by local roads, residential curb and gutters, and storm drains. The retention basin is temporary storm water infrastructure, created in uplands, for the purpose of collecting storm water runoff. This temporary retention basin would not be subject to federal or State regulatory authority as identified above. Therefore, the project will have no effects on jurisdictional waters, wetlands and streambeds.

Local Policies and Ordinances Protecting Biological Resources

The project will not conflict with local policies or ordinances applicable to biological resources.

Indirect Effects

Indirect impacts to surrounding areas as a result of the project may include, but are not limited to, increased dust, noise, lighting, traffic, and storm water runoff. The project site is surrounded by existing development and special-status biological resources are absent from the project site. Therefore, the proposed project will not result in indirect effects to special-status biological resources.

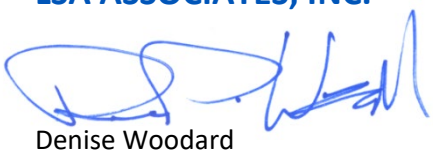
Cumulative Effects

The project site is highly disturbed and surrounded by existing development. No special-status biological resources occur on the project site. Therefore, the project will not result in substantial cumulative effects to biological resources.

If you require additional information or wish to discuss the information provided above, please contact me by email at denise.woodard@lsa.net or by phone at (951) 781-9310.

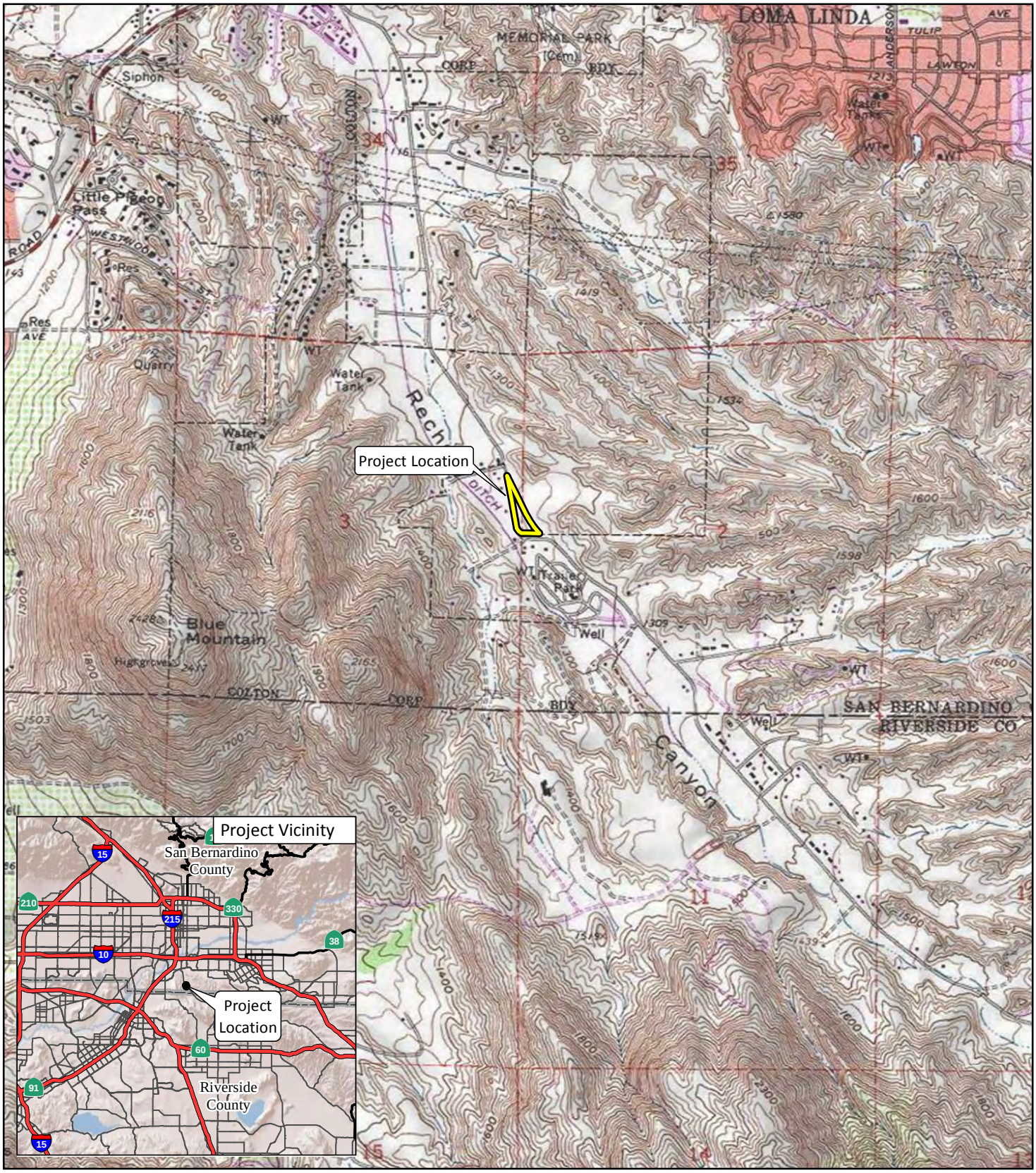
Sincerely,

LSA ASSOCIATES, INC.



Denise Woodard
Associate/Senior Biologist

Attachments: Figures 1 through 3



LSA

LEGEND

Project Location

FIGURE 1

N

0 1000 2000

FEET

SOURCE: USGS 7.5' Quad - San Bernardino South (1980), CA

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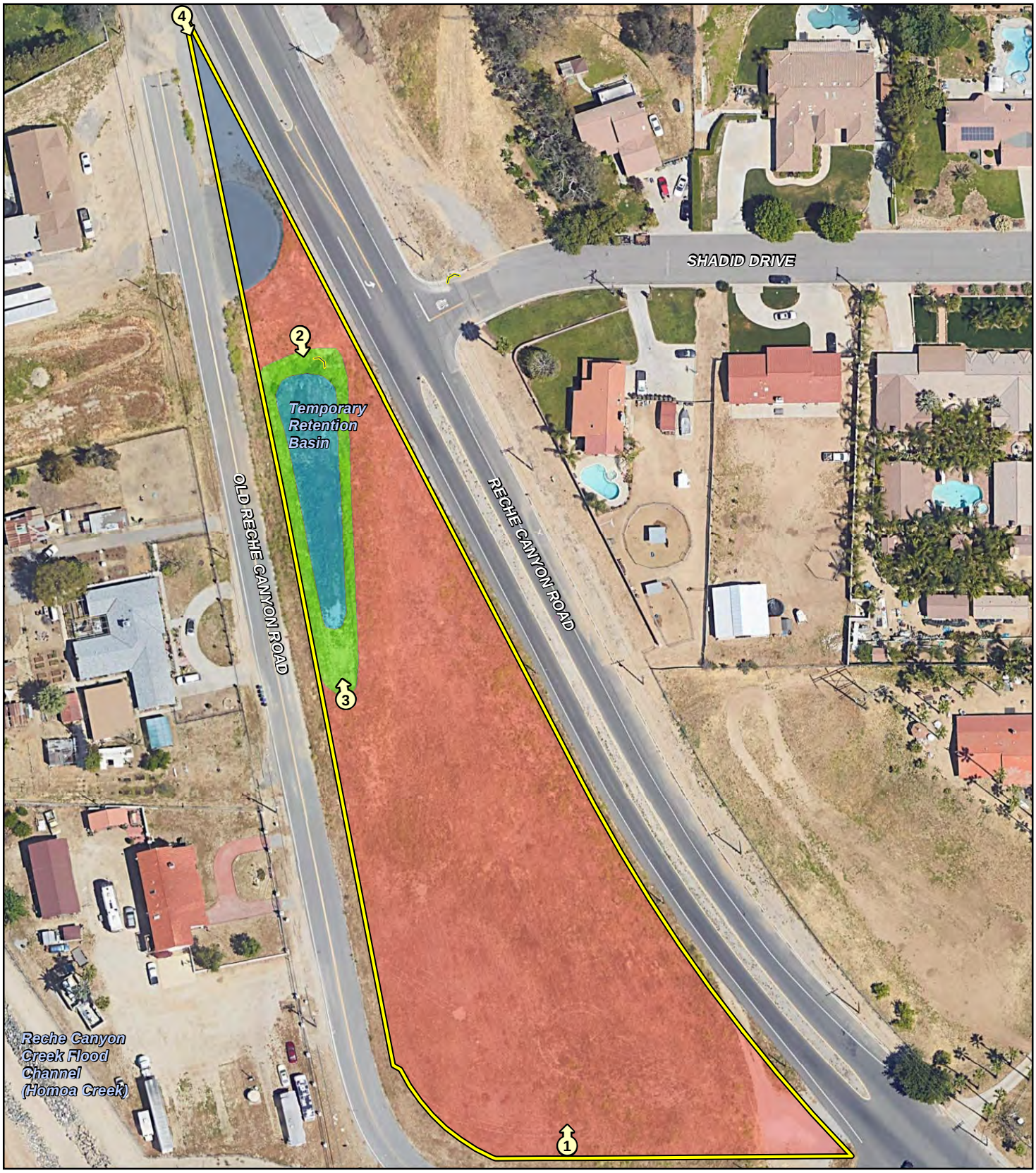
Reche Canyon Plaza Project

Regional and Project Location



LSA

LEGEND

Project Location

Culvert

Photo Location

Vegetation and Land Use

Developed/Disturbed

Freshwater Marsh

Non-Native Grasslands (Disturbed)

Temporary Retention Basin

N

0 50 100

FEET

SOURCE: Google (2018)

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FIGURE 2

Reche Canyon Plaza Project

Vegetation, Land Use, and Photograph Locations

1. View of disturbed non-native grasslands.

2. View of freshwater marsh habitat in temporary retention basin.

3. View of temporary retention basin.

4. View of developed-disturbed areas.

LSA

FIGURE 3

Reche Canyon Plaza Project

Site Photographs

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APPENDIX D

CULTURAL RESOURCES ASSESSMENT

CULTURAL RESOURCES ASSESSMENT

RECHE CANYON PLAZA PROJECT

CITY OF COLTON

SAN BERNARDINO COUNTY, CALIFORNIA

LSA

July 2019

CULTURAL RESOURCES ASSESSMENT

RECHE CANYON PLAZA PROJECT

CITY OF COLTON

SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for:

Mr. Mario Suarez, Planning Division
City of Colton Development Services Department
659 La Cadena Drive
Colton, California 92324

Prepared by:

Riordan Goodwin
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, California 92507

LSA Project No. CLT1703

National Archaeological Data Base Information:
Type of Study: Reconnaissance Survey
Sites Recorded: None
USGS 7.5' Quadrangle: *San Bernardino South, California*
Acreage: 2.9 acres
Keywords: Phase I, negative results, monitoring not recommended.

LSA

July 2019

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APPENDIX

A: RECORDS SEARCH BIBLIOGRAPHY

FIGURE

Figure 1: Project Regional and Project Location 2

MANAGEMENT SUMMARY

LSA was retained by the City of Colton to conduct a cultural resources assessment for the proposed Reche Canyon Plaza Project in the City of Colton, San Bernardino County, California. This cultural resources assessment was completed pursuant to the California Environmental Quality Act (CEQA).

A cultural resources records search, additional research, and a field survey were conducted for the project area. No cultural resources are documented within or near the project parcels, and survey results were negative, indicating little to no sensitivity for undocumented subsurface resources. Therefore, no further investigations or archaeological monitoring is recommended.

In the event previously undocumented archaeological resources are identified during earthmoving activities, further work in the area should be halted until the nature and significance of the find can be assessed by a qualified archaeologist.

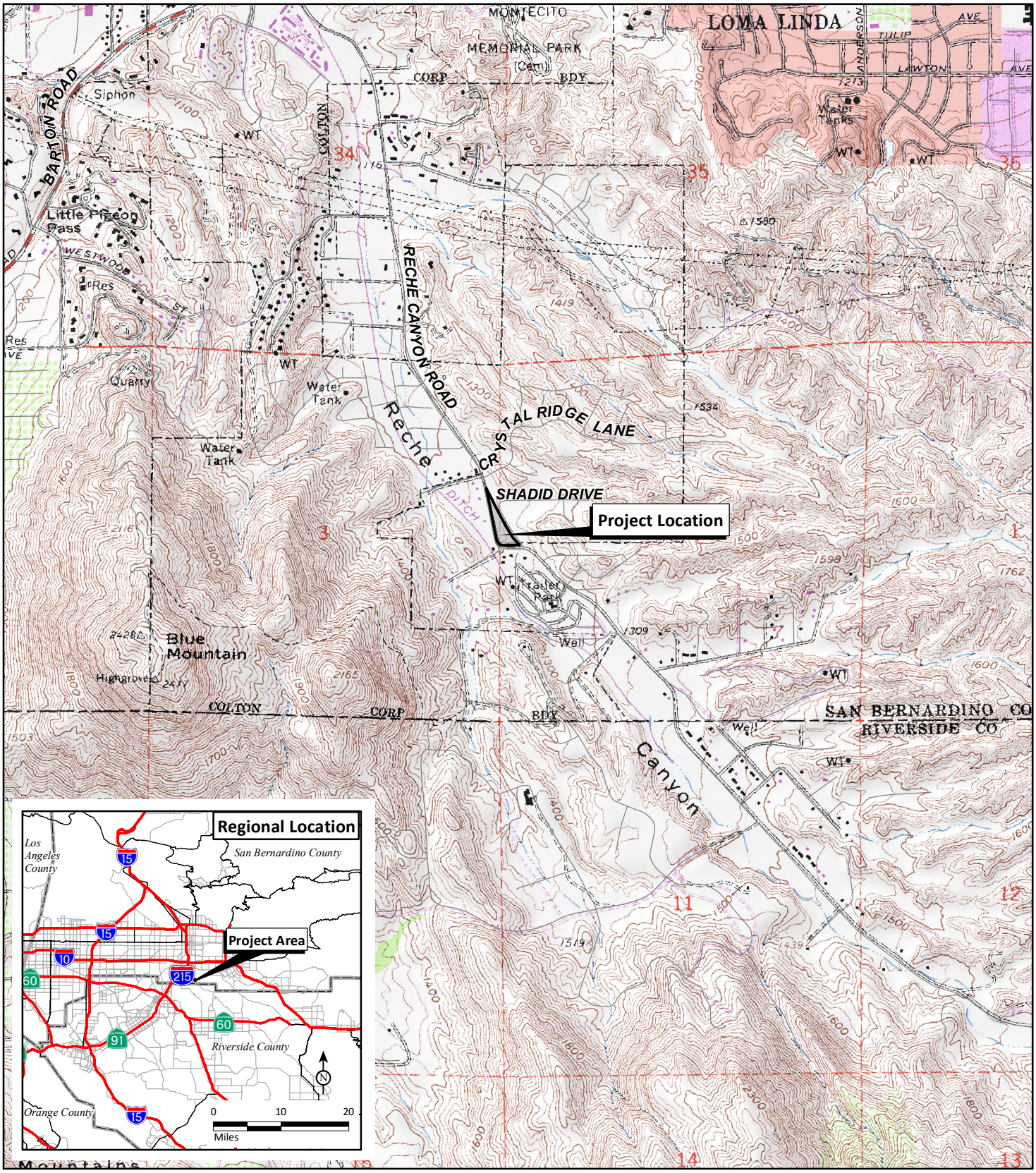
If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

INTRODUCTION

LSA was retained by the City of Colton to conduct a cultural resources assessment for the proposed project in the City of Colton, San Bernardino County, California. This assessment was completed per CEQA, Public Resources Code Chapter 2.6, Section 21083.2, and California Code of Regulations Title 14, Chapter 3, Article 5, Section 15064.5. The research and field surveys were conducted to determine whether the proposed project could adversely affect any resources considered historical resources per CEQA.

PROJECT LOCATION AND DESCRIPTION

The project area is located on Reche Canyon Road between Crystal Lane and Michelle Drive, bounded by residential development on all sides. The project is depicted on the United States Geological Survey (USGS) *San Bernardino South, California* topographic quadrangle map in Township 2 South, Range 4 West in Sections 2 and 3, San Bernardino Baseline and Meridian (USGS 1980; Figure 1). The project area is a currently vacant 2.9-acre lot (Assessor's Parcel Numbers 0284-211-70, 71, and 72, and 1178-371-27). The proposed project is commercial development.



LSA

FIGURE 1

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Colton Reche Canyon Plaza Project
Cultural Resources Assessment

Regional and Project Location

SOURCE: USGS 7.5' Quad: San Bernardino South (1980), CA; ESRI Streetmap, 2013.

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NATURAL SETTING

Climate and Watershed

The project region is characterized by a temperate climate, with dry, hot summers and moderate winters. Rainfall ranges from 12 to 16 inches annually (Beck and Haase 1974). Precipitation usually occurs in the form of winter rain, with warm monsoonal showers in summer. The project was formerly transected by an ephemeral drainage, it is currently on the east bank of the Reche Canyon Ditch (formerly an unchannelized drainage) and the nearest natural reliable source of water is the Santa Ana River (approximately 2.5 miles northwest), which drains west.

Biology

At an average elevation of approximately 900 feet, the project is within the Lower Sonoran Life Zone of California (Schoenherr 1992), which ranges from below sea level to 3,500 feet in elevation. Although the natural vegetation has been largely removed from the project by weed abatement disking, pioneer species such as hare oat, mustard, and xeric grasses were noted on the property. Extensive fauna are known locally, including many endemic species of reptiles, birds, and insects.

Geology

The project area is located at the northern end of the Peninsular Ranges Geomorphic Province, a 900-mile-long northwest-southeast trending structural block that extends from the Transverse Ranges to the tip of Baja California and includes the Los Angeles Basin (California Geological Survey 2002; Norris and Webb 1976). The province is approximately 225 miles wide, extending from the Colorado Desert in the east, across the continental shelf to the Southern Channel Islands (Santa Barbara, San Nicolas, Santa Catalina, and San Clemente) in the west (Sharp 1976). This region is characterized by a series of mountain ranges separated by northwest-trending valleys subparallel to faults branching from the San Andreas Fault. The geology of this province is similar to that of the Sierra Nevada, with numerous rock outcroppings useful to the Native Americans for resource milling, shelter, and ceremonial art.

CULTURAL SETTING

Prehistory

Chronologies of prehistoric cultural change in Southern California have been attempted numerous times, and several are reviewed in Moratto (2004). No single description is universally accepted as the various chronologies are based primarily on material developments identified by researchers familiar with sites in a particular region and variation exists essentially due to the differences in those items found at the sites. Small differences occur over time and space, which combine to form patterns that are variously interpreted.

Currently, two primary regional culture chronology syntheses are commonly referenced in the archaeological literature. The first, Wallace (1955), describes four cultural horizons or time periods: Horizon I – Early Man (9000–6000 BC), Horizon II – Milling Stone Assemblages (6000–3000 BC), Horizon III – Intermediate Cultures (3000 BC–AD 500), and Horizon IV – Late Prehistoric Cultures (AD

500–historic contact). This chronology was refined (Wallace 1978) using absolute chronological dates obtained after 1955.

The second cultural chronology (Warren 1968) is based broadly on Southern California prehistoric cultures and was also revised (Warren 1984; Warren and Crabtree 1986). Warren's (1984) chronology includes five periods in prehistory: Lake Mojave (7000–5000 BC), Pinto (5000–2000 BC), Gypsum (2000 BC–AD 500), Saratoga Springs (AD 500–1200), and Protohistoric (AD 1200–historic contact). Changes in settlement pattern and subsistence focus are viewed as cultural adaptations to a changing environment, which begins with gradual environmental warming in the late Pleistocene, continues with the desiccation of the desert lakes, followed by a brief return to pluvial conditions, and concludes with a general warming and drying trend, with periodic reversals that continue to the present (Warren and Crabtree 1986).

After AD 500, there was an influx of Native American groups from the eastern deserts into southern California. These groups brought changes in subsistence focus and associated technologies, as well as burial practices. These cultural changes along with the group migrations are known as the *Shoshonean Intrusion* or *Shoshonean Wedge* (Kroeber 1925; Koerper 1979) and the *Takic Wedge* (Bergin and Ferraro 1999). The term *Takic Wedge* refers to the wedge of Takic culture groups that moved to the coast, displacing tribes of the Hokan and Yuman language stocks to the north and south (Shipley 1978). The ethnographically recorded Luiseño, Juaneño, and Gabrielino are thought to be the descendants of prehistoric Takic populations that settled along the coast during the Late Prehistoric Period, or perhaps even earlier. The Serrano and Cahuilla, more distant from the coast, are also Takic-speaking tribes within this wedge.

Ethnography

The project area is near the intersection of the traditional cultural territories of the Cahuilla, Gabrielino, and Serrano (Kroeber 1925; Heizer 1968). Tribal territories were somewhat fluid and changed over time. The first written accounts of these Southern California tribes are attributed to the mission fathers, and later documentation was by others as indicated below.

Cahuilla

The territory of the Cahuilla ranged from the San Bernardino Mountains south to Borrego Springs and the Chocolate Mountains, from Orocopia Mountain to the east, to the San Jacinto Plain and Palomar Mountain to the west (Bean 1978). Cahuilla territory lies within the geographic center of Southern California and encompassed diverse environments ranging from inland river valleys and foothills to mountains and desert (Bean and Shipek 1978).

Cahuilla villages, generally located near water sources within canyons or near alluvial fans, comprised groups of related individuals, generally from a single lineage, and the territory around the village was owned by the villagers (Bean 1978). Like other Native American groups in Southern California, the Cahuilla were semi-nomadic peoples leaving their villages and utilizing temporary campsites to exploit seasonably available plant and animal resources (James 1960).

Cahuilla subsistence was based primarily on acorns, honey mesquite, screw beans, piñon nuts, and cactus fruit, supplemented by a variety of wild fruits and berries, tubers, roots, and greens (Kroeber 1925; Heizer and Elsasser 1980). Hunting deer, rabbit, antelope, bighorn sheep, reptiles, small rodents, quail, doves, ducks, and reptiles by means of bows, throwing sticks, traps, and communal drives is documented (James 1960).

The Cahuilla were documented by Barrows (1900), Hooper (1920), and Strong (1929) among others.

Gabrielino

The territory of the Gabrielino included portions of Los Angeles, Orange, and San Bernardino Counties during ethnohistoric times, and also extended inland into northwestern Riverside County (Kroeber 1925; Heizer 1968). It encompassed an extremely diverse environment that included coastal beaches, lagoons and marshes, inland river valleys, foothills and mountains (Bean and Shipek 1978).

The Gabrielino caught and collected seasonally available food resources, and led a semi-sedentary lifestyle, living in permanent communities along inland watercourses and coastal estuaries. Individuals from these villages took advantage of the varied resources available. Seasonally, as foods became available, native groups moved to temporary camps to collect plant foods such as acorns, buckwheat, chía, berries, and fruits, and to conduct communal rabbit and deer hunts. They also established seasonal camps along the coast and near bays and estuaries to gather shellfish and hunt waterfowl (Hudson 1971).

The Gabrielino lived in small communities, which were the focus of family life. Patrilineally linked, extended families occupied each village (Kroeber 1925; Bean and Smith 1978a). Both clans and villages were apparently exogamous, marrying individuals from outside the clan or village (Heizer 1968). Gabrielino villages were politically independent and were administered by a chief, who inherited his position from his father. Shamans guided religious and medical activities, while group hunting or fishing was supervised by individual male specialists (Bean and Smith 1978a).

The nearest historically known Gabrielino community was *Horuuvunga* (also known to the Serrano as *Jurupet* and described to Alfred Kroeber as *Hurumpa,* see below), was purportedly located approximately 10 miles to the west somewhere between the Jurupa Mountains and the Pedley Hills (Kroeber 1925; Kirkman 1938; McCawley 1996).

The Gabrielino were described by Johnston (1962), Blackburn (1962–1963), Hudson (1971), and others.

Serrano

The Serrano lived in the area generally north of Cahuilla territory (western Riverside County), occupying much of present-day San Bernardino County and northeastern Los Angeles County, but there is some overlap in the ancestral areas. The term Serrano is Spanish for “mountaineer” or “highlander” and is derived from *sierra*, meaning “mountain range” and was given to people who inhabited the areas of the San Bernardino Mountains that had no associated mission (Bean and

Smith 1978b). The Serrano culture group actually incorporates two divisions, a mountain division (referred to as the Mountain Serrano) and a desert division, referred to as the Desert Serrano (Sutton and Earle 2017).

The Serrano were hunter-gatherers who exploited whatever flora was available in the area they happened to be, generally it was acorns, pinion nuts, honey, mesquite, yucca, and cactus fruits, in addition to various seeds, bulbs, and roots. Plants were consumed both raw and cooked. Food processing involved the use of manos, metates, mortars, and pestles. Antelope, deer, mountain sheep, rabbits, and rodents were hunted and captured, and the most common hunting implements were the bow and arrow, throwing stick, traps, snares, and deadfalls. Meat was prepared in earth ovens, by boiling in watertight baskets, or by parching (Bean and Smith 1978b).

The Serrano had a patrilineal society composed of clans and families linked by both ancestry and ceremony, and most lived in small communities near reliable sources of water (springs, perennial seeps, streams, and small lakes) (Benedict 1924). The basic settlement unit of the Serrano was a village with a number of small satellite resource-gathering camps. The project area is approximately 3.9 miles west-southwest of the ethnohistorically known village of *Wa'aachnga* (or *Kaawchama*), which developed around the San Bernardino Asistencia (McCawley 1996).

The Serrano were described by Benedict (1924), Bright (1975), Strong (1929), and others.

With the Spanish intrusion came a drastic change in lifestyle for the natives of Southern California. Incorporation of the indigenous populations into the mission system led to the disruption of native cultures and changes in subsistence and land use practices. Mission San Gabriel, established in 1771, probably had a limited effect until the asistencia was established near Redlands, perhaps as early as 1819 (Harley 1988). Cattle ranch/farm settlements were established on or near Indian villages, primarily in the major drainages conducive to horticulture and animal husbandry. Within a short time, the missions controlled many ranchos where Indians lived and worked.

History

In California, the historic era is generally divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to present). As there were no resources within the project area, the historic context will focus on the County and local community during the American Period.

San Bernardino County

San Bernardino County was created in 1853 from portions of Los Angeles and San Diego Counties due to mineral wealth and the City of San Bernardino was incorporated as the County Seat the following year. Gold was discovered in Holcomb and Bear Valleys in the San Bernardino Mountains in 1860, and placer mining began in Lytle Creek. Silver was mined at Ivanpah in 1870, and the silver mines of the Calico district were developed in the 1880s. Borax was first discovered in 1862 in the Searles Dry Lake area near Trona (Hoover et al. 1990). Agriculture ultimately replaced mining as the county's economic base, with thousands of acres under cultivation by the beginning of World War I (McGroarty 1914).

Colton

In 1873, what would become the City of Colton had its beginnings when the Slover Mountain Colony Association (SMCA) was formed and purchased 2,000 acres from William A. Conn (Richards 1996). As a result of a dispute with the City of San Bernardino, the Southern Pacific Railroad made arrangements to reroute its line directly through SMCA land donated to the railroad (Ingersoll 1904). In 1875, the City of Colton (named after SP Vice President David D. Colton) was laid out in conjunction with construction of the SP Railway through the valley and after the resolution of a dispute between the SP and the California Southern railroads, Colton Crossing was completed (Richards 1966). With the backing of the railroad, Colton grew rapidly and was incorporated as a city in 1887 (Ingersoll 1904). By 1906, Colton was "located on the main line of three transcontinental railroads" and known as the "Hub City" (Anonymous 1906). Although the railroad clearly played a crucial role in the development and early success of the town, the booming citrus industry that began in nearby Riverside in the 1870s became a major part of Colton's economic base by the late 1880s (Wagner 2004). The City continued to grow during the following decades. The California Portland Cement Company began manufacturing cement in Colton in 1891 after calcite and other ingredients essential for manufacturing cement were found on Slover Mountain, constructing a plant there in 1894, and 12 years later the company owned the entire mountain (Smith 1977). Since the end of World War II, agriculture has given way to residential and commercial development, which have become the driving force in the City's growth.

METHODS

Records Search

The results of a records search previously conducted at the South Central Coastal Information Center (SCCIC) was collated with data from a current records search at the Eastern Information Center (EIC) for this project (Austerman 2017). The objectives of this data review were (1) establish the status and extent of previously recorded sties, surveys and excavations within the project area and (2) note what types of resources might be expected to occur within the proposed project based on the existing data from known cultural resources sites located within a 1-mile radius. Appendix A contains the records search bibliography.

Additional Research

In June 2019, Senior Cultural Resources Manager/Archaeologist Riordan Goodwin reviewed historic period maps and aerials.

Field Survey

On June 13, 2019, the project area was surveyed by Allegria Garcia, who walked transects spaced approximately 10 meters apart, with particular attention given to exposed areas and rodent back dirt for cultural residues.

RESULTS

Records Search

Data from SCCIC and EIC indicate there have been nine cultural resource studies previously conducted within one mile of the proposed project, none of which includes any portion of the project area. Although no cultural resources are documented within the project area, one prehistoric site (33-001067, a bedrock milling feature) and two historic period linear resources (36-026050 and 36-026051, segments of power transmission lines) were recorded within one mile. The prehistoric resource (33-001067) was approximately 1.4 kilometers/0.86 mile south of the project.

Additional Research

Online research revealed that no buildings and structures were located on the project area during the historic period (HistoricAerials.com 1938; Google Earth 2019; USGS 1955).

Field Survey

On June 13, 2019, Ms. Garcia conducted the pedestrian survey of the entire project area. Visibility was excellent to poor, with approximately 50 percent of the ground surface obscured by vegetation. Soils are alluvium. Modern refuse and imported soil piles were noted throughout the site. No cultural resources were identified.

FINDINGS AND RECOMMENDATIONS

A cultural resources records search, additional research, and a field survey were conducted for the project area. No cultural resources are documented within or near the project parcels, and survey results were negative, indicating little to no sensitivity for undocumented subsurface resources. Therefore, no further investigations or archaeological monitoring is recommended.

In the event human remains are encountered, State Health and Safety Code Section 7050.5. states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the NAHC, which will determine and notify an MLD. With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

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APPENDIX A

RECORDS SEARCH BIBLIOGRAPHIES

Report List

CLT 1601

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-01806	NADB-R - 1061806; Voided - 88-6.3	1988	SWANSON, MARK T.	CRESTA LINDA TRACT, JUDGEMENTAL SURVEY	RESEARCH ASSOCIATES	
SB-04351	NADB-R - 1064351	2002	MCLEAN, DEBORAH	CULTURAL & PALEONTOLOGICAL RESOURCES ASSESSMENT: TENTATIVE TRACT NO. 16289, SAN BERNARDINO COUNTY, CA. 20PP	LSA	
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SB-04644	NADB-R - 1064644	2005	HOGAN-CONRAD, SUSAN	PHASE IV CULTURAL RESOURCES CONSTRUCTION MONITORING OF RECHE CANYON, TENTATIVE TRACT NO. 16289, CITY OF COLTON, SAN BERNARDINO COUNTY, CALIFORNIA		
SB-05613						
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SB-07369	NADB-R - 1067369	2012	Cotterman, Cary and Roger D. Mason	Archaeological Survey Report for the Reche Canyon Road Street Improvement Project Southern Extension (HB0015), Vicinity of Colton, San Bernardino County, California.		

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RI-00504	NADB-R - 1080543; Voided - MF-0436	1978	Tony F. Weber	Archaeological Survey of the Regulus Investment Company, Incorporated, Land Holdings in Pigeon Pass and Reche Canyon. Riverside County, California	San Bernardin Museum Association, Redlands, CA	33-001067, 33-001151, 33-002237, 33-002238
RI-04762	NADB-R - 1083854; Voided - MF-3495	1990	BARKER, LEO R. and ANN E. HUSTON, EDITORS	DEATH VALLEY TO DEADWOOD; KENNECOTT TO CRIPPLE CREEK. PROCEEDINGS OF THE HISTORIC MINING CONFERENCE, JANUARY 23-27, 1989, DEATH VALLEY NATIONAL MONUMENT	Division of National Register Programs National Park Service	
RI-06088	Caltrans - 08230-466900; NADB-R - 1087451	1998	BRICKER, DAVID	FIRST SUPPLEMENTAL HISTORIC PROPERTY SURVEY REPORT FOR THE IMPROVEMENT OF INTERSTATE ROUTE 215/STATE ROUTE 91/ STATE ROUTE 60, RIVERSIDE COUNTY, CA	CALTRANS- DISTRICT 8	33-004495, 33-009681, 33-011517, 33-011521, 33-011523, 33-011537, 33-011539, 33-011561, 33-012149, 33-012150, 33-012151, 33-012152, 33-012153, 33-012154, 33-012155, 33-012156, 33-012157, 33-012158, 33-012159, 33-012160, 33-012162, 33-012163, 33-012164, 33-012165, 33-012166, 33-012167, 33-012168, 33-012169, 33-012170, 33-012171
RI-07110	Submitter - LLD-06-843.ARS	2006	Hoover, Anna M.	A Phase I Archaeological Survey Report for, TTM 34980, APN 259-040-018, +/- 2.5 Acres, County of Riverside, California.	L & L Environmental, Inc.	

APPENDIX E

GEOTECHNICAL REPORT

GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • MATERIALS TESTING & INSPECTION • FORENSIC • LABORATORY

SALEM
engineering group, inc.

GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED COMMERCIAL DEVELOPMENT
RECHE CANYON ROAD & CRYSTAL RIDGE LANE
COLTON, CALIFORNIA

SALEM PROJECT NO. 3-216-1053
OCTOBER 18, 2016

PREPARED FOR:

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October 18, 2016 Project No. 3-216-1053

Mr. Alex Irshaid
RamCam Group.
670 E. Parkridge Ave, Ste#101
Corona, CA 92879

Subject: Geotechnical Engineering Investigation
Proposed Commercial Development
Reche Canyon Road & Crystal Ridge Lane
Colton, California

Dear Mr. Irshaid:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this Geotechnical Engineering Investigation report for the Proposed Commercial Development to be located at the subject site.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

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GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED COMMERCIAL DEVELOPMENT
RECHE CANYON ROAD & CRYSTAL RIDGE LANE
COLTON, CALIFORNIA

1. PURPOSE AND SCOPE

This report presents the results of our Geotechnical Engineering Investigation for the Proposed Commercial Development to be located at the intersection of Reche Canyon Road and Crystal Ridge Lane in the City of Colton, California (see Figure 1, Vicinity Map).

The purpose of our geotechnical engineering investigation was to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed.

The scope of this investigation included a field exploration, double ring infiltration tests, laboratory testing, engineering analysis and the preparation of this report. Our field exploration was performed on September 28, 2016 and included the drilling of six (6) small-diameter soil borings to a maximum depth of 50 feet at the site. In addition, two (2) double ring infiltration tests were performed on September 29, 2016 at a depth of approximately 3 feet below existing grade for determination of the infiltration rate. The locations of the soil borings and double ring infiltration tests are depicted on Figure 2, Site Plan. A detailed discussion of our field investigation, exploratory boring logs are presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical properties for engineering analyses. Appendix B presents the laboratory test results in tabular and graphic format.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. If project details vary significantly from those described herein, SALEM should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

2. PROJECT DESCRIPTION

We understand that development of the site will include construction of a commercial development on a vacant undeveloped land. The proposed development will include a 10,500 square-foot retail store building, a 3,000 square-foot C-store store building, a carwash, and a fuel canopy. Maximum wall load is expected to be on the order of 3 kips per linear foot. Maximum column load is expected to be on the

order of 50 kips. Floor slab soil bearing pressure is expected to be on the order of 150 psf. On-site parking and landscaping are planned to be associated with the development.

Concrete and asphaltic concrete pavement for parking area, customers travel lanes, and truck lane are to be designed for standard duty and heavy-duty traffic loading based on an Equivalent Single Axle Load (ESAL) of 18 kips, a maximum load of 60,000 ESAL and a design life of 20 years. The pavement design recommendations provided herein are based on the State of California Department (CALTRANS) design manual. A site grading plan was not available at the time of preparation of this report. As the existing project area is essentially level, we anticipate that cuts and fills during the earthwork will be minimal and limited to providing level building pads and positive site drainage. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified. The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

3. SITE LOCATION AND DESCRIPTION

The site is located near the intersection of Reche Canyon Road and Crystal Ridge Lane in the City of Colton, California (see Site Plan, Figure 2). The site is currently vacant undeveloped land supporting seasonal vegetation. The site is bonded by Crystal Ridge Lane to the north, Reche Canyon Road to the east, and single-family residences to the south and west. The site is relatively flat with no major changes in grade.

4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings (B-1 through B-6) were drilled on September 28, 2016 in the areas shown on the Site Plan, Figure 2. The test borings were advanced with an 8-inch diameter hollow stem auger rotated by a truck-mounted CME-45C drill rig. The test borings were extended to a maximum depth of 50 feet below existing grade.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer and stratification lines were approximated on the basis of observations made at the time of drilling. Visual classification of the materials encountered in the test borings were generally made in accordance with the Unified Soil Classification System (ASTM D2487). A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A." The logs of the test borings are presented in Appendix "A." The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The location of the test borings were determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted. Soil samples were obtained from the test borings at the depths shown on the logs of borings. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content. The borings were backfilled with soil cuttings after completion of the drilling.

5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, density, shear strength, consolidation potential, expansion index, maximum density and optimum moisture determination, and gradation of the materials encountered. In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

6. GEOLOGIC SETTING

The subject site is located within the northern part of the Peninsular Ranges Geomorphic Province of California. The province varies in width from approximately 30 miles to 100 miles in width. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks and Cretaceous igneous rocks of the Southern California batholith.

The Peninsular Ranges Province is divided into three northwest-trending fault-bounded structural blocks, from west to east, the Santa Ana Mountains, Perris, and San Jacinto Mountains. The Santa Ana Mountains block (west of the subject site) extends from the coast to the Elsinore Fault zone. The northern margin of the Perris structural block underlies the subject site. Paleocene to Pliocene sedimentary rocks underlie the western portion of the Santa Ana Mountains structural block. The eastern portion, a highly faulted structural anticline, is cored by a basement assemblage of Mesozoic metasedimentary and Cretaceous batholithic and volcanic rocks.

A thick section of primarily upper Cretaceous marine and Paleocene marine and nonmarine rocks overly this basement. The Perris structural block is a large mass of granitic rock generally bounded by the San Jacinto Fault, the Elsinore Fault, the Santa Ana River and a non-defined southeast boundary. The Perris Block has had a history of vertical land movements of several thousand feet due to shifts in the Elsinore and San Jacinto Faults. Several erosional and depositional surfaces are developed on the Perris block and thin to relatively thick sections of nonmarine, mainly Quaternary sediments discontinuously cover the basement.

The near-surface deposits in the vicinity of the subject site are indicated to be comprised of Quaternary older alluvial fan deposits. Deposits encountered on the subject site during exploratory drilling are discussed in detail in this report.

7. GEOLOGIC HAZARDS

7.1 Faulting and Seismicity

The Peninsular Range has historically been a province of relatively high seismic activity. The nearest faults to the project site are associated with the San Jacinto Fault system located approximately 1.4 miles from the site. There are no known active fault traces in the project vicinity. Based on mapping and historical seismicity, the seismicity of the Peninsular Range has been generally considered high by the scientific community.

The project area is not within an Alquist-Priolo Earthquake Fault (Special Studies) Zone and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D in accordance with Chapter 16 of the California Building Code.

The proposed structures are determined to be in Seismic Design Category E. To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 34.0266° North; site longitude is 117.2791° West. The ten closest active faults are summarized below in Table 7.1.

TABLE 7.1
REGIONAL FAULT SUMMARY

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
San Jacinto; SBV+SJV+A+CC+B+SM	1.4	7.9
San Jacinto, SJV+A+CC+B+SM	2.4	7.8
S. San Andreas; CH+CC+BB+NM+SM+NSB+SSB+BG+CO	9.1	8.2
San Jacinto, A+CC+B+SM	13.5	6.7
Cucamonga	14.1	6.7
Cleghorn	17.1	6.8
North Frontal (West)	20.0	7.2
Elsinore; W+GI+T+J+CM	21.4	7.9
Chino, alt 2	21.6	6.8
Chino, alt 1	21.9	6.7

The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.

7.2 Surface Fault Rupture

The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low.

7.3 Ground Shaking

We used the USGS web-based application *US Seismic Design Maps* to estimate the peak ground acceleration adjusted for site class effects (PGA_M). Because of the proximity to the subject site and the maximum probable events for these faults, it appears that a maximum probable event along the fault zones could produce a peak horizontal acceleration of approximately 0.873 g (2% probability of being exceeded in 50 years). While listing PGA is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including frequency and duration of motion and soil conditions underlying the site.

7.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. However, liquefaction has occurred in soils other than clean sand.

The soils encountered within the depth of 50 feet on the project site consisted predominately of silty sand with various amounts of clay and gravel, silty sand/sand, and sandy silt with various amounts of clay. Free groundwater was not encountered during this investigation. Based on the San Bernardino County Land Use Plan, General Plan, Geologic Hazard Overlays FH30C for San Bernardino S, the site lies within a low liquefaction potential zone.

Low to very low cohesion strength is associated with the sandy soil. A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands. The site was evaluated for liquefaction potential. The liquefaction analysis indicated that the soils had a low potential for liquefaction under seismic conditions. Therefore, no mitigation measures are warranted. Detailed geotechnical engineering recommendations are presented in the remaining portions of the text. The recommendations are based on the properties of the materials identified during our investigation.

7.5 Lateral Spreading

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relatively flat site topography, we judge the likelihood of lateral spreading to be low.

7.6 Landslides

Based on the San Bernardino County Land Use Plan, General Plan, Geologic Hazard Overlays FH30C for San Bernardino S, the site does not lie within a landslide susceptible zone. There are no known landslides at the site, nor is the site in the path of any known or potential landslides. Therefore, we do not consider the potential for a landslide to be a hazard to this project.

7.7 Tsunamis and Seiches

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

8. SOIL AND GROUNDWATER CONDITIONS

8.1 Subsurface Conditions

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted of alluvium deposits of loose to medium dense silty sand with various amounts of clay and gravel, loose to dense silty sand/sand with various amounts of gravel, and stiff to very stiff sandy silt.

No significant fill was encountered in our borings. Fill soils may be present onsite between our test boring locations. Verification of the extent of fill should be determined during site grading. Field and laboratory tests suggest that the deeper native soils are moderately strong and slightly compressible. These soils extended to the termination depth of our borings.

The soils were classified in the field during the drilling and sampling operations. The stratification lines were approximated by the field engineer on the basis of observations made at the time of drilling. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The locations of the test borings were determined by measuring from feature shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

8.2 Groundwater

The test boring locations were checked for the presence of groundwater during and after the drilling operations. Free groundwater was not encountered during this investigation.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

8.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2011 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water.

A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be 50 mg/kg.

ACI 318 Tables 4.2.1 and 4.3.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 8.3 below.

TABLE 8.3
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS

Water Soluble Sulfate (SO_4) in Soil, Percentage by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Minimum Concrete Compressive Strength	Cementations Materials Type
0.005	Not Applicable	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 131 mg/kg. This level of chloride concentration is not considered to be severely corrosive.

It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

8.4 Double Ring Infiltration Testing

Two (2) double-ring infiltrometer tests were performed on September 29, 2016 at the site. The tests were conducted at the locations as shown on the Site Plan, Figure 2. The depth of the infiltration tests was approximately 3 feet below existing site grades.

The test locations were excavated and prepared using a backhoe, which provided a sufficient room for the installation of the testing equipment. The infiltration tests were conducted in accordance with ASTM Test Method D3385.

The double-ring infiltrometer method consisted of driving 2 open cylinders, partially filling the rings with water, and then maintaining the water at a constant level. The volume of water added to the inner ring to maintain the water level constant, is the measure of the volume of water that infiltrates the soil. The volume infiltrated during timed intervals is converted to an incremental infiltration velocity, usually expressed in centimeters per second (cm/sec). The maximum steady state or average incremental infiltration velocity, depending on the purpose/application of the test, is equivalent to the infiltration rate.

The results of the double-ring infiltration test are as follows:

TABLE 8.4
DOUBELRING INFILTRATION TESTING RESULTS

Test No.	Depth from Grade (Feet)	Infiltration Rates (in/hr)	Infiltration Rates (cm/sec)	Soil Type
DR-1	3	1.50	1.06×10^{-3}	Silty SAND (SM)
DR-2	3	1.86	1.31×10^{-3}	Silty SAND (SM)

Double-ring infiltration tests were conducted within the proposed storm water infiltration trench areas. The tests were conducted at depths of approximately 3 feet below existing grade. Following completion of the

Double-Ring Infiltrometer Testing, the test pits were backfilled using test pit soils and wheel rolled by the a pick-up truck. Recompaction of the backfilled soil will be required during site grading if these areas will be used for structural supports.

Soils encountered at the bottom of the trenches predominately consisted of slightly moist, loose to medium dense silty sand. The tested infiltration rates range from approximately 1.50 to 1.86 inch per hour. The estimated soil absorption factors presented in this report are based on clear water and a factor of safety should be incorporated into the design of the infiltration system to compensate for soil clogging from water impurities. In addition, periodic maintenance consisting of clearing the bottom of the infiltration system of clogged soils should be expected. The infiltration system may become impermeable if the filter is clogged or the soil is compacted.

The infiltration rate may become slower if the surrounding soil is wet or saturated due to prolonged rainfalls. The owner or civil engineer may elect to use a lower factor of safety for the design; however, more frequent maintenance consisting of clearing the bottom of the infiltration trenches of clogged soils will be expected. Additional infiltration tests may be conducted at bottom of the infiltration system during construction to verify the infiltration rate. The infiltration system shall be located at minimum distances of 10 feet from any foundations and 10 feet from property lines. Infiltration in compacted fill is not allowed. Provided that the infiltration system is located at a minimum distance of 10 feet away from any foundations, the infiltration would not result in distress to the adjacent structures.

The scope of our services did not include a groundwater study and was limited to the performance of infiltration testing and the submitted of the data only. Our services did not include those associated with an Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands. Any statements, or absence of statements, in this report regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1 General

9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction of improvements at the site as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.

9.1.2 The primary geotechnical constraints identified in our investigation is the presence of potentially compressible material at the site. Recommendations to mitigate the effects of these soils are provided in this report.

9.1.3 Fill materials may be present onsite beyond our boring location. Undocumented fill materials are not suitable to support any future structures and should be replaced with Engineered Fill.

The extent and consistency of the fills should be verified during site construction. Prior to fill placement, Salem Engineering Group, Inc. should inspect the bottom of the excavation to verify the fill condition.

9.1.4 Site demolition activities shall include removal of all surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. It is suspected that possible demolition activities of the existing structures may disturb the upper soils. After demolition activities, it is recommended that disturbed soils be removed and/or recompacted.

9.1.5 Following completion of the Double-Ring Infiltrometer Testing, the test pits were backfilled using test pit soils and wheel rolled by a pick-up truck. Recompaction of the backfilled soil will be required during site grading if these areas will be used for structural supports.

9.1.6 The near-surface onsite soils are moisture-sensitive and are moderately compressible (collapsible soil) under saturated conditions. Structures within the project vicinity have experienced excessive post-construction settlement, when the foundation soils become near saturated. The collapsible or weak soils should be removed and recompacted according to the recommendations in the Grading section of this report (Section 9.5).

9.1.7 Based on the subsurface conditions at the site and the anticipated structural loading, we anticipate that the proposed buildings may be supported using conventional shallow foundations, and the fuel dispenser canopy will be supported using deep caisson foundations provided that the recommendations presented herein are incorporated in the design and construction of the project.

9.1.8 Provided the site is graded in accordance with the recommendations of this report and foundations constructed as described herein, we estimate that total settlement due to static load utilizing conventional shallow foundations for the proposed buildings will be within 1 inch and the corresponding differential settlement will be less than ½ inch.

9.1.9 All references to relative compaction and optimum moisture content in this report are based on ASTM D 1557 (latest edition).

9.1.10 SALEM shall review the project drainage plans, foundation plans, and structural plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required. If SALEM is not provided plans and specifications for review, we cannot assume any responsibility for the future performance of the project.

9.1.11 SALEM shall be present at the site during site demolition and preparation to observe site clearing/demolition, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

9.1.12 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe

foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

9.2 Seismic Design Criteria

9.2.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2013 CBC, our recommended parameters are shown below. These parameters are based on Probabilistic Ground Motion of 2% Probability of Exceedance in 50 years. The Site Class was determined based on the results of our field exploration.

TABLE 9.2.1
2013 CBC SEISMIC DESIGN PARAMETERS

Seismic Item	Symbol	Value	2010 ASCE 7 or 2013 CBC Reference
Site Coordinates (Datum = NAD 83)		34.0266 Lat -117.2791 Lon	
Site Class	--	D	ASCE 7 Table 20.3
Soil Profile Name	--	Stiff Soil	ASCE 7 Table 20.3
Risk Category	--	II	CBC Table 1604.5
Site Coefficient for PGA	F_{PGA}	1.000	ASCE 7 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	PGA_M	0.873 g	ASCE 7 Equation 11.8-1
Seismic Design Category	SDC	E	ASCE 7 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	S_S	2.266 g	CBC Figure 1613.3.1(1-6)
Mapped Spectral Acceleration (1.0 sec. period)	S_1	1.033 g	CBC Figure 1613.3.1(1-6)
Site Class Modified Site Coefficient	F_a	1.000	CBC Table 1613.3.3(1)
Site Class Modified Site Coefficient	F_v	1.500	CBC Table 1613.3.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	S_{MS}	2.266 g	CBC Equation 16-37
MCE Spectral Response Acceleration (1.0 sec. period) $S_{M1} = F_v S_1$	S_{M1}	1.549 g	CBC Equation 16-38
Design Spectral Response Acceleration $S_{DS}=⅔S_{MS}$ (short period - 0.2 sec)	S_{DS}	1.511 g	CBC Equation 16-39
Design Spectral Response Acceleration $S_{D1}=⅔S_{M1}$ (1.0 sec. period)	S_{D1}	1.033 g	CBC Equation 16-40

9.2.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

9.3 Soil and Excavation Characteristics

9.3.1 Based on the soil conditions encountered in our soil borings, the onsite soils can be excavated with moderate effort using conventional excavation equipment.

9.3.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

9.3.3 The upper soils are moisture-sensitive and moderately collapsible under saturated conditions. These soils, in their present condition, possess moderate risk to construction in terms of possible post-construction movement of the foundations and floor systems if no mitigation measures are employed. Accordingly, measures are considered necessary to reduce anticipated collapse potential. Mitigation measures will not eliminate post-construction soil movement, but will reduce the soil movement. Success of the mitigation measures will depend on the thoroughness of the contractor in dealing with the soil conditions.

9.3.4 The near surface soils identified as part of our investigation are, generally, slightly moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. Exposed native soils exposed as part of site grading operations shall not be allowed to dry out and should be kept continuously moist prior to placement of subsequent fill.

9.4 Materials for Fill

9.4.1 Excavated soils generated from cut operations at the site are suitable for use as general Engineered Fill in structural areas, provided they have an Expansion Index of 20 or less, do not contain deleterious matter, organic material, or rock material larger than 3 inches in maximum dimension.

9.4.2 Import soil shall be well-graded, slightly cohesive silty fine sand or sandy silt, with relatively impervious characteristics when compacted. A clean sand or very sandy soil is not acceptable for this purpose. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.4.3.

TABLE 9.4.2
IMPORT FILL REQUIREMENTS

Minimum Percent Passing No. 200 Sieve	10
Maximum Percent Passing No. 200 Sieve	50
Minimum Percent Passing No. 4 Sieve	70
Maximum Particle Size	3"
Maximum Plasticity Index	10
Maximum CBC Expansion Index	15

9.4.3 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.

9.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered.

9.4.5 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

9.5 Grading

9.5.1 A SALEM representative should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.

9.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.

9.5.3 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.

9.5.4 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 2 to 4 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. The stripped vegetation will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

9.5.5 Structural building pads areas should be considered as areas extending a minimum of 5 feet horizontally beyond the outside dimensions of buildings, including footings and non-cantilevered overhangs carrying structural loads.

9.5.6 To minimize post-construction soil movement and provide uniform support for the proposed structures, it is recommended that overexcavation and recompaction within the proposed building pad areas be performed to a minimum depth of **five (5)** feet below existing grade or **four (4)** feet below proposed footing bottom, whichever is deeper. Prior to placement of fill soils, the upper 10 to 12 inches of native subgrade soils should be scarified, moisture-conditioned to **no less** than the optimum moisture content and recompacted to a minimum of 95 percent of the

maximum dry density based on ASTM D1557-07 Test Method. The overexcavation and recompaction should also extend laterally to a minimum of 5 feet beyond the outer edges of the proposed footings.

9.5.7 Any fill materials encountered during grading should be removed and replaced with engineered fill. The actual depth of the overexcavation and recompaction should be determined by our field representative during construction.

9.5.8 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in thin lifts to allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).

9.5.9 Engineered Fill soils should be placed, moisture conditioned to near optimum moisture content, and compacted to at least 95% relative compaction.

9.5.10 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

9.5.11 Within pavement areas, it is recommended that overexcavation and recompaction be performed to a minimum depth of **18** inches below existing grade or proposed grade, whichever is deeper. Prior to placement of fill soils, the upper 10 to 12 inches of native subgrade soils should be scarified, moisture-conditioned to **no less** than the optimum moisture content and recompacted to a minimum of 95 percent of the maximum dry density based on ASTM D1557-07 Test Method. The overexcavation and recompaction should also extend laterally to a minimum of 2 feet beyond the outer edges of the pavement.

9.5.12 Final pavement subgrade should be finished to a smooth, unyielding surface. We further recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base.

9.5.13 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.

9.5.14 We do not anticipate groundwater or seepage to adversely affect construction if conducted during the drier moths of the year (typically summer and fall). However, groundwater and soil moisture conditions could be significantly different during the wet season (typically winter and spring) as surface soil becomes wet; perched groundwater conditions may develop. Grading during this time period will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If the construction schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.

9.5.15 The wet soils may become non conducive to site grading as the upper soils yield under the weight of the construction equipment. Therefore, mitigation measures should be performed for stabilization. Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation. To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose.

If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 6 to 24 inches of ¾-inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 6 to 24 inches of crushed rock material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock.

A layer of geofabric is recommended to be placed on top of the compacted crushed rock to minimize migration of soil particles into the voids of the crushed rock, resulting in soil movement. Although it is not required, the use of geogrid (e.g. Tensar BX 1100 or TX 140) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization.

Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

9.6 Shallow Foundations

9.6.1 The site is suitable for use of conventional shallow foundations consisting of continuous footings and isolated pad footings bearing in properly compacted Engineered Fill.

9.6.2 The bearing wall footings considered for the structure should be continuous with a minimum width of 15 inches and extend to a minimum depth of 18 inches below the lowest adjacent grade. Isolated column footings should have a minimum width of 24 inches and extend a minimum depth of 18 inches below the lowest adjacent grade. The bottom of footing excavations should be maintained free of loose and disturbed soil. Footing concrete should be placed into a neat excavation.

9.6.3 For design purposes, total settlement due to static loading on the order of 1 inch may be assumed for shallow footings. Differential settlement due to static loading, along a 20-foot exterior wall footing or between adjoining column footings, should be ½ inch, producing an angular distortion of 0.002. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded

or saturated. The footing excavations should not be allowed to dry out any time prior to pouring concrete.

9.6.4 Footings proportioned as recommended above may be designed for the maximum allowable soil bearing pressures shown in the table below.

Loading Condition	Allowable Bearing
Dead Load Only	2,000 psf
Dead-Plus-Live Load	2,500 psf
Total Load, Including Wind or Seismic Loads	3,325 psf

9.6.5 Resistance to lateral footing displacement can be computed using an allowable coefficient of friction factor of 0.40 acting between the base of foundations and the supporting native subgrade.

9.6.6 Lateral resistance for footings can alternatively be developed using an equivalent fluid passive pressure of 380 pounds per cubic foot acting against the appropriate vertical native footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the 2013 CBC that includes wind or earthquake loads.

9.6.7 Minimum reinforcement for footings should consist of eight No. 4 steel reinforcing bars; four placed near the top of the footing and four near the bottom or be designed by the project structural engineer.

9.6.8 Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom edge of the footing.

9.6.9 The foundation subgrade should be sprinkled as necessary to maintain a moist condition without significant shrinkage cracks as would be expected in any concrete placement. Prior to placing rebar reinforcement, foundation excavations should be evaluated by a representative of SALEM for appropriate support characteristics and moisture content. Moisture conditioning may be required for the materials exposed at footing bottom, particularly if foundation excavations are left open for an extended period.

9.7 Caisson Foundations

9.7.1 It is recommended that the caisson foundation to have a minimum depth of 10 feet below the lowest adjacent grade.

9.7.2 The caissons may be designed using an allowable sidewall friction of 150 psf. This value is for dead-plus-live loads. An allowable end bearing capacity of 5,000 psf may be used provided that the bottom of the caisson is cleaned with the use of a clean-out bucket or equivalent and

inspected by our representative prior to placement of reinforcement and concrete. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the CBC that includes wind or earthquake loads.

9.7.3 Uplift loads can be resisted by caissons using an allowable sidewall friction of 100 psf of the surface area and the weight of the caisson.

9.7.4 The total static settlement of the caisson footing is not expected to exceed 1 inch. Differential settlement should be less than ½ inch. Most of the settlement is expected to occur during construction as the loads are applied.

9.7.5 Lateral loads for caissons may be designed utilizing the Isolated Pole Formula and Specifications shown on Table 1804.2, Sections 1804.3.1 and 1808.2.2 of the California Building Code. The drilled caissons may be designed for a lateral capacity of 380 pounds per square foot per foot of depth below the lowest adjacent grade to a maximum of 5,700 psf.

9.7.6 These values may be increased by one-third when using the alternative load combinations in Section 1605.3.2 of the IBC that include wind or earthquake loads. These values should not be doubled since the values given herein are higher than the tabular values shown on the Table 1804.2. The lateral loading criteria is based on the assumption that the load application is applied at the ground level, flexible cap connections applied and a minimum embedment depth of 10 feet.

9.7.7 Dry, loose sandy soils were encountered at the site. Casing will be required during drilling of the caisson footings.

9.8 Concrete Slabs-on-Grade

9.8.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading. We recommend that non-structural slabs-on-grade be at least 4 inches thick and underlain by six (6) inches of compacted granular aggregate subbase material compacted to at least 95% relative compaction.

9.8.2 Granular aggregate subbase material shall conform to ASTM D-2940, Latest Edition (Table 1, bases) with at least 95 percent passing a 1½-inch sieve and not more than 8% passing a No. 200 sieve or its approved equivalent to prevent capillary moisture rise.

9.8.3 We recommend reinforcing slabs, at a minimum, with No. 3 reinforcing bars placed 18 inches on center, each way.

9.8.4 Slabs subject to structural loading may be designed utilizing a modulus of subgrade reaction K of 200 pounds per square inch per inch. The K value was approximated based on inter-relationship of soil classification and bearing values (Portland Cement Association, Rocky Mountain Northwest).

9.8.5 The spacing of crack control joints should be designed by the project structural engineer. In order to regulate cracking of the slabs, we recommend that full depth construction joints or control

joints be provided at a maximum spacing of 15 feet in each direction for 5-inch thick slabs and 12 feet for 4-inch thick slabs.

9.8.6 Crack control joints should extend a minimum depth of one-fourth the slab thickness and should be constructed using saw-cuts or other methods as soon as practical after concrete placement. The exterior floors should be poured separately in order to act independently of the walls and foundation system.

9.8.7 It is recommended that the utility trenches within the structure be compacted, as specified in our report, to minimize the transmission of moisture through the utility trench backfill. Special attention to the immediate drainage and irrigation around the structures is recommended.

9.8.8 Moisture within the structure may be derived from water vapors, which were transformed from the moisture within the soils. This moisture vapor penetration can affect floor coverings and produce mold and mildew in the structure. To minimize moisture vapor intrusion, it is recommended that a vapor retarder be installed in accordance with manufacturer's recommendations and/or ASTM guidelines, whichever is more stringent. In addition, ventilation of the structure is recommended to reduce the accumulation of interior moisture.

9.8.9 In areas where it is desired to reduce floor dampness where moisture-sensitive coverings are anticipated, construction should have a suitable waterproof vapor retarder (a minimum of 15 mils thick polyethylene vapor retarder sheeting, Raven Industries "VaporBlock 15, Stego Industries 15 mil "StegoWrap" or W.R. Meadows Sealtight 15 mil "Perminator") incorporated into the floor slab design. The water vapor retarder should be decay resistant material complying with ASTM E96 not exceeding 0.04 perms, ASTM E154 and ASTM E1745 Class A. The vapor barrier should be placed between the concrete slab and the compacted granular aggregate subbase material. The water vapor retarder (vapor barrier) should be installed in accordance with ASTM Specification E 1643-94.

9.8.10 The concrete maybe placed directly on vapor retarder. The vapor retarder should be inspected prior to concrete placement. Cut or punctured retarder should be repaired using vapor retarder material lapped 6 inches beyond damaged areas and taped.

9.8.11 The recommendations of this report are intended to reduce the potential for cracking of slabs due to soil movement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to soil movement. This is common for project areas that contain expansive soils since designing to eliminate potential soil movement is cost prohibitive. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

9.8.12 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

9.9 Lateral Earth Pressures and Frictional Resistance

9.9.1 Active, at-rest and passive unit lateral earth pressures against footings and walls are summarized in the table below:

Lateral Pressure Conditions	Equivalent Fluid Pressure, pcf
Active Pressure, Drained	37
At-Rest Pressure, Drained	57
Passive Pressure	380
Related Parameters	
Allowable Coefficient of Friction	0.40
In-Place Soil Density (lbs/ft^3)	120

9.9.2 Active pressure applies to walls, which are free to rotate. At-rest pressure applies to walls, which are restrained against rotation. The preceding lateral earth pressures assume sufficient drainage behind retaining walls to prevent the build-up of hydrostatic pressure.

9.9.3 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.

9.9.4 A safety factor consistent with the design conditions should be included in the usage of the values in the above table.

9.9.5 For stability against lateral sliding, which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.5.

9.9.6 For stability against lateral sliding, which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended.

9.9.7 For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.

9.9.8 For dynamic seismic lateral loading the following equation shall be used:

Dynamic Seismic Lateral Loading Equation
Dynamic Seismic Lateral Load = $\frac{3}{8}\gamma K_h H^2$
Where: γ = In-Place Soil Density
K_h = Horizontal Acceleration = $\frac{2}{3}PGA_M$
H = Wall Height

9.10 Retaining Walls

9.10.1 Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic-concrete or other suitable backfill to minimize surface drainage into the wall drain system. The gravel should conform to Class II permeable materials graded in accordance with the current CalTrans Standard Specifications.

9.10.2 Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer's recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.

9.10.3 Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The top of the perforated pipe should be placed at or below the bottom of the adjacent floor slab or pavements. The pipe should be placed in the center line of the drainage blanket and should have a minimum diameter of 4 inches. Slots should be no wider than 1/8-inch in diameter, while perforations should be no more than ¼-inch in diameter.

9.10.4 If retaining walls are less than 5 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 2-inch minimum diameter holes (concrete walls) or unmortared head joints (masonry walls) and placed no higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to the CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.

9.10.5 During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

9.11 Temporary Excavations

9.11.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA "Type C" soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved "competent person" onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.

9.11.2 It is the contractor's responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges

from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.

9.11.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.

9.11.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in the following table:

RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-4	1:1
4-8	2:1

9.11.5 If, due to space limitation, excavations near property lines or existing structures are performed in a vertical position, slot cuts, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.

9.11.6 Braced shorings should be designed for a maximum pressure distribution of 30H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.

9.11.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM Engineering Group, Inc. should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

9.12 Underground Utilities

9.12.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 95% relative compaction at or above optimum moisture content.

9.12.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 6 to 12 inches above the crown of the pipe. Pipe bedding and backfill material should conform to the requirements of the governing utility agency.

9.12.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the buildings or structures to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.

9.12.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

9.13 Surface Drainage

9.13.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.

9.13.2 The ground immediately adjacent to the foundation shall be sloped away from the buildings at a slope of not less than 5 percent for a minimum distance of 10 feet.

9.13.3 Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the buildings and drainage gradients maintained to carry all surface water to collection facilities and off site. These grades should be maintained for the life of the project. Ponding of water should not be allowed adjacent to the structure. Over-irrigation within landscaped areas adjacent to the structure should not be performed.

9.13.4 Roof drains should be installed with appropriate downspout extensions out-falling on splash blocks so as to direct water a minimum of 5 feet away from the structures or be connected to the storm drain system for the development.

9.14 Pavement Design

9.14.1 Based on site soil conditions, an R-value of 45 was used for the preliminary flexible asphaltic concrete pavement design. The R-value may be verified during grading of the pavement areas.

9.14.2 The pavement design recommendations provided herein are based on the State of California Department of Transportation (CALTRANS) design manual. The asphaltic concrete (flexible pavement) is based on a 20-year pavement life utilizing 1200 passenger vehicles, 10 single unit trucks, and 2 multi-unit trucks. The following table shows the recommended pavement sections for various traffic indices.

TABLE 9.14.2
ASPHALT CONCRETE PAVEMENT THICKNESSES

Traffic Index	Asphaltic Concrete	Class II Aggregate Base*	Compacted Subgrade*
5.0 (Parking & Vehicle Drive Areas)	2.5"	4.0"	12.0"
6.0 (Heavy Truck Areas)	3.0"	5.0"	12.0"

95% compaction based on ASTM D1557-07 Test Method

9.14.3 The following recommendations are for light-duty and heavy-duty Portland Cement Concrete pavement sections.

TABLE 9.14.3
PORTLAND CEMENT CONCRETE PAVEMENT THICKNESSES

Traffic Index	Portland Cement Concrete*	Class II Aggregate Base**	Compacted Subgrade**
5.0 (Light Duty)	5.0"	4.0"	12.0"
6.0 (Heavy Duty)	6.0"	4.0"	12.0"

**** Minimum Compressive Strength of 4,000 psi***
***** 95% compaction based on ASTM D1557-07 Test Method***

10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING

10.1 Plan and Specification Review

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

10.2 Construction Observation and Testing Services

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

10.2.3 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe

foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the test borings drilled at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated. If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction.

If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing. The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and project design consultants

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer's recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil. The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping.

The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

Ibrahim Ibrahim, MS, EIT
Geotechnical Staff Engineer

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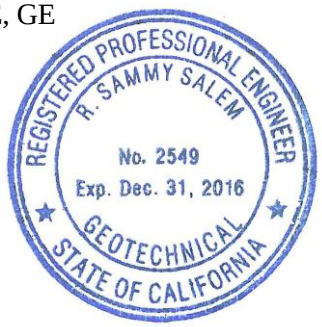
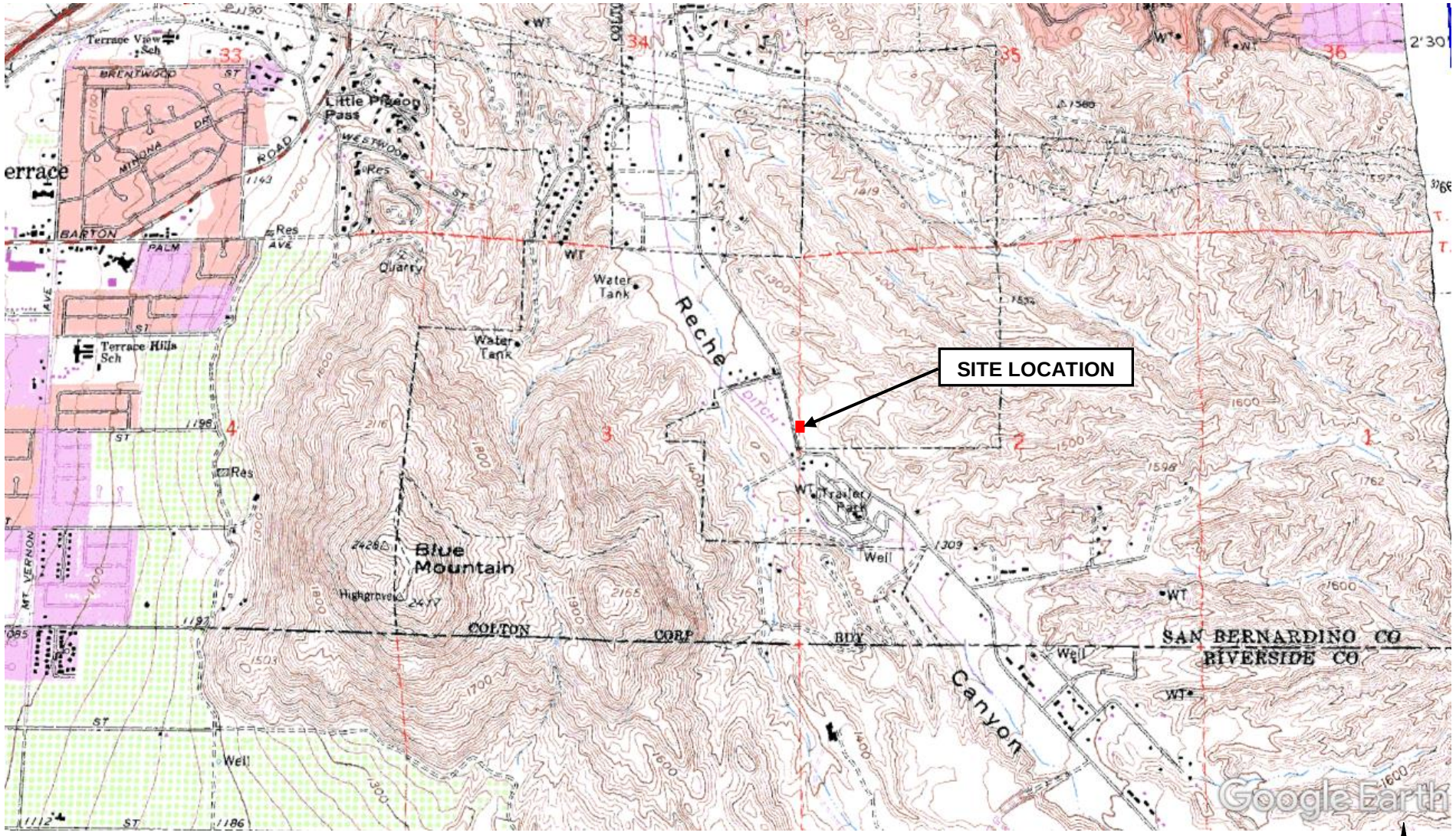




Source Image: U.S. Geological Survey, San Bernardino South, Calif. N3400-W11715/7.5' Quadrangle, 1967 (Photorevised 1980)

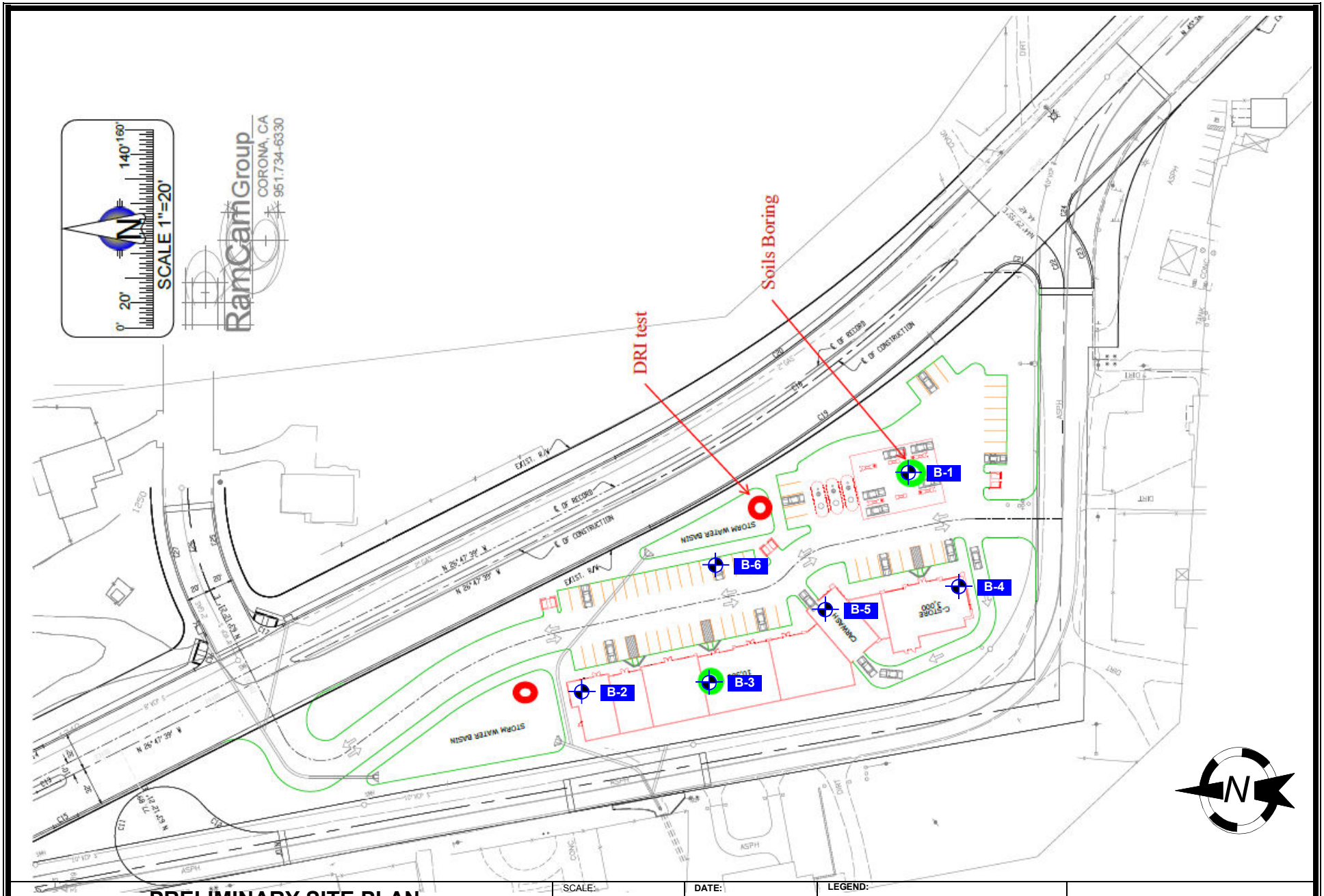
N

VICINITY MAP

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed Commercial Development
Reche Canyon Road & Crystal Ridge Lane
Colton, California

SCALE:	DATE:
NOT TO SCALE	10/2016
DRAWN BY:	APPROVED BY:
AA	CJ
PROJECT NO.	FIGURE NO.
3-216-1053	1

SALEM engineering group, inc.



PRELIMINARY SITE PLAN

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed Commercial Development
Reche Canyon Road & Crystal Ridge Lane
Colton, California

SCALE: NOT TO SCALE	DATE: 10/2016
DRAWN BY: II	APPROVED BY: CJ
PROJECT NO. 3-216-1053	FIGURE NO. 2

LEGEND:

B-1 Soil Boring Locations

All Locations Approximate

SALEM engineering group, inc.

APPENDIX

A

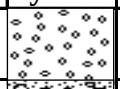
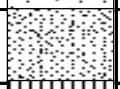
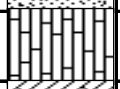
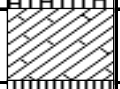
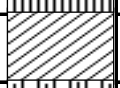
APPENDIX A
FIELD EXPLORATION

Fieldwork for our investigation (drilling) was conducted on September 28, 2016 and included a site visit, subsurface exploration, and soil sampling. The Double ring infiltration tests were performed on September 29, 2016. The locations of the exploratory borings and double ring infiltration tests are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

In general, our borings were performed using a truck-mounted CME-45C drill rig equipped with an 8-inch hollow stem auger. Sampling in the borings was accomplished using a hydraulic 140-pound hammer with a 30-inch drop. Samples were obtained with a 3-inch outside-diameter (OD), split spoon (California Modified) sampler, and a 2-inch OD, Standard Penetration Test (SPT) sampler. The number of blows required to drive the sampler the last 12 inches (or fraction thereof) of the 18-inch sampling interval were recorded on the boring logs. The blow counts shown on the boring logs should not be interpreted as standard SPT "N" values; corrections have not been applied. Upon completion, the borings were backfilled with drill cuttings.

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

Unified Soil Classification System

Major Divisions			Letter	Symbol	Description
Coarse-grained Soils More than ½ retained on the No. 200 Sieve	**Gravels** More than ½ coarse fraction retained on the No. 4 sieve	Clean Gravels	GW		Well-graded gravels and gravel-sand mixtures, little or no fines.
			GP		Poorly-graded gravels and gravel-sand mixtures, little or no fines.
		Gravels With Fines	GM		Silty gravels, gravel-sand-silt mixtures.
			GC		Clayey gravels, gravel-sand-clay mixtures.
	Sands More than ½ passing through the No. 4 sieve	Clean Sands	SW		Well-graded sands and gravelly sands, little or no fines.
			SP		Poorly-graded sands and gravelly sands, little or no fines.
		Sands With Fines	SM		Silty sands, sand-silt mixtures
			SC		Clayey sands, sandy-clay mixtures.
Fine-grained Soils More than ½ passing through the No. 200 Sieve	**Silts and Clays** Liquid Limit less than 50%		ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands.
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL		Organic clays of medium to high plasticity.
	Silts and Clays Liquid Limit greater than 50%		MH		Inorganic silts, micaceous or diatomaceous fines sands or silts, elastic silts.
			CH		Inorganic clays of high plasticity, fat clays.
			OH		Organic clays of medium to high plasticity.
Highly Organic Soils			PT		Peat, muck, and other highly organic soils.

Consistency Classification

Granular Soils			***Cohesive Soils***		
Description - Blows Per Foot (Corrected)			Description - Blows Per Foot (Corrected)		
	MCS	SPT		MCS	SPT
Very loose	<5	<4	Very soft	<3	<2
Loose	5 – 15	4 – 10	Soft	3 – 5	2 – 4
Medium dense	16 – 40	11 – 30	Firm	6 – 10	5 – 8
Dense	41 – 65	31 – 50	Stiff	11 – 20	9 – 15
Very dense	>65	>50	Very Stiff	21 – 40	16 – 30
			Hard	>40	>30

MCS = Modified California Sampler

SPT = Standard Penetration Test Sampler

Boring No. B-1

Project: Proposed Commercial Development
Client: RamCam Group
Location: Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 3-216-1053
Figure No.: A-1
Logged By: SMG
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Loose; slightly moist; brown; fine-coarse grained.	102.2	2.7	MCS		11		
5		**Sandy SILT (ML)** Stiff; moist; brown; fine-medium grained.	95.9	8.5	MCS		11		
		Silty SAND (SM) Medium dense; slighly moist; brown; fine-coarse grained; with gravel.	-	2.2	SPT		16		
15		Grades as above.	-	2.1	SPT		19		
20		Grades as above; loose.	-	5.6	SPT		6		
		Silty SAND/SAND (SM/SP) Medium dense; slightly moist; tan; fine-coarse grained.	-	2.1	SPT		23		
25									

Drill Method: Hollow Stem Auger
Drill Rig: CME 45C
Driller: Salem Engineering Group, Inc.
Sheet: 1 of 2

Drill Date: 9/28/16
Borehole Size: 8 inches
Hammer Type: Auto Trip.
Weight & Drop: 140 lbs./30 in.

SALEM

Boring No. B-1

Project: Proposed Commercial Development
Client: RamCam Group
Location: Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 3-216-1053
Figure No.: A-1
Logged By: SMG
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
30		Grades as above; dense.	-	2.4	SPT		34		
35		**Sandy SILT (ML)** Very stiff; moist; brown; fine-coarse grained; with clay.	-	14.1	SPT		17		
40		Grades as above; stiff; wet.	-	30.7	SPT		12		
45		**Silty SAND/SAND (SM/SP)** Dense; slightly moist; brown; fine-coarse grained; with gravel.	-	2.4	SPT		47		
50		Grades as above. End of Borehole							

Drill Method: Hollow Stem Auger
Drill Rig: CME 45C
Driller: Salem Engineering Group, Inc.
Sheet: 2 of 2

Drill Date: 9/28/16
Borehole Size: 8 inches
Hammer Type: Auto Trip.
Weight & Drop: 140 lbs./30 in.

SALEM

Boring No. B-2

Project: Proposed Commercial Development
Client: RamCam Group
Location: Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 3-216-1053
Figure No.: A-2
Logged By: SMG
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Loose; slightly moist; brown; fine-coarse grained.	100.4	3.1	MCS		10
5		Grades as above; medium dense; with gravel.	110.4	1.9	MCS		20
10		Grades as above; with less gravel.	-	3.4	SPT		29
15		Grades as above; with more gravel.	-	2.9	SPT		20
20		Grades as above.					
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Hollow Stem Auger
Drill Rig: CME 45C
Driller: Salem Engineering Group, Inc.
Sheet: 1 of 1

Drill Date: 9/28/16
Borehole Size: 8 inches
Hammer Type: Auto Trip.
Weight & Drop: 140 lbs./30 in.

SALEM

Boring No. B-3

Project: Proposed Commercial Development
Client: RamCam Group
Location: Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 3-216-1053
Figure No.: A-3
Logged By: SMG
Initial: None
At Completion: None
Depth to Water>

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Loose; slightly moist; brown; fine-coarse grained.	101.6	2.9	MCS		11		
5		Grades as above.	-	1.6	MCS		12		
10		Grades as above; medium dense; with gravel.	-	2.7	SPT		26		
15		Grades as above.	-	3.0	SPT		21		
20		Grades as above.							
		End of Borehole							
25									

Drill Method: Hollow Stem Auger
Drill Rig: CME 45C
Driller: Salem Engineering Group, Inc.
Sheet: 1 of 1

Drill Date: 9/28/16
Borehole Size: 8 inches
Hammer Type: Auto Trip.
Weight & Drop: 140 lbs./30 in.

SALEM

Boring No. B-4

Project: Proposed Commercial Development
Client: RamCam Group
Location: Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 3-216-1053
Figure No.: A-4
Logged By: SMG
Initial: None
At Completion: None
Depth to Water>

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND/SAND (SM/SP) Loose; slightly moist; brown; fine-coarse grained; with gravel.	-	0.9	MCS		12
5		Grades as above; medium dense.	-	1.0	MCS		30
10		Grades as above.	-	2.4	SPT		23
15		Grades as above; dense.	-	12.6	SPT		35
20		Grades as above.					
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Hollow Stem Auger
Drill Rig: CME 45C
Driller: Salem Engineering Group, Inc.
Sheet: 1 of 1

Drill Date: 9/28/16
Borehole Size: 8 inches
Hammer Type: Auto Trip.
Weight & Drop: 140 lbs./30 in.

SALEM

Boring No. B-5

Project: Proposed Commercial Development
Client: RamCam Group
Location: Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 3-216-1053
Figure No.: A-5
Logged By: SMG
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND/SAND (SM/SP) Medium dense; slightly moist; brown; fine-coarse grained; with gravel.	-	1.2	MCS		32		
5		Grades as above; dense.	-	0.8	MCS		43		
10		Grades as above.	-	1.6	SPT		33		
15		Grades as above; very dense.	-	1.5	SPT		57		
20		Grades as above.							
		End of Borehole							
25									

Drill Method: Hollow Stem Auger
Drill Rig: CME 45C
Driller: Salem Engineering Group, Inc.
Sheet: 1 of 1

Drill Date: 9/28/16
Borehole Size: 8 inches
Hammer Type: Auto Trip.
Weight & Drop: 140 lbs./30 in.

SALEM

Boring No. B-6

Project: Proposed Commercial Development
Client: RamCam Group
Location: Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Grnd. Surf. Elev. (Ft. MSL) N/A

Project No: 3-216-1053
Figure No.: A-6
Logged By: SMG
Initial: None
Depth to Water>
At Completion: None

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Loose; slightly moist; brown; fine-coarse grained.	98.2	2.5	MCS		9		
5		Grades as above; medium dense; with trace clay.	95.8	4.7	MCS		16		
		Grades as above; no clay.							
10		End of Borehole							
15									
20									
25									

Drill Method: Hollow Stem Auger
Drill Rig: CME 45C
Driller: Salem Engineering Group, Inc.
Sheet: 1 of 1

Drill Date: 9/28/16
Borehole Size: 8 inches
Hammer Type: Auto Trip.
Weight & Drop: 140 lbs./30 in.

SALEM

DOUBLE RING INFILTROMETER TEST DATA

ASTM TEST METHOD D3385-09

Test Location ID:	**DR-1**			Constants-	Ring Data				Unit Vol. of Refill Reservoir or Ring	
Test Depth (ft below grade):	3.0				Ring Dia. (in)					
Proj No.:	3-216-1053				Inner	Outer	Area, A_r (in^2)	Depth of Liquid (in)	No.	Vol., V_r (in^3/in)
Proj Name:	Proposed Commercial Development				12	24				
Date of Test:	9/29/2016					Inner Ring:	113.1	~6	--	113.1
Test By: SK	USCS Class:	Silty SAND (SM)				Annular Space:	339.3	~6	--	339.3
Water Table Depth (ft):	N/A			Penetration of Rings into Soil (in.):			Inner:	2	Outer:	2
Liquid Level Maintained by Using:	( ) Flow valve; ( ) Float Valve; ( ) Mariotte Tube; (X) Refilling Rings; ( ) Other									
Additional Comments:										

Test Interval	Time (hr:min	Δ t (min) & Total time	Inner Ring		Annular Ring		Infiltration Rate, I **		Remarks
			Ring/Res. Elev., H (in)	Δ H (in.) & ΔVol.(in^3)	Ring/Res. Elev., H (in)	Δ H (in.) & ΔVol.(in^3)	Inner (in/hr)	Outer (in/hr)	
1-Start	10:05	10	10.00	0.50	10.00	0.56			
End	10:15	10	10.50	56.55	10.56	190.01	3.00	3.36	
2-Start	10:15	10	10.50	0.38	10.56	0.44			
End	10:25	20	10.88	42.98	11.00	149.29	2.28	2.64	
3-Start	10:25	10	10.88	0.31	11.00	0.38			
End	10:35	30	11.19	35.06	11.38	128.93	1.86	2.28	
4-Start	10:35	10	11.19	0.25	11.38	0.31			
End	10:45	40	11.44	28.28	11.69	105.18	1.50	1.86	
5-Start	10:45	10	11.44	0.25	11.69	0.31			
End	10:55	50	11.69	28.28	12.00	105.18	1.50	1.86	
6-Start	10:55	10	11.69	0.25	12.00	0.31			
End	11:05	60	11.94	28.28	12.31	105.18	1.50	1.86	
7-Start	11:07	10	10.00	0.25	11.00	0.31			added water
End	11:17	70	10.25	28.28	11.31	105.18	1.50	1.86	
8-Start	11:17	10	10.25	0.25	11.31	0.32			
End	11:27	80	10.50	28.28	11.63	108.58	1.50	1.92	
9-Start	11:27	10	10.50	0.25	11.63	0.31			
End	11:37	90	10.75	28.28	11.94	105.18	1.50	1.86	
10-Start	11:38	10	10.00	0.25	11.00	0.31			added water
End	11:48	100	10.25	28.28	11.31	105.18	1.50	1.86	
11-Start	11:48	10	10.25	0.25	11.31	0.32			
End	11:58	110	10.50	28.28	11.63	108.58	1.50	1.92	
12-Start	11:58	10	10.50	0.25	11.63	0.31			
End	12:08	120	10.75	28.28	11.94	105.18	1.50	1.86	

* Flow, $Qf = \Delta H * V_r$

**Infiltration Rate. $I = Qf/(A_r * \Delta t)$

DOUBLE RING INFILTROMETER TEST DATA

ASTM TEST METHOD D3385-09

Test Location ID:	**DR-2**			Constants-	Ring Data				Unit Vol. of Refill Reservoir or Ring
Test Depth (ft below grade):	3.0				Ring Dia. (in)				
Proj No.:	3-216-1053				Inner	Outer	Area, A_r (in^2)	Depth of Liquid (in)	Vol., V_r (in^3/in)
Proj Name:	Proposed Commercial Development				12	24			No.
Date of Test:	9/29/2016						Inner Ring:	113.1	~6	--	113.1
Test By:	SK	USCS Class:	Silty SAND (SM)				Annular Space:	339.3	~6	--	339.3
Water Table Depth (ft):	N/A			Penetration of Rings into Soil (in.):			Inner:	2	Outer:	2	
Liquid Level Maintained by Using:	( ) Flow valve; ( ) Float Valve; ( ) Mariotte Tube; (X) Refilling Rings; ( ) Other										
Additional Comments:											

Test Interval	Time (hr:min	Δ t (min) & Total time	Inner Ring		Annular Ring		Infiltration Rate, I **		Remarks
			Ring/Res. Elev., H (in)	Δ H (in.) & ΔVol.(in^3)	Ring/Res. Elev., H (in)	Δ H (in.) & ΔVol.(in^3)	Inner (in/hr)	Outer (in/hr)	
1-Start	12:40	10	9.00	0.50	9.50	0.56			
End	12:50	10	9.50	56.55	10.06	190.01	3.00	3.36	
2-Start	12:50	10	9.50	0.38	10.06	0.45			
End	13:00	20	9.88	42.98	10.51	152.69	2.28	2.70	
3-Start	13:00	10	9.88	0.31	10.51	0.43			
End	13:10	30	10.19	35.06	10.94	145.90	1.86	2.58	
4-Start	13:10	10	10.19	0.31	10.94	0.37			
End	13:20	40	10.50	35.06	11.31	125.54	1.86	2.22	
5-Start	13:20	10	10.50	0.31	11.31	0.32			
End	13:30	50	10.81	35.06	11.63	108.58	1.86	1.92	
6-Start	13:31	10	8.50	0.31	9.00	0.38			added water
End	13:41	60	8.81	35.06	9.38	128.93	1.86	2.28	
7-Start	13:41	10	8.81	0.32	9.38	0.37			
End	13:51	70	9.13	36.19	9.75	125.54	1.92	2.22	
8-Start	13:51	10	9.13	0.31	9.75	0.38			
End	14:01	80	9.44	35.06	10.13	128.93	1.86	2.28	
9-Start	14:02	10	8.50	0.31	9.00	0.38			added water
End	14:12	90	8.81	35.06	9.38	128.93	1.86	2.28	
10-Start	14:12	10	8.81	0.32	9.38	0.37			
End	14:22	100	9.13	36.19	9.75	125.54	1.92	2.22	
11-Start	14:22	10	9.13	0.31	9.75	0.31			
End	14:32	110	9.44	35.06	10.06	105.18	1.86	1.86	

* Flow, $Qf = \Delta H * V_r$

**Infiltration Rate. $I = Qf/(A_r * \Delta t)$

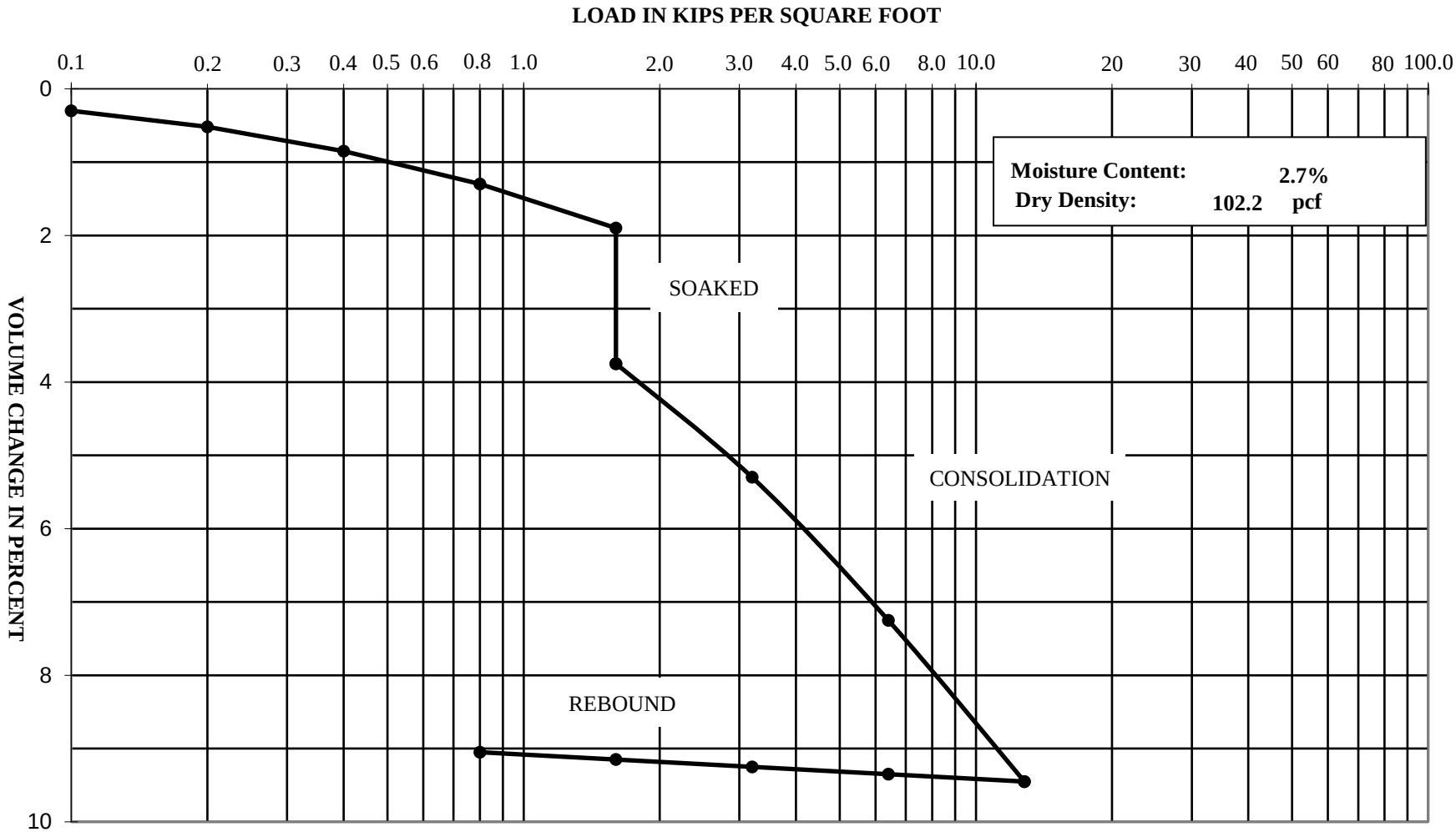
APPENDIX

B

APPENDIX B
LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ dry density and moisture content, corrosivity, consolidation, shear strength, expansion index, maximum dry density and optimum moisture, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D 2435



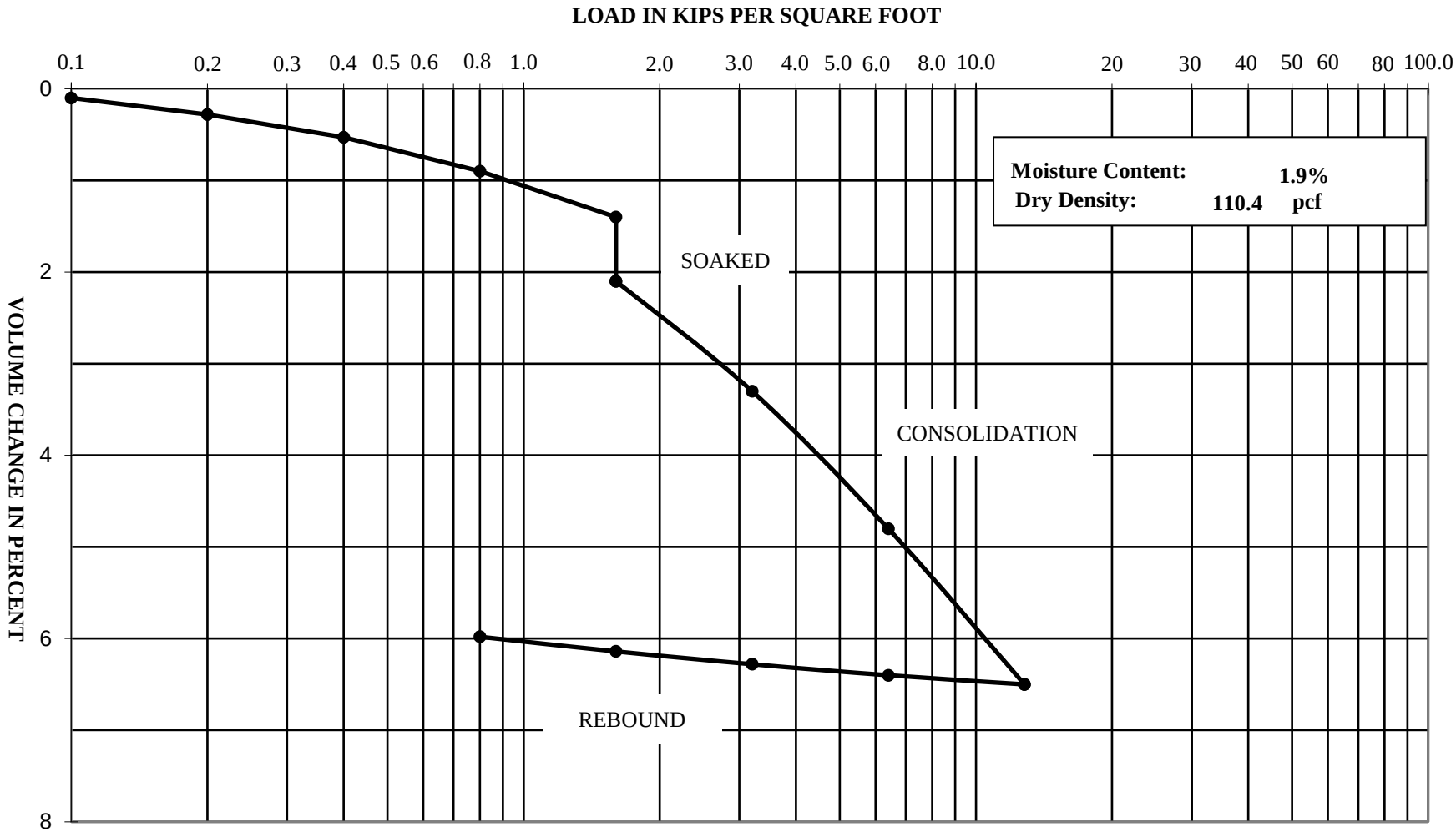
Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 2'

SALEM engineering group, inc.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D 2435



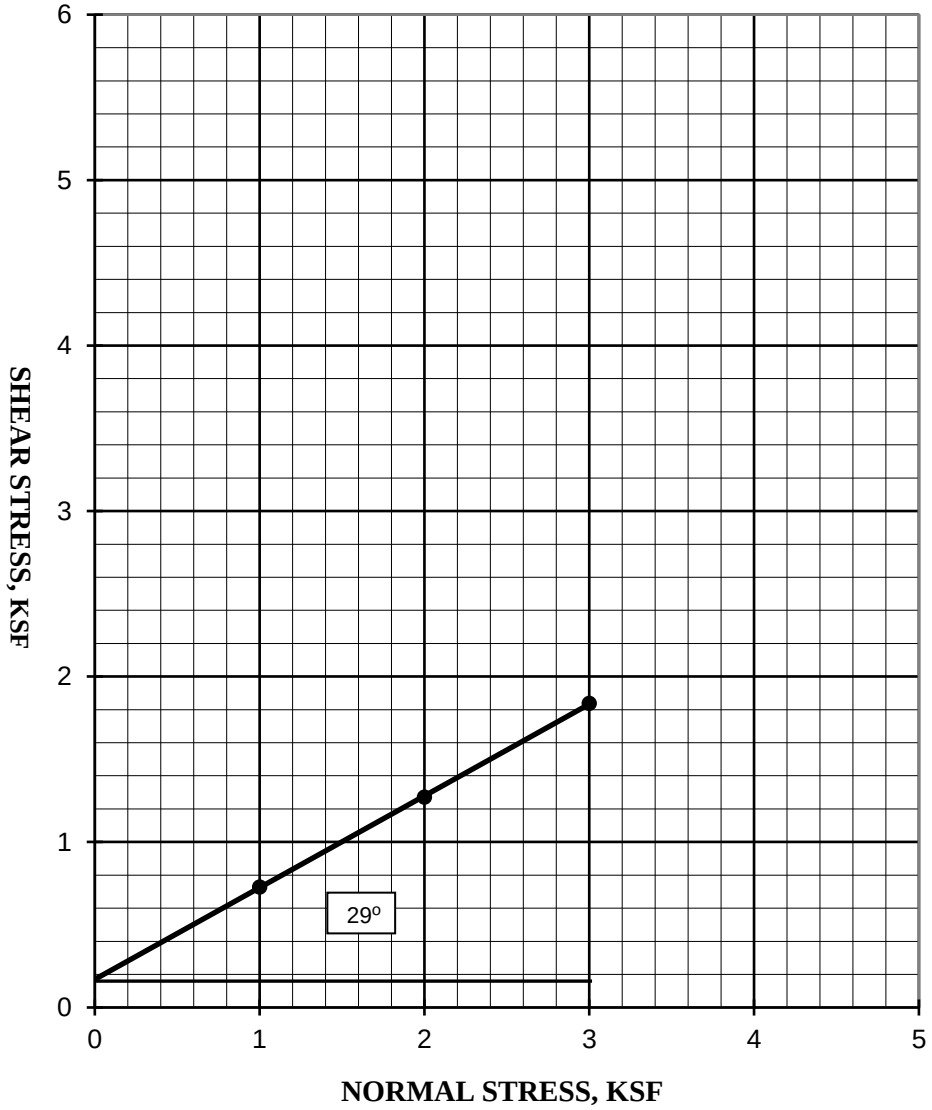
Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-2 @ 5'

SALEM engineering group, inc.

SHEAR STRENGTH DIAGRAM
(DIRECT SHEAR)
ASTM D - 3080



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

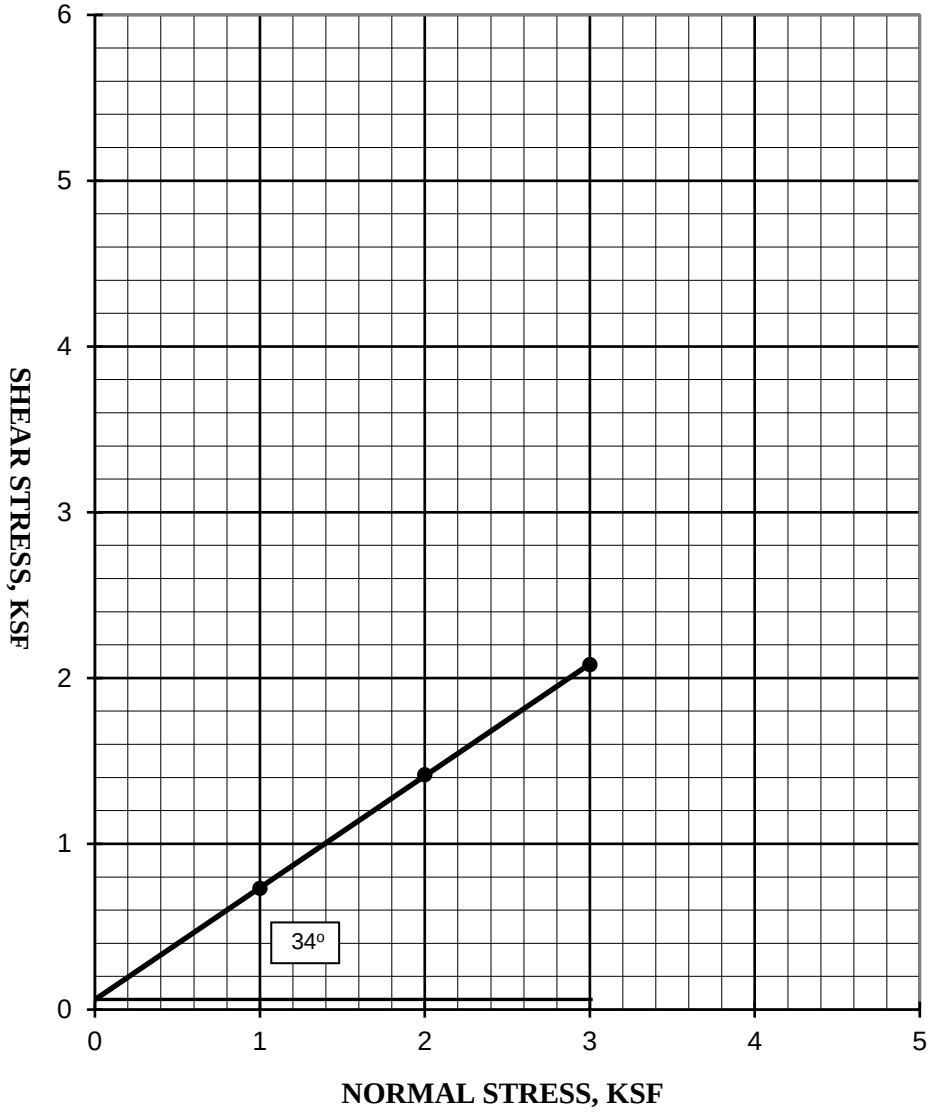
Boring: B-1 @ 5'
Soil Type: Sandy SILT (ML)

Friction Angle:	**29.0**	**degrees**
Cohesion:	**170**	**psf**

Moisture Content	**8.5%**
Dry Density	**95.9 pcf**

SALEM engineering group, inc.

SHEAR STRENGTH DIAGRAM
(DIRECT SHEAR)
ASTM D - 3080



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-2 @ 2'
Soil Type: Silty Sand (SM)

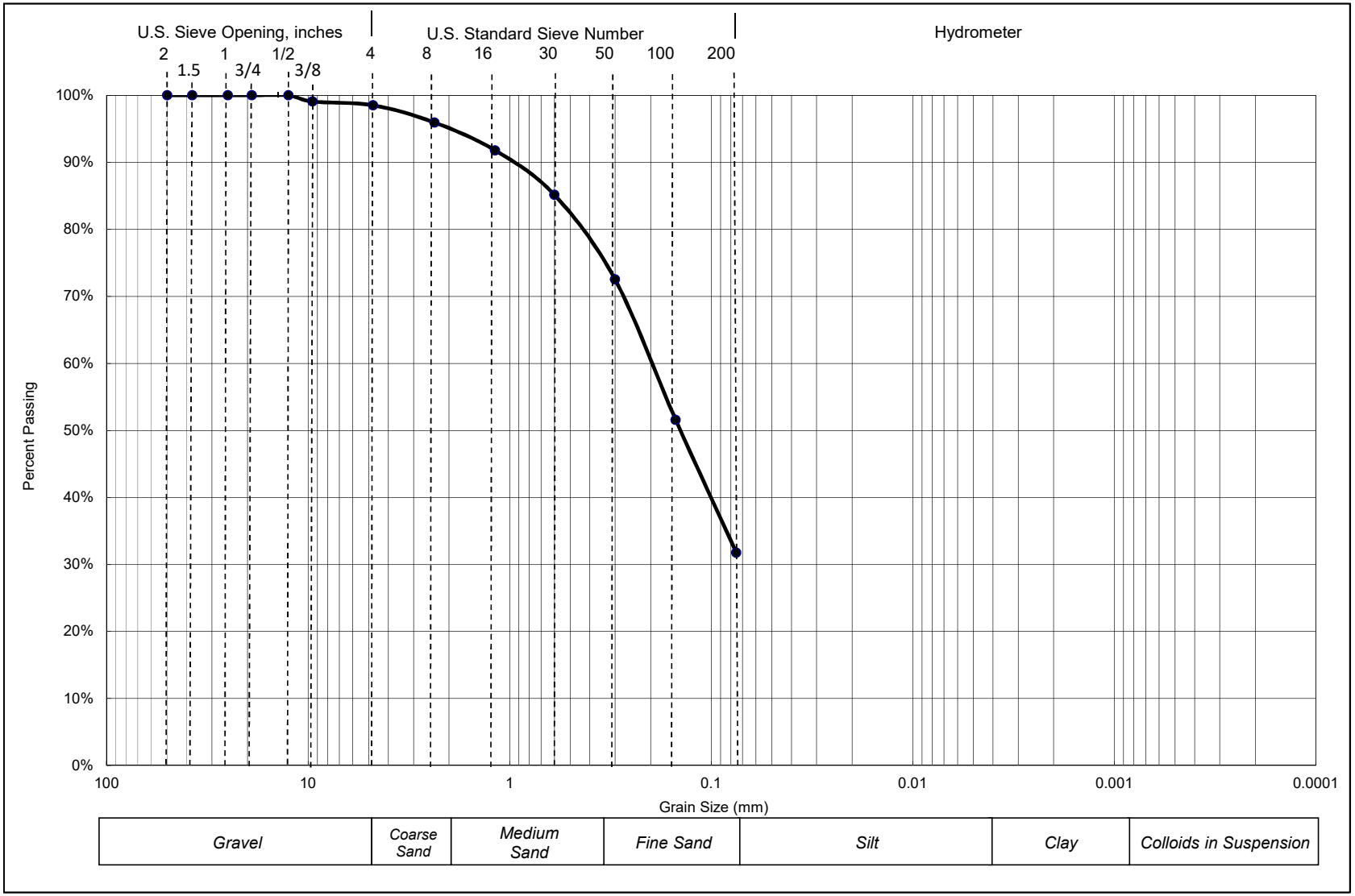
Friction Angle:	**34.0**	**degrees**
Cohesion:	**60**	**psf**

Moisture Content	**3.1%**
Dry Density	**100.4 pcf**

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 2'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

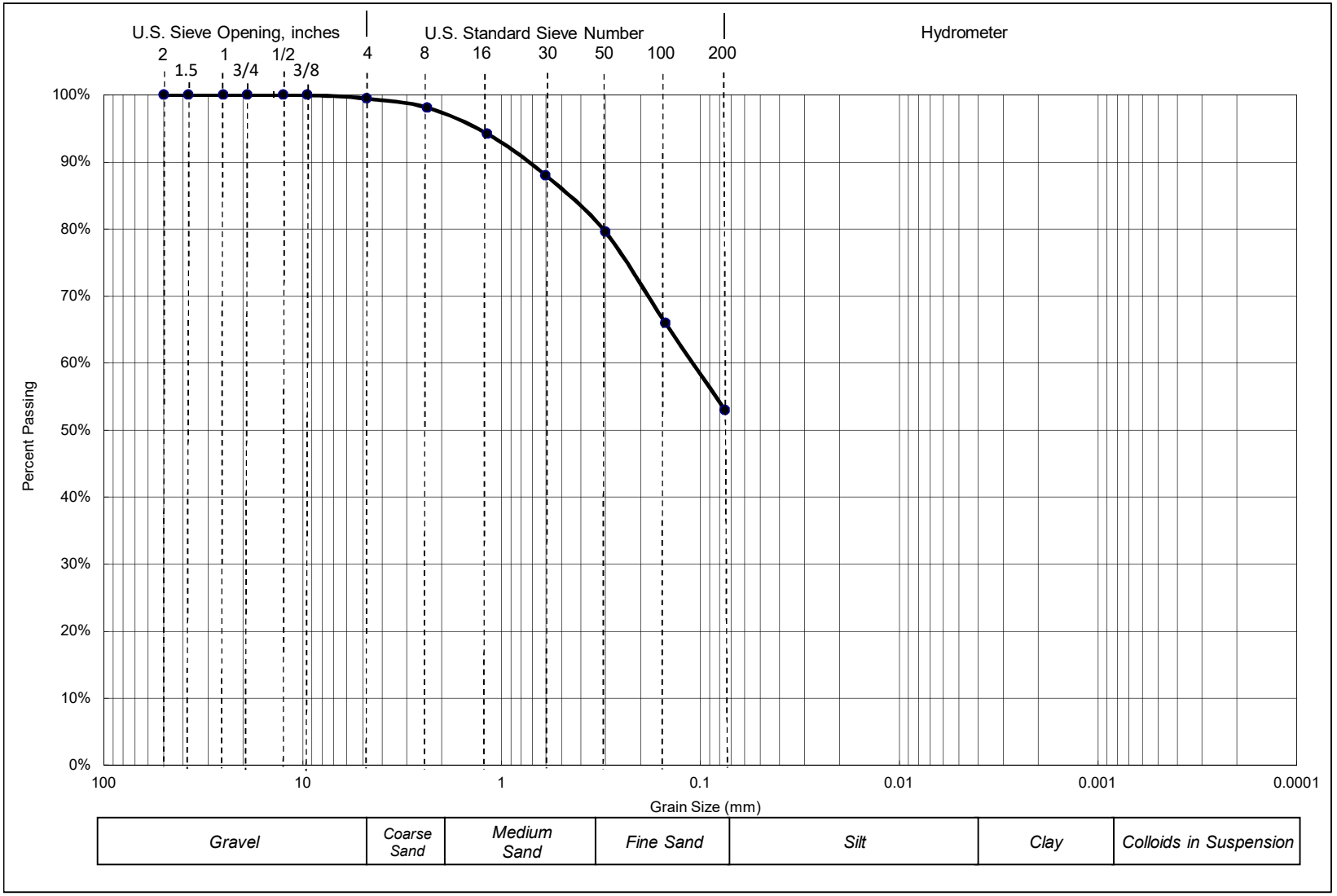
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	99.1%
No. 4	4.75	98.5%
No. 8	2.36	95.9%
No. 16	1.18	91.8%
No. 30	0.6	85.2%
No. 50	0.3	72.5%
No. 100	0.15	51.6%
No. 200	0.075	31.7%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 2'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 5'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

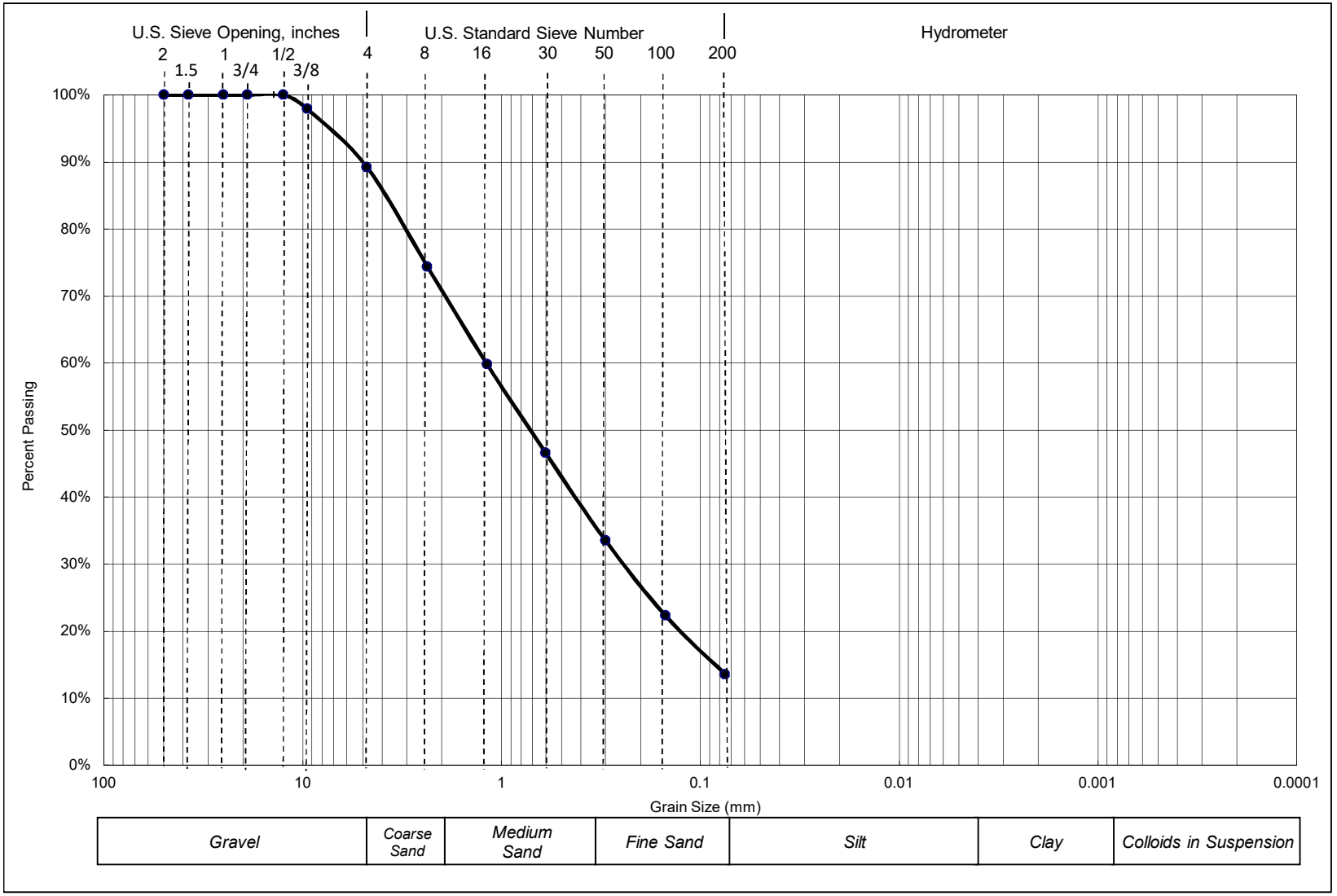
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	99.5%
No. 8	2.36	98.1%
No. 16	1.18	94.2%
No. 30	0.6	88.0%
No. 50	0.3	79.5%
No. 100	0.15	66.0%
No. 200	0.075	53.0%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 10'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

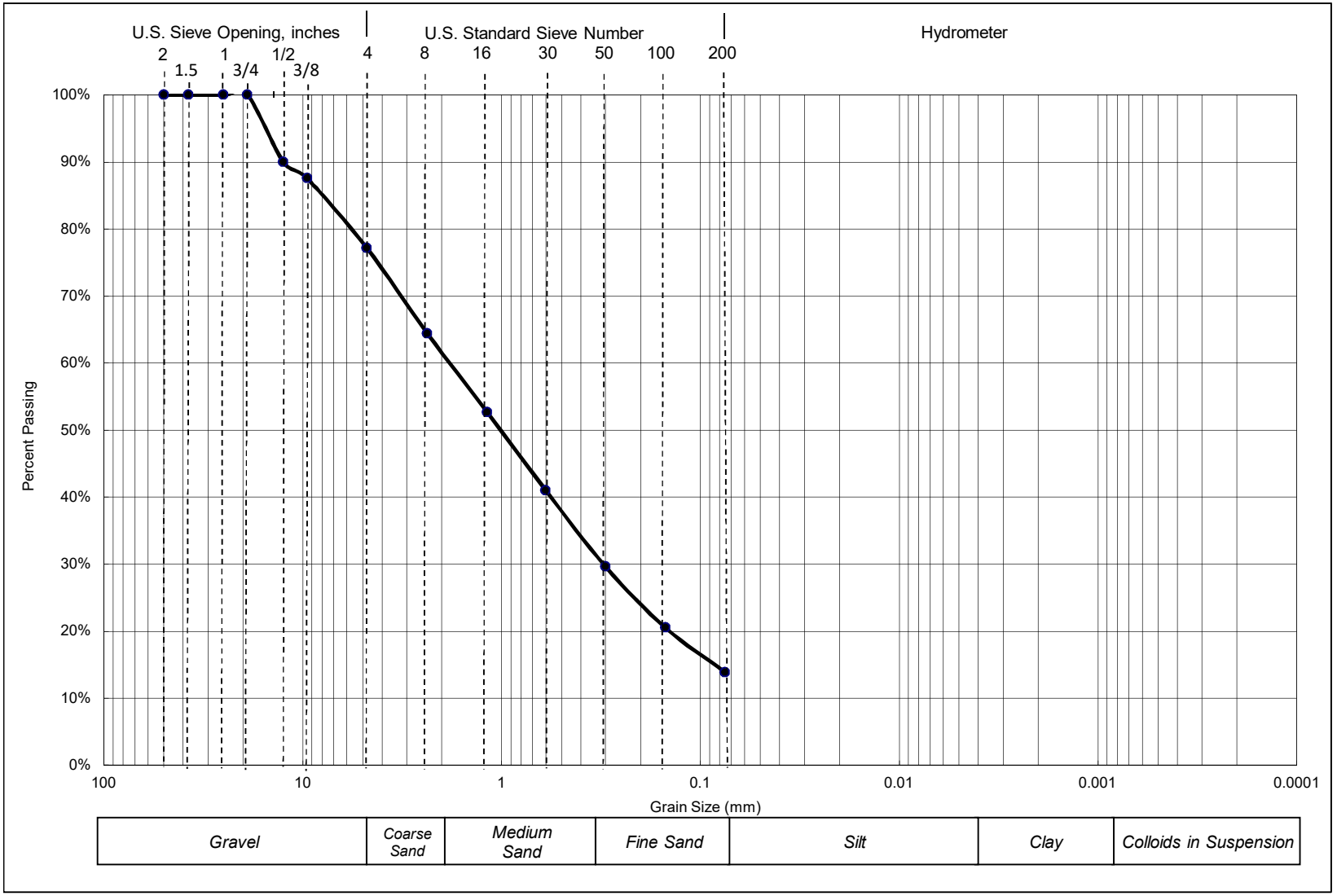
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	97.9%
No. 4	4.75	89.2%
No. 8	2.36	74.4%
No. 16	1.18	59.8%
No. 30	0.6	46.6%
No. 50	0.3	33.5%
No. 100	0.15	22.3%
No. 200	0.075	13.5%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 10'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 15'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

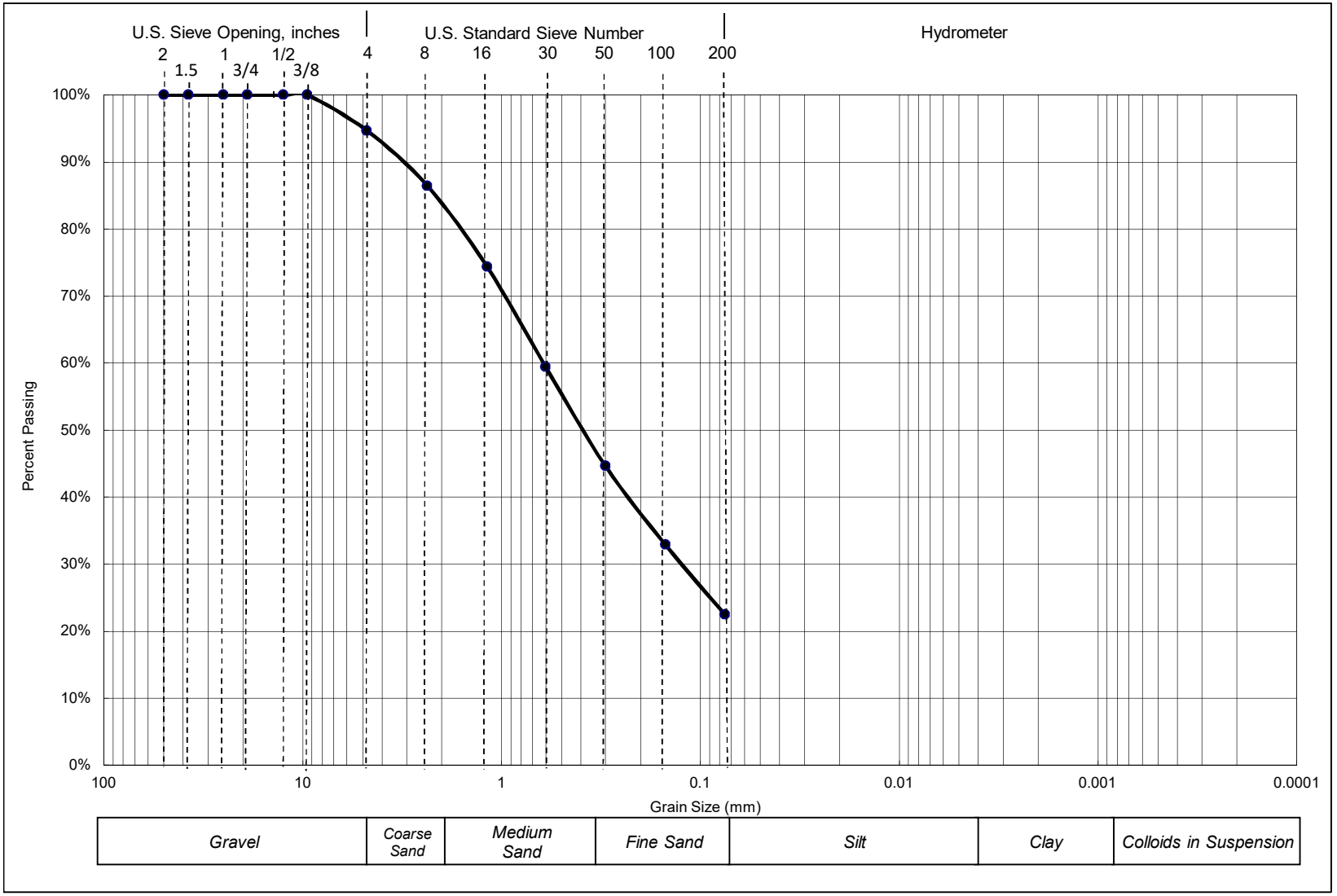
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	90.0%
3/8-in.	9.5	87.5%
No. 4	4.75	77.1%
No. 8	2.36	64.4%
No. 16	1.18	52.7%
No. 30	0.6	41.0%
No. 50	0.3	29.6%
No. 100	0.15	20.5%
No. 200	0.075	13.9%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 15'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 20'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

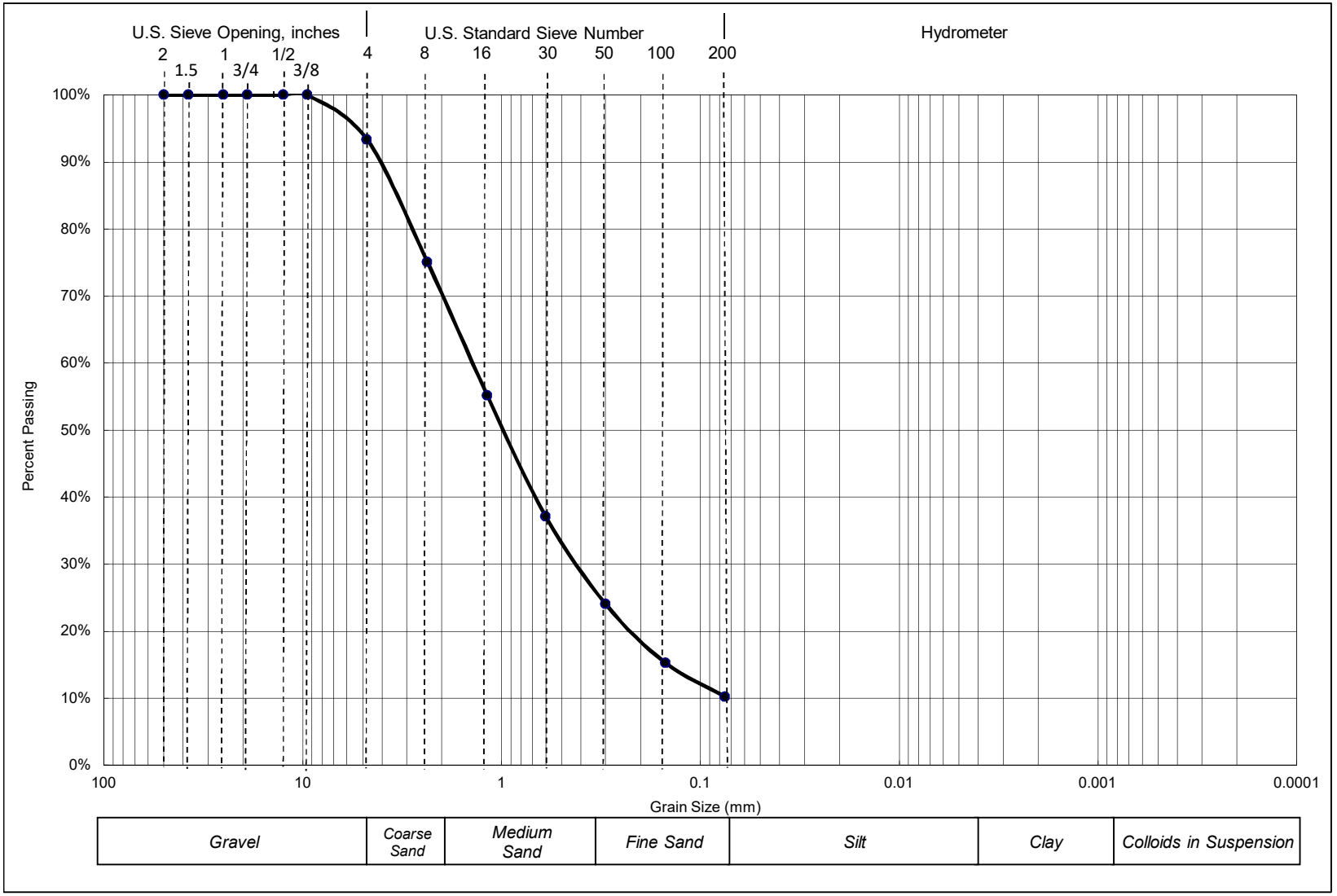
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	94.7%
No. 8	2.36	86.4%
No. 16	1.18	74.3%
No. 30	0.6	59.5%
No. 50	0.3	44.6%
No. 100	0.15	32.9%
No. 200	0.075	22.4%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 20'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 25'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

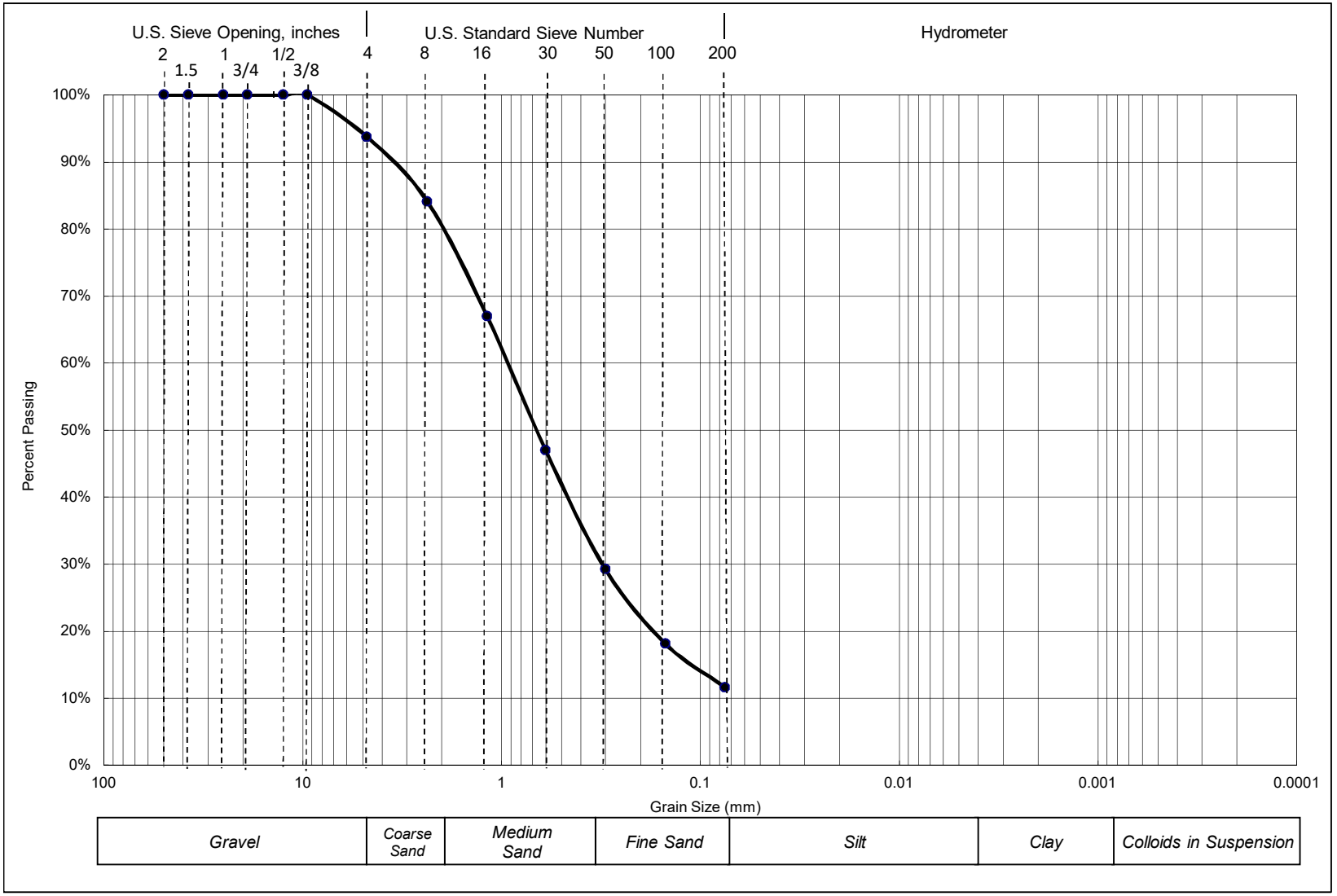
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	93.4%
No. 8	2.36	75.1%
No. 16	1.18	55.2%
No. 30	0.6	37.1%
No. 50	0.3	24.1%
No. 100	0.15	15.3%
No. 200	0.075	10.2%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 25'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 30'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

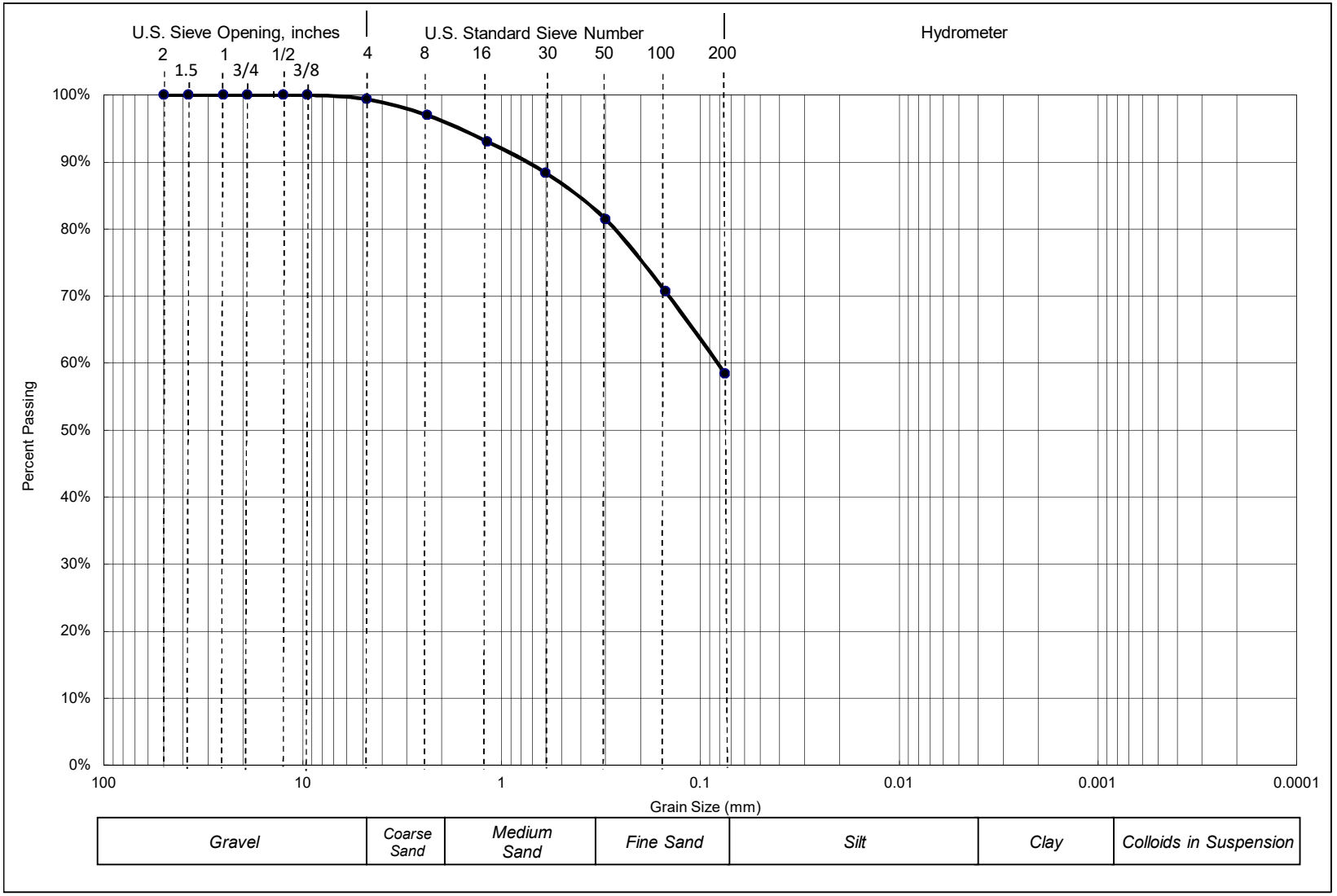
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	93.8%
No. 8	2.36	84.1%
No. 16	1.18	66.9%
No. 30	0.6	47.0%
No. 50	0.3	29.2%
No. 100	0.15	18.1%
No. 200	0.075	11.6%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 30'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 35'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

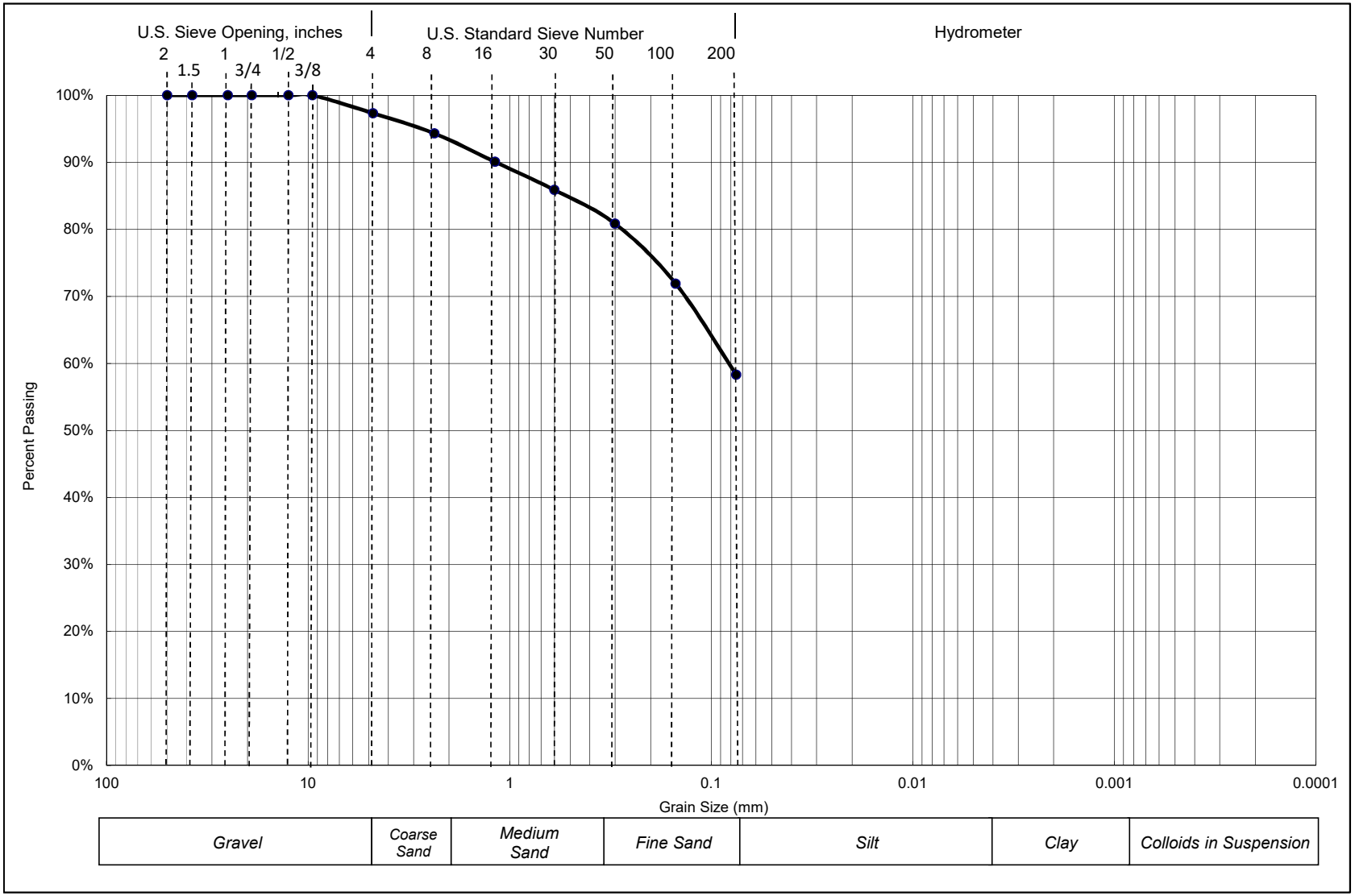
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	99.4%
No. 8	2.36	97.0%
No. 16	1.18	93.0%
No. 30	0.6	88.4%
No. 50	0.3	81.5%
No. 100	0.15	70.7%
No. 200	0.075	58.4%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 35'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 40'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

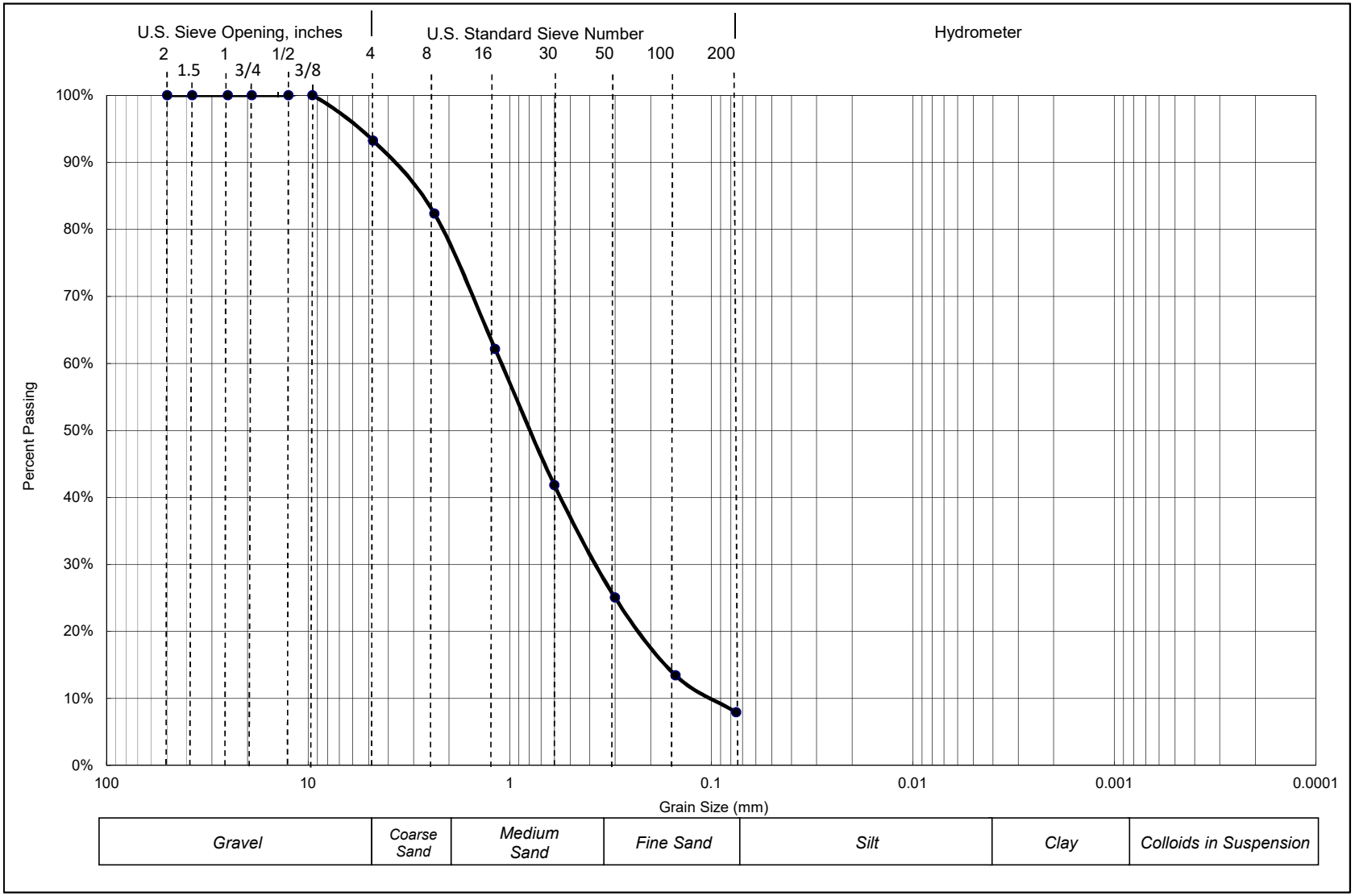
Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	97.3%
No. 8	2.36	94.3%
No. 16	1.18	90.1%
No. 30	0.6	85.9%
No. 50	0.3	80.8%
No. 100	0.15	71.9%
No. 200	0.075	58.3%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 40'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM D 422



Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA

Project Number: 3-216-1053

Boring: B-1 @ 45'

SALEM engineering group, inc.

DRY SIEVE ANALYSIS (ASTM D422 without Hydrometer)

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	93.2%
No. 8	2.36	82.3%
No. 16	1.18	62.2%
No. 30	0.6	41.8%
No. 50	0.3	25.0%
No. 100	0.15	13.4%
No. 200	0.075	7.9%

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Boring: B-1 @ 45'

SALEM engineering group, inc.

EXPANSION INDEX TEST
ASTM D 4829 / UBC Std. 29-2

Project Number: 3-216-1053
Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Date Tested: 9/28/16
Sample location/ Depth: B-1 @ 0' - 3'
Sample Number: 1
Soil Classification: Silty SAND (SM)

Trial #	1	2	3
Weight of Soil & Mold, gms	598.6		
Weight of Mold, gms	186.7		
Weight of Soil, gms	411.9		
Wet Density, Lbs/cu.ft.	124.2		
Weight of Moisture Sample (Wet), gms	300.0		
Weight of Moisture Sample (Dry), gms	278.0		
Moisture Content, %	7.9		
Dry Density, Lbs/cu.ft.	115.1		
Specific Gravity of Soil	2.7		
Degree of Saturation, %	46.1		

Time	Inital	30 min	1 hr	6 hrs	12 hrs	24 hrs
Dial Reading	0	--	--	--	--	0.0030

Expansion Index $_{measured}$ = 3
Expansion Index $_{50}$ = 1.5

Expansion Index = **1**

Expansion Potential Table	
Exp. Index	Potential Exp.
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

SALEM engineering group, inc.

CHEMICAL ANALYSIS

SO_4 - Modified Caltrans 417 & Cl - Modified Caltrans 417/422

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Date: 10/4/16
Soil Classification: Silty SAND (SM)

Sample Number	Sample Location	Soluble Sulfate SO_4-S	Soluble Chloride Cl	pH
1a.	B-1 @ 0' - 3'	50 mg/Kg	130 mg/Kg	7.7
1b.	B-1 @ 0' - 3'	50 mg/Kg	131 mg/Kg	7.7
1c.	B-1 @ 0' - 3'	50 mg/Kg	131 mg/Kg	7.7
Average:		**50 mg/Kg**	**131 mg/Kg**	**7.7**

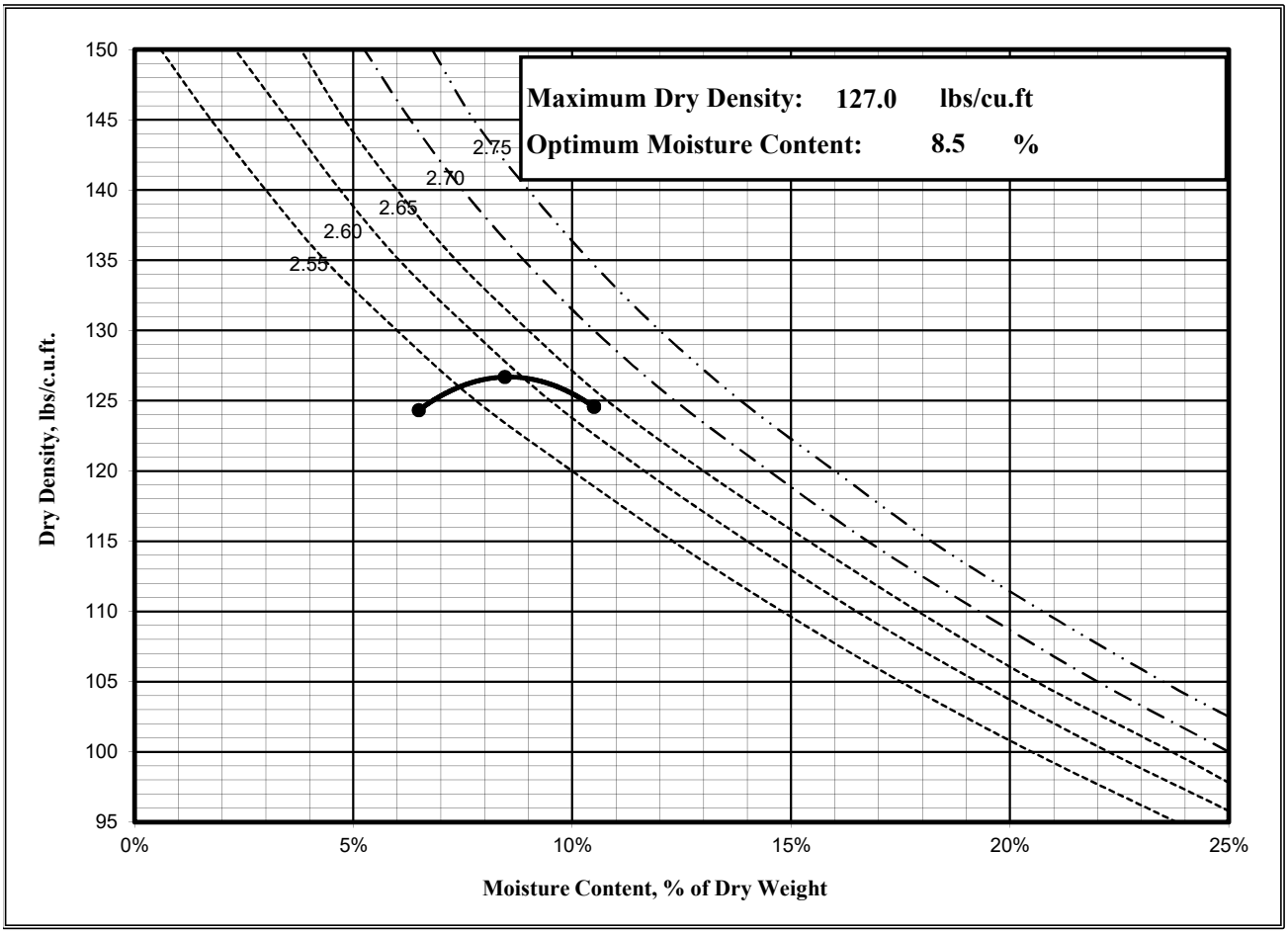
SALEM engineering group, inc.

LABORATORY COMPACTION CURVE

ASTM - D1557, D698

Proposed Commercial Development, Reche Canyon Road & Crystal Ridge Lane, Colton, CA
Project Number: 3-216-1053
Date Tested: 9/29/16
Sample Location: B-1 @ 0' - 3'
Soil Classification: Silty SAND (SM)
Sample/Curve Number: 1
Test Method: 1557 A

	1	2	3
Weight of Moist Specimen & Mold, gm	4257.9	4333.4	4336.9
Weight of Compaction Mold, gm	2257.9	2257.9	2257.9
Weight of Moist Specimen, gm	2000.0	2075.5	2079.0
Volume of mold, cu. ft.	0.0333	0.0333	0.0333
Wet Density, lbs/cu.ft.	132.4	137.4	137.6
Weight of Wet (Moisture) Sample, gm	200.0	200.0	200.0
Weight of Dry (Moisture) Sample, gm	187.8	184.4	181.0
Moisture Content, %	6.5%	8.5%	10.5%
Dry Density, lbs/cu.ft.	124.3	126.7	124.6



SALEM engineering group, inc.

APPENDIX

C

APPENDIX C
GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

1.0 SCOPE OF WORK: These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

2.0 PERFORMANCE: The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

3.0 TECHNICAL REQUIREMENTS: All compacted materials shall be densified to no less that 95 percent of relative compaction (90 percent for cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

4.0 SOILS AND FOUNDATION CONDITIONS: The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

5.0 DUST CONTROL: The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

6.0 CLEARING AND GRUBBING: The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

7.0 SUBGRADE PREPARATION: Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

8.0 EXCAVATION: All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

9.0 FILL AND BACKFILL MATERIAL: No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

10.0 PLACEMENT, SPREADING AND COMPACTION: The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.

11.0 SEASONAL LIMITS: No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

12.0 DEFINITIONS - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

The term "Standard Specifications": hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

13.0 PREPARATION OF THE SUBGRADE - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

14.0 AGGREGATE BASE - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

15.0 AGGREGATE SUBBASE - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

16.0 ASPHALTIC CONCRETE SURFACING - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.

APPENDIX F

PHASE I HAZARDOUS MATERIALS REPORT

SALEM
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October 4, 2021

Job No. 3-421-0940

Mr. Alex Irshaid
RAMCAM Group
670 East Parkridge Avenue, Suite 101
Corona, CA 92879

Office: (951) 734-6330
Email: Alex@rcgroup.us

Subject: **AAI PHASE I ENVIRONMENTAL SITE ASSESSMENT**
Proposed Commercial Development
Reche Canyon Road and Crystal Ridge Lane
Colton, CA

Dear Mr. Irshaid:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has conducted this Phase I Environmental Site Assessment (ESA) of the Proposed Commercial Development site located at the south corner of Reche Canyon Road and Crystal Ridge Lane in Colton, California (subject property). During the course of this assessment, SALEM identified no evidence of Recognized Environmental Conditions (RECs) in connection with the subject property as defined by ASTM E1527-13.

We appreciate the opportunity to assist you with this project. If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully submitted,

SALEM Engineering Group, Inc.

Reily Rivera
Environmental Project Manager

GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • MATERIALS TESTING & INSPECTION • FORENSIC • LABORATORY

SALEM
engineering group, inc.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROPOSED COMMERCIAL DEVELOPMENT
RECHE CANYON ROAD AND CRYSTAL RIDGE LANE
COLTON, CALIFORNIA

SALEM PROJECT NO. 3-421-0940
OCTOBER 4, 2021

PREPARED FOR:

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October 4, 2021 **Job No. 3-421-0940**

PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROPOSED COMMERCIAL DEVELOPMENT
RECHE CANYON ROAD AND CRYSTAL RIDGE LANE
COLTON, CALIFORNIA

1.0 EXECUTIVE SUMMARY

SALEM Engineering Group, Inc. (SALEM) has conducted a Phase I Environmental Site Assessment (ESA) of the Proposed Commercial Development site located at the south corner of Reche Canyon Road and Crystal Ridge Lane in Colton, California (subject property). The subject property occupies four contiguous irregular-shaped parcels totaling approximately 2.67 acres (San Bernardino County Assessor's Parcel Numbers [APNs] 0284-211-70-0000, 0284-211-71-0000, 0284-211-72-0000, and 1178-371-27-0000). SALEM conducted this Phase I ESA of the subject property in conformance with the American Society for Testing and Materials (ASTM) E1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* The U.S. Environmental Protection Agency (USEPA) has determined that the ASTM E1527-13 Standard is consistent with the requirements for conducting an "All Appropriate Inquiry" under 40 C.F.R. Part 312. Thus, this Phase I ESA constitutes All Appropriate Inquiry (AAI) designed to identify Recognized Environmental Conditions (RECs) in connection with the previous ownership and uses of the subject property as defined by ASTM E1527-13 and 40 C.F.R. Part 312.

ASTM E1527-13 Section 1.1.1 *Recognized Environmental Conditions* – The term *recognized environmental conditions* is defined as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The term as further defined by ASTM "is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies." Conditions determined to be *de minimis* are not *recognized environmental conditions*.

During the course of this assessment, SALEM identified no evidence of Recognized Environmental Conditions (RECs) in connection with the subject property as defined by ASTM E1527-13.

2.0 PURPOSE AND SCOPE OF ASSESSMENT

2.1 Purpose

According to ASTM E1527-13, the purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an *environmental site assessment* of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and *petroleum products*. As such, this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner*, *contiguous property owner*, or *bona fide prospective purchaser* limitation on CERCLA liability (hereinafter, the *"landowner liability protections,"* or *"LLPs"*): that is, the practice that constitutes *"all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35) (B).

The Phase I ESA was conducted to identify 'Recognized Environmental Conditions' (RECs), 'Controlled Recognized Environmental Conditions' (CRECs) and 'Historical RECs'(HRECs) as defined by the American Society for Testing and Materials (ASTM) *Designation E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* Section 1.1.1 of the ASTM *Designation E1527-13* defines an REC as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." The term as further defined by ASTM "is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies." Section 3.2.18 defines a CREC as a "recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)." Section 3.2.42 defines HREC as a "past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and land use limitations, institutional controls, or engineering controls)."

2.2 Scope of Work

The objective of the SALEM Phase I ESA scope of work is to provide an evaluation of RECs at the subject property and potential off-site sources. The scope of work for this Phase I ESA conforms to ASTM E1527-13. SALEM was provided written authorization to conduct the Phase I ESA by Mr. Alex Irshaid with RAMCAM Group on August 27, 2021 in accordance SALEM's proposal P3-421-1361. In fulfillment of the SALEM scope of work for this Phase I ESA, SALEM was retained to perform the following tasks:

- Acquire readily available information regarding land-use history and property development by reviewing historical aerial photographs, pertinent building permit records, historic city directories, as well as reviewing recent and historic topographic land-use maps of the subject property and surrounding area.

- A reasonable attempt at conducting interviews with at least one state and/or local government official in the form of either an in-person interview, by telephone, or in writing via a formal records request at the discretion of the environmental professional, in an effort to obtain information indicating RECs in connection with the subject property.

- Reviewing readily available local, state and federal regulatory agency databases listed in ASTM E1527-13 and compiled by Environmental Data Resources, Inc. (EDR), including but not limited to CERCLA and NPL lists for sites within one mile of the subject property. State databases, including but not limited to CALSITES, Hazardous Substance Account Act, Cortese, SWIS, SWAT, Well Investigation Program (AB1803), and LUFT, were reviewed for sites within one mile of the subject property.

- Performing a reconnaissance of the subject property and surrounding areas (up to one-half mile beyond site boundary), with regard to potential off-site sources of degradation to the subject property, which included photograph documentation of subject property conditions, and identification of potential environmental concerns. Interviews with persons knowledgeable of the previous and current ownership and uses of the subject property.

- Identifying aboveground storage tanks and/or indications of underground storage tanks on-site.

- In addition to ASTM E1527-13, SALEM recognizes ASTM *Standard Guide for Vapor Encroachment Screening (VES) on Property Involved in Real Estate Transactions* (ASTM E2600-15) as an industry-accepted guideline to determine if a Vapor Encroachment Condition (VEC) exists at the target property. A VES consists of reviewing the Phase I ESA data combined with the application of professional judgment. SALEM evaluates the regulatory agency databases to determine if there are known or suspect contaminated sites within a minimum search distance of the target property. In addition, SALEM attempted to determine whether soil and/or groundwater have been impacted within the critical distances outlined in ASTM E2600-15.

- Preparing this report of SALEM's findings and recommendations if warranted.

3.0 SITE DESCRIPTION

The subject property comprises four contiguous irregular-shaped parcels totaling approximately 2.67 acres (San Bernardino County APNs 0284-211-70-0000, 0284-211-71-0000, 0284-211-72-0000, and 1178-371-27-0000) located on the south corner of Reche Canyon Road and Crystal Ridge Lane in Colton, California. At the time of SALEM's September 22, 2021 site reconnaissance, the subject property was vacant land covered with dirt and native vegetation. The subject property is located in Sections 2 and 3, Township 2 South, Range 4 West, San Bernardino Baseline and Meridian, United States Geological Survey (U.S.G.S.) 7.5 Minute Topographic Map, San Bernardino South, California Quadrangle dated 2012.

4.0 PHYSIOGRAPHY AND HYDROGEOLOGIC CONDITIONS

The subject property is located south of the San Gabriel Mountains in the Bunker Hill groundwater basin, at an elevation of approximately 1,014 feet above mean sea level. The Bunker Hill basin is a structural basin filled with Quaternary alluvial deposits comprised of eroded sand, gravel, and clay. The alluvium is the major aquifer in the basin and attains a maximum thickness of more than 4,000 feet. The regional hydrogeologic setting for the subject site is characterized by steeply to moderate sloping alluvial deposits which are coarser near their apex in the mountains and grade to finer deposits towards the ocean. Within the alluvial deposits are layers of sand and gravel, which may extend for some distance west, and which may serve as groundwater discharge areas. Near their source, the alluvial fans are underlain by, and in direct hydraulic contact with, older alluvial fans or lie directly upon consolidated fractured sedimentary, metamorphic, or igneous rock. Away from the mountains, these deposits consist of interbedded sand, silt, and clay with discontinuous lenses of coarser sand and gravel, which formed on a narrow coastal plain of moderate relief.

According to California Regional Water Quality Control Board (RWQCB) records for the Food N Fuel leaking underground storage tank (LUST) site at 2649 South Waterman Avenue, San Bernardino, located approximately 1.7 miles north of the subject property, depth to groundwater in the subject property's vicinity is expected to be first encountered at a depth between approximately 62.18 and 94.67 feet below ground surface (bgs) with a general direction of groundwater flow toward the east. However, local groundwater level and flow direction may vary due to seasonal fluctuations in precipitation, usage demands, geology, and/or surface topography.

5.0 SITE RECONNAISSANCE

A site reconnaissance, which included a visual observation of the subject property and properties within the subject area, was conducted by SALEM's environmental assessor on September 22, 2021. The objective of the site reconnaissance is to identify RECs, including the storage and handling of hazardous substances and petroleum products on or in the vicinity of the subject property which have the potential to environmentally impact on-site soils, surface water and groundwater.

5.1 Observations

Table I summarizes the visual observations made during our site reconnaissance. A discussion of the physical observations follows Table I. Refer to the Site Map (Figure 1) and color photographs following the text for the locations of the features discussed in this section of the report.

TABLE I
Summary of Observations during Site Reconnaissance

FEATURE	OBSERVED	NOT OBSERVED
Structures (existing)		X
Evidence of past uses		X
Hazardous substances and/or petroleum products (including containers)		X
Aboveground storage tanks (ASTs)		X
Underground storage tanks (USTs) or evidence of USTs		X
Strong, pungent, or noxious odors		X
Pools of liquid likely to be hazardous materials or petroleum products		X
Drums		X
Unidentified substance containers		X
Pad-mounted/Pole-mounted transformers/capacitors/other PCB-containing equipment		X
Subsurface hydraulic equipment		X
Heating/ventilation/air conditioning (HVAC)		X
Stains or corrosion on floors, walls, or ceilings		X
Floor drains and sumps		X
Pits, ponds, or lagoons		X
Stained soil and/or pavement		X
Stressed vegetation		X
Waste or wastewater discharges to surface or surface waters on subject property (including stormwater)		X
Wells (irrigation, domestic, dry, injection, abandoned, monitoring wells)		X
Septic Systems		X

The subject property comprises four contiguous irregular-shaped parcels totaling approximately 2.67 acres (San Bernardino County APNs 0284-211-70-0000, 0284-211-71-0000, 0284-211-72-0000, and 1178-371-27-0000) located on the south corner of Reche Canyon Road and Crystal Ridge Lane in Colton, California. At the time of SALEM's site reconnaissance, the subject property was vacant land covered with dirt and native vegetation.

- A paved turn-out was observed in the northern portion of the subject property.
- A storage container was observed in the southeast corner of the subject property.
- During visual observations of the subject property, no hazardous substances and/or petroleum products were observed to be stored or handled on the subject property. Exposed surface soils did not exhibit obvious signs of discoloration. No other obvious evidence (vent pipes, fill pipes, dispensers, etc.) of USTs was noted within the area observed. No standing water or major depressions were observed on the subject property.

5.2 Adjacent Streets and Property Usage

Table II summarizes the adjacent streets and properties uses observed during the SALEM's site reconnaissance.

TABLE II
Adjacent Streets and Property Use

DIRECTION	ADJACENT STREET	ADJACENT PROPERTY USE
Northeast	Reche Canyon Road	Residential
South	Access Road	Hitchin' Post Market/Liquor and Gasoline Service Station (2651 Reche Canyon Road); Residential
West	Access Road	Residential

Based on the observed uses of the properties located immediately adjoining the subject property, it is unlikely that significant quantities of hazardous substances or petroleum products are stored or handled at the adjoining properties with the exception of the Hitchin' Post gasoline service station to the south, which stores large quantities of gasoline. The adjoining Hitchin' Post gasoline station was not identified on any government databases of known and reported unauthorized releases of hazardous substances and/or petroleum products to the subsurface. Based upon the absence of reported unauthorized releases, the gasoline station is deemed to presently have a low potential to environmentally impact the subject property and therefore, does not present an REC to the subject property.

5.3 Potable Water Source

The water purveyor for the subject property is the City of Colton Water Department (CWD). The CWD's water quality monitoring is an on-going program with water samples obtained on a regular basis. It is the responsibility of the CWD to provide customers with potable water in compliance with the California State Maximum Contaminant Levels (MCLs) for primary drinking water constituents in water supplied to the public.

5.4 Sewage Disposal System

SALEM's research indicates that no sewage disposal systems have historically serviced the subject property but that sewer service is available in the subject property vicinity.

5.5 Heating and Cooling Source

No structures are located on the subject property. Therefore, no heating or cooling sources exist at the subject property.

6.0 USER-PROVIDED INFORMATION

A review of a user-provided Title Report and a Phase I ESA User Questionnaire was conducted in order to help identify pertinent information regarding potential environmental impacts associated with the subject property.

6.1 Preliminary Title Reports

On September 28, 2021, a Preliminary Title Report by Fidelity National Title Company, dated June 6, 2017, were provided to SALEM by Mr. Alex Irshaid with RAMCAM Group for the subject property. The Preliminary Title Report was reviewed to identify potential deed restrictions, environmental liens, or activity and use limitations (AULs) which may have occurred on or exist in connection with the subject property as indicated by the Preliminary Title Report. SALEM's review of the Preliminary Title Report indicated no deed restrictions, environmental liens, or AULs for the subject property. Please refer to Appendix A for a copy of the Preliminary Title Report.

6.2 Phase I Environmental Site Assessment User Questionnaire

On September 15, 2021, a completed Phase I ESA User Questionnaire was received from Mr. Fahim Tanios, the current owner of the subject property. Please refer to Appendix B for a copy of the completed Phase I ESA User Questionnaire.

In order to quality for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *"Brownfields Amendments"*), the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that *"all appropriate inquiry"* is not complete. The user is asked to provide information or knowledge of the following:

- Environmental cleanup liens that are filed or recorded against the *property*.
- Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry.
- Specialized knowledge or experience of the person seeking to quality for the LLPs.
- Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.
- Commonly known or *reasonably ascertainable* information about the *property*.
- The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.

According to Mr. Tanios, to the best of his knowledge as the user of this Phase I ESA, no environmental cleanup liens and no activity or land use limitations have been filed or recorded against the subject property. Mr. Tanios indicated the subject property has historically been vacant land and that no chemicals have been present on-site. Mr. Tanios indicated that he did not have knowledge of the past or current spills or chemical releases or environmental cleanups at the subject property. Additionally, Mr. Tanios indicated that the purchase price of the subject property reasonably reflects fair market value.

7.0 SITE USAGE SURVEY

In order to assess the subject property's history, SALEM reviewed a Phase I ESA Owner Questionnaire, historical aerial photographs, building department records, city directories, planning department records and SFIMs.

7.1 Phase I Environmental Site Assessment Owner Questionnaire

On September 15, 2021, a Phase I ESA Owner Questionnaire was received from Mr. Fahim Tanios, the current owner of the subject property. The Phase I ESA Owner Questionnaire is designed to provide pertinent information regarding potential environmental and historical impacts associated with the subject property. Mr. Tanios indicated that he has owned the subject property for five years and the subject property is currently vacant land. Mr. Tanios indicated that no previous investigations have been conducted on the subject property and there are no previous uses of the subject property. According to Mr. Tanios, he had no knowledge regarding on-site treatment or discharge of waste; on-site leach fields, dry wells, sumps, or disposal ponds; use, storage or disposal of hazardous substances or petroleum products; existing or former USTs or ASTs; hazardous material spills; buried materials; domestic, monitoring or irrigation wells; or any additional items of environmental concern that were associated with the subject property. Mr. Tanios indicated that the subject property is connected to municipal water and sewer systems. Please refer to Appendix C for a copy of the completed Phase I ESA Owner Questionnaire.

7.2 Historical Aerial Photograph Review

Historical aerial photographs of the subject property and vicinity dated 1930, 1938, 1949, 1953, 1959, 1966, 1968, 1975, 1978, 1985, 1989, 1994, 2002, 2006, 2009, 2012 and 2016 were reviewed to evaluate changes in land-use for the subject property. The historical aerial photographs were supplied by EDR. Refer to Appendix D for a copy of the EDR-provided aerial photographs. A summary of the aerial photographs is provided below:

- **1930 Aerial Photograph**
  The subject property and adjoining properties appear to be undeveloped land. A two-lane dirt road is observed adjoining to the south and west, curving around the subject property.

- **1938 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1930 aerial photograph. The road adjoining to the south and west appears to have been paved.

- **1949 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1938 aerial photograph.

- **1953 Aerial Photograph**
  The conditions on the subject property and adjoining properties to the northeast and west are similar to the 1949 aerial photograph. Two single-family dwellings are observed on the adjoining property to the south.

- **1959 Aerial Photograph**
  The conditions on the subject property and the adjoining properties are similar to the 1953 aerial photograph, with the exception that the adjoining property to the south appears to have been further developed with a small commercial structure.

- **1966 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1959 aerial photograph.

- **1968 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1966 aerial photograph.

- **1975 Aerial Photograph**
  The conditions on the subject property and adjoining property to the northeast are similar to the 1968 aerial photograph. The adjoining property to the west has been developed with several single-family dwellings. The commercial portion of the adjoining property to the south appears to have had a canopy associated with a gasoline service station.

- **1978 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1975 aerial photograph.

- **1985 Aerial Photograph**
  The conditions on the subject property and adjoining properties to the south and west are similar to the 1978 aerial photograph. The properties to the northeast of the subject property have been developed with single-family dwellings.

- **1989 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1985 aerial photograph.

- **1994 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1989 aerial photograph.

- **2002 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 1994 aerial photograph.

- **2006 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 2002 aerial photograph.

- **2009 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 2006 aerial photograph.

- **2012 Aerial Photograph**
  The conditions on the subject property and adjoining properties are similar to the 2009 aerial photograph.

- **2016 Aerial Photograph**
  The conditions on the subject property and the adjoining properties are similar to the 2012 aerial photograph, with the exception of the gasoline service station to the north of the subject property has been replaced with the current asphalt-paved parking lot.

7.3 Building Department Records Review

On September 9, 2021, a records request was made to the City of Colton Building Department (CBD) for the subject property APNs. All available records pertain to the proposed development for this project. Please refer to Appendix E for copies of CBD records.

7.4 City Directories

On September 10, 2021, SALEM contracted with EDR to provide a City Directory Abstract dated 1922 through 2017 for the subject property, as well as the subject property vicinity. As there are no addresses associated with the subject property, the subject property was not listed in the City Directory Abstract Report. Please refer to Appendix F for a copy of the City Directory Abstract.

7.5 Sanborn Fire Insurance Maps

SALEM reviews SFIMs to evaluate prior land use at the subject property and adjacent properties. SFIMs typically exist for cities with populations of 2,000 or more, the coverage dependent on the location of the property. On September 21, 2021, SALEM contracted with EDR to provide a Fire Insurance Map Abstract indicating the availability of historic SFIMs for the subject property and adjacent properties as far back as 1867. EDR's search of collections at the Library of Congress, University Publications of America, and various public and local sources revealed no coverage for the subject property and adjacent properties. Please refer to Appendix G for a copy of the EDR-provided SFIM No Coverage Certification.

7.6 Agricultural Chemicals

Review of historical aerial photographs dating to 1930 reveals that the subject property has not been utilized for agricultural purposes. Therefore, the use, storage and application of agricultural chemicals at the subject site are not considered an environmental concern.

7.7 Phase I Environmental Site Assessment Interview - Previous Owner

SALEM attempted to interview the previous owner of the subject property to provide pertinent information regarding potential environmental and historical impacts associated with the subject property. However, a Phase I ESA interview with the previous owner of the subject property was not reasonable ascertainable.

7.8 Previous Environmental Reports

SALEM was not provided with additional environmental reports for the subject property.

8.0 REGULATORY AGENCY RECORDS REVIEW

SALEM conducted a review of regulatory agency records for the purpose of determining if hazardous substances or petroleum products/hazardous wastes have been stored or handled on the subject property and area properties of environmental concern. The most current records available were reviewed.

California Environmental Protection Agency, Department of Toxic Substances Control

SALEM's September 9, 2021 review of the DTSC Envirostor California cleanup sites database available via the DTSC Internet Website which tracks federal superfund sites, state response sites, voluntary cleanup sites, and school cleanup sites, indicated that no records of cleanup sites are on file with the DTSC for the subject property or adjoining properties.

California Regional Water Quality Control Board

SALEM's September 9, 2021 review of the RWQCB Geotracker leaking underground fuel tank (LUFT) database available via the RWQCB Internet Website indicated no records of LUFTs for the subject property or adjoining properties are on file with the RWQCB.

California Division of Oil, Gas, and Geothermal Resources

SALEM reviewed the California Division of Oil, Gas, and Geothermal Resources (DOGGR) website (http://maps.conservation.ca.gov/doggr/index.html) to evaluate the potential for existing/former oil, gas, or geothermal wells on the subject property or adjoining properties. The subject property is located within the DOGGR Southern District. The subject property vicinity is not located within an oil, gas, or geothermal field. The review of DOGGR information does not indicate that an oil, gas, or geothermal well has been drilled on the subject property.

South Coast Air Quality Management District

On September 9, 2021, the South Coast Air Quality Management District (SCAQMD) website (http://www3.aqmd.gov/webappl/fim/prog/search.aspx) was reviewed to identify any records of historical hazardous/flammable permits, hazardous materials handling, registered USTs, and/or unauthorized releases of hazardous substances or petroleum products for the subject property. According to the SCAQMD, no records are on file for the subject property.

San Bernardino County Fire Department

On September 9, 2021, the SBCFD-HMD was contacted regarding records of historical hazardous/flammable permits, hazardous substances and/or petroleum products handling, hazardous/flammable incidents, and/or registered USTs for the subject property. According to the SBCFD-HMD, no records are on file for the subject property.

Local Area Tribal Records
According to the EDR Radius Map Report, no tribal records are listed for the subject property or adjoining properties.

8.1 Standard Environmental Record Sources

EDR performed a search of federal, state, and local regulatory agency databases for the subject property and surrounding area. The various search distances as required by ASTM E1527-13 extended up to one mile from the subject property. Several agencies have published documents that list businesses or properties which have handled hazardous materials or hazardous waste, or may have had a documented release of hazardous substances or petroleum products. The databases consulted in the course of this assessment were compiled by EDR on September 5, 2021 and represent reasonably ascertainable current listings. SALEM did not verify the locations and distances of every site listed by EDR. SALEM verified locations and distances of the sites SALEM deemed as having a potential to environmentally impact the subject property. The actual location of the off-site properties identified may differ from the EDR listing. Table III summarizes the listed properties located within the specified ASTM Search Radii. The EDR Radius Map report is included in Appendix H.

TABLE III
EDR Radius Map Summary

DATABASE	TYPE OF RECORDS	SUBJECT PROPERTY	<⅛ MILE	⅛ - ¼ MILE	¼ - ½ MILE	½ - 1 MILE
STANDARD ENVIRONMENTAL RECORDS						
Federal NPL Site List						
NPL	National Priorities List	0	0	0	0	0
Proposed NPL	Proposed National Priorities List	0	0	0	0	0
NPL LIENS	Federal Superfund Liens	0	0	0	0	0
Federal Delisted NPL Site List						
Delisted NPL	National Priority List Deletions	0	0	0	0	0
Federal CERCLIS List						
SEMS	Superfund Enterprise Management System	0	0	0	0	---
Federal Facility	Federal Facility	0	0	0	0	---
Federal CERCLIS NFRAP Site List						
SEMS-ARCHIVE	Superfund Enterprise Management System Archive	0	0	0	0	---
Federal RCRA CORRACTS Facilities List						
CORRACTS	Corrective Action Report	0	0	0	0	0
Federal RCRA non-CORRACTS TSD Facilities List						
RCRA-TSDF	Transporters, Storage, and Disposal	0	0	0	0	---
Federal RCRA Generators List						
RCRA – LQG	RCRA – Large Quantity Generators	0	0	0	---	---
RCRA – SQG	RCRA – Small Quantity Generators	0	0	0	---	---
RCRA – VSQG	RCRA - Very Small Quantity Generators	0	0	0	---	---
Federal Institutional Controls/Engineering Controls Registries						
LUCIS	Land Use Control Information System	0	0	0	0	---
US ENG CONTROLS	Engineering Controls Sites List	0	0	0	0	---
US INST CONTROL	Sites with Institutional Controls	0	0	0	0	---
Federal ERNS List						
ERNS	Emergency Response Notification System	0	0	---	---	---
State and Tribal Equivalent NPL						
RESPONSE	State Response Sites	0	0	0	0	0
State and Tribal Equivalent CERCLIS						
ENVIROSTOR	Envirostor Database	0	0	0	0	0
State and Tribal Landfill and/or Solid Waste Disposal Site List						
SWF/LF	Solid Waste Information System	0	0	0	0	---
State and Tribal Leaking Storage Tank Lists						
LUST	Leaking Underground Storage Tanks	0	0	0	0	---
CPS-SLIC	Statewide SLIC Cases	0	0	0	0	---

TABLE III (cont'd)
EDR Radius Map Summary

DATABASE	TYPE OF RECORDS	SUBJECT PROPERTY	<⅛ MILE	⅛ - ¼ MILE	¼ - ½ MILE	½ - 1 MILE
INDIAN LUST	LUST on Indian Land	0	0	0	0	---
State and Tribal Registered Storage Tank Lists						
UST	Active UST Facilities	0	1	0	---	---
FEMA UST	Underground Storage Tank Listing	0	0	0	---	---
AST	Aboveground Storage Tank Facilities	0	0	0	---	---
INDIAN UST	USTS on Indian Land	0	0	0	---	---
State and Tribal Voluntary Cleanup Sites						
INDIAN VCP	Voluntary Cleanup on Indian Land	0	0	0	0	---
VCP	Voluntary Cleanup Program Properties	0	0	0	0	---
ADDITIONAL ENVIRONMENTAL RECORDS						
Local Brownfield Lists						
US BROWNFIELDS	Brownfield Sites	0	0	0	0	---
Local Lists of Landfill/Solid Waste Disposal Sites						
ODI	Open Dump Inventory	0	0	0	0	---
DEBRIS REGION 9	Illegal Dump Site Locations	0	0	0	0	---
WMUDS/SWAT	Waste Management Unit Database	0	0	0	0	---
SWRCY	Recycler Database	0	0	0	0	---
HAULERS	Registered Waste Tire Haulers Lists	0	0	---	---	---
INDIAN ODI	Report on Open Dumps on Indian Land	0	0	0	0	---
IHS OPEN DUMPS	Open Dumps on Indian Land	0	0	0	0	---
Local Lists of Hazardous Waste/Contaminated Sites						
US HIST CDL	Clandestine Drug Labs	0	0	---	---	---
HIST Cal-Sites	Cal sites Database	0	0	0	0	0
SCH	School Property Evaluation Program	0	0	0	---	---
Toxic Pits	Toxic Pits Cleanup Act Sites	0	0	0	0	0
CDL	Clandestine Drug Labs	0	0	---	---	---
CERS HAZ WASTE	CalEPA Regulated Site Portal	0	1	0	---	---
PFAS	PFAS Contamination Site Location Listing	0	0	0	0	---
Local Lists of Registered Storage Tanks						
CA FID UST	Facility Inventory Database	0	0	0	---	---
CERS TANKS	California Environmental Reporting System Tanks	0	1	0	---	---
HIST UST	Historical UST	0	1	0	---	---
SWEEPS UST	SWEEPS UST Lists	0	1	0	---	---
Local Land Records						
LIENS 2	CERCLA Lien Information	0	0	---	---	---
LIENS	Environmental Liens Listing	0	0	---	---	---
DEED	Deed Restriction Listing	0	0	0	0	0
Records of Emergency Release Reports						
HMIRS	Hazardous Materials Information System	0	0	---	---	---
CHMIRS	CA Hazardous Material Information System	0	0	---	---	---
LDS	Land Disposal Sites Listing	0	0	---	---	---
SPILLS 90	SPILLS 90 data from FirstSearch	0	0	---	---	---
MCS	Military Cleanup Sites Listing	0	0	---	---	---
Other Ascertainable Records						
RCRA Non-Gen	Non-Generators	0	2	0	---	---
DOT OPS	Incident and Accident Data	0	0	---	---	---
DOD	Department of Defense Sites	0	0	0	0	0
FUDS	Formerly Used Defense Sites	0	0	0	0	0
CONSENT	Superfund Consent Decrees	0	0	0	0	0
ROD	Records of Decision	0	0	0	0	0
UMTRA	Uranium Mill Tailings Sites	0	0	0	0	---
MINES	Mines Master Index File	0	0	0	---	---
TRIS	Toxic Chemical Release Inventory System	0	0	---	---	---

TABLE III (cont'd)
EDR Radius Map Summary

DATABASE	TYPE OF RECORDS	SUBJECT PROPERTY	<⅛ MILE	⅛ - ¼ MILE	¼ - ½ MILE	½ - 1 MILE
TSCA	Toxic Substances Control Act	0	0	---	---	---
FTTS	FIFRA/TSCA Tracking System	0	0	---	---	---
HIST FTTS	FIFRA/TSCA Tracking System	0	0	---	---	---
SSTS	Section 7 Tracking Systems	0	0	---	---	---
ICIS	Integrated Compliance Information System	0	0	---	---	---
PADS	PCB Activity Database System	0	0	---	---	---
MLTS	Material Licensing Tracking System	0	0	---	---	---
RADINFO	Radiation Information Database	0	0	---	---	---
FINDS	Facility Index System	0	0	---	---	---
RAATS	RCRA Administrative Action Tracking	0	0	---	---	---
CA BOND EXP. PLAN	Bond Expenditure Plan	0	0	0	0	0
WDS	Waste Discharge System	0	0	---	---	---
Cortese	Cortese Hazardous Waste & Substance Sites	0	0	0	0	---
NPDES	National Pollutant Discharge Elimination System	0	0	---	---	---
HIST CORTESE	Historical Cortese sites.	0	0	0	0	---
CUPA Listings	CUPA Resources List	0	0	0	---	---
Notify 65	Proposition 65 Records	0	0	0	0	0
DRYCLEANERS	Cleaner Facilities	0	0	0	---	---
WIP	Well Investigation Program Case List	0	0	0	---	---
HAZNET	Facility and Manifest Data	0	0	---	---	---
EMI	Emissions Inventory Data	0	0	---	---	---
INDIAN RESERV	Indian Reservations	0	0	0	0	0
HWP	Envirostor Permitted Facilities Listing	0	0	0	0	0
HWT	Registered Hazardous Waste Transporter	0	0	0	---	---
COAL ASH EPA	Coal Combustion Residues Surface List	0	0	0	0	---
PCB TRANSFORMER	PCB Transformer	0	0	---	---	---
COAL ASH DOE	Steam-Electric Plan Operation Data	0	0	---	---	---
MWMP	Medical Waste Management Program	0	0	0	---	---
PEST LIC	Pesticide Regulation Licenses Listing	0	0	---	---	---
San Bern. Co. Permit	Hazardous Material Permits	0	2	0	---	---
PROC	Certified Processors Database	0	0	0	0	---
WASTEWATER PITS	Oil Wastewater Pits Listing	0	0	0	0	---
ECHO	Enforcement & Compliance History Information	0	0	---	---	---
FUELS PROGRAM	EPA Fuels Program Registered Listings	0	0	0	---	---
CERS	CalEPA Regulated Site Portal Data	0	0	---	---	---
HWTS	Hazardous Waste Tracking System	0	---	---	---	---
CIWQS	California Integrated Water Quality System	0	0	0	---	---
SCRD DRYCLEANERS	Statewide Coalition for Remediation of Cleaners	0	0	0	0	---
US FIN ASSUR	US Financial Assurance	0	0	---	---	---
EPA WATCH LIST	EPA Watch List	0	0	---	---	---
2020 COR ACTION	2020 Corrective Action	0	0	0	---	---
RMP	Risk Management Plan	0	0	---	---	---
PRP	Potentially Responsible Parties	0	0	---	---	---
FUSRAP	Formerly Utilized Sites Remedial Action Plan	0	0	0	0	0
LEAD SMELTERS	Lead Smelter Sites	0	0	---	---	---
US AIRS	US Aerometric Information Retrieval System	0	0	0	---	---
US MINES	US Mines Sites	0	0	0	---	---
ABANDONED MINES	Abandoned Mine Sites	0	0	0	---	---
DOCKET HWC	Hazardous Waste Compliance Docket	0	0	---	---	---
UXO	Unexploded Ordinances Sites	0	0	0	0	0
ENF	Enforcement Actions	0	0	---	---	---
FIN ASSUR	Financial Assurance	0	0	---	---	---
ICE	Inspections, Compliance, and Enforcement	0	0	---	---	---

TABLE III (cont'd)
EDR Radius Map Summary

DATABASE	TYPE OF RECORDS	SUBJECT PROPERTY	<⅛ MILE	⅛ - ¼ MILE	¼ - ½ MILE	½ - 1 MILE
UIC	Underground Injection Control	0	0	---	---	---
UIC GEO	Underground Injection Control (GeoTracker)	0	0	---	---	---
MILITARY PRIV SITES	Military Privatized Sites	0	0	---	---	---
PROJECT	Project Sites (GeoTracker)	0	0	---	---	---
NON-CASE INFO	Non-Case Information (GeoTracker)	0	0	---	---	---
OTHER OIL GAS	Other Oil & Gas Sites (GeoTracker)	0	0	---	---	---
PROD WATER PONDS	Produced Water Ponds (GeoTracker)	0	0	---	---	---
SAMPLING POINT	Sampling Point (GeoTracker)	0	0	---	---	---
WELL STIM PROJ	Well Stimulation Project (GeoTracker)	0	0	---	---	---
MINES MRDS	Mines Mineral Resources Database	0	0	---	---	---
EDR HIGH RISK HISTORICAL RECORDS						
EDR Exclusive Records						
EDR MGP	Manufactured Gas Plants	0	0	0	0	0
EDR Hist Auto	EDR Historical Auto Stations	0	2	---	---	---
EDR Hist Cleaner	EDR Historical Cleaners	0	0	---	---	---
EDR RECOVERED GOVERNMENT ARCHIVES						
Exclusive Recovered Government Archives						
RGA LF	Recovered Government Archive Solid Waste Facilities List	0	0	---	---	---
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank	0	0	---	---	---

0 = No sites in radius identified
--- = Not Searched

The subject property was not listed in the EDR-provided government database report.

No sites with reported releases of hazardous substances or petroleum products to the subsurface were reported within a one-eighth-mile radius of the subject property.

In general, only hazardous substances and petroleum products released from facilities located approximately up-gradient and within a few hundred feet of the subject property, or in a cross-gradient direction close to the subject property, are judged to have a reasonable potential of migrating to the subject property. This opinion is based on the assumption that hazardous substances and petroleum products generally do not migrate large distances laterally within the soil, but rather tend to migrate with groundwater in the general direction of groundwater flow.

No orphan sites were identified in the EDR-provided government database report.

No engineering control sites, sites with institutional controls, or sites with deed restrictions were listed for the subject property, adjoining sites, or vicinity properties in the EDR-provided government database report.

No Indian reservations or LUSTs on Indian land were reported on the subject property, adjoining sites, or vicinity properties in the EDR-provided government database report.

The remaining properties identified by EDR within the specified search radius of the subject property, which appeared on local, state, or federally published lists of sites that use of have had releases of hazardous substances or petroleum products, were determined through SALEM's field observations to be of sufficient distance and/or situated hydraulically cross/downgradient of the subject property, such that impacts to the subject property are not likely.

9.0 POTENTIAL VAPOR ENCROACHMENT CONDITION

Vapor intrusion is a way by which chemicals in soil and groundwater can migrate into indoor air. Chemical vapors moving up through soil and into a building are a potential source of indoor air contamination and may pose a risk to human health. In evaluating the potential for a vapor encroachment condition (VEC) on the subject property, SALEM attempted to determine if there was information indicating that chemicals of concern were located within the "critical distance", defined as the lineal distance between the nearest edge of a contaminated plume and the nearest target property boundary. Based on ASTM E 2600-15 *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*, the "critical distance" is equal to 100 feet, with the exception of dissolved petroleum hydrocarbons, which have a "critical distance" of 30 feet. If non-aqueous phase petroleum hydrocarbons are present, the 100-foot "critical distance" is utilized.

9.1 Vapor Encroachment Screening

SALEM has performed a Vapor Encroachment Screening (Tier 1) in general accordance with the scope and limitations of ASTM Standard Practice E2600-15 for the subject property. Vapor intrusion is a way by which chemicals in soil and groundwater can migrate into indoor air. Chemical vapors moving up through soil and into a building are a potential source of indoor air contamination and may pose a risk to human health. In evaluating the potential for a vapor encroachment condition (VEC) on the subject property, SALEM attempted to determine if there was information indicating that chemicals of concern were located within the "critical distance", defined as the lineal distance between the nearest edge of a contaminated plume and the nearest target property boundary. Based on ASTM E 2600-15 *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*, the "critical distance" is equal to 100 feet, with the exception of dissolved petroleum hydrocarbons, which have a "critical distance" of 30 feet. If non-aqueous phase petroleum hydrocarbons are present, the 100-foot "critical distance" is utilized.

TABLE IV
Vapor Encroachment Questionnaire

QUESTION	RESPONSE	COMMENTS
1. Property Type?	Vacant	
2. Are there buildings/structures on the subject property?	No	
3. Will buildings/structures be constructed on the subject property in the future?	Yes	
4. If buildings exist or are proposed, do/will they have elevators?	No	
5. Type of level below grade (existing or proposed)?	Slab-on-Grade (proposed)	
6. Is there ventilation below grade?	No	
7. Sump pumps, floor drains, or trenches (existing or proposed)?	Yes (proposed)	
8. Radon or methane mitigation system installed?	No	
9. Heating system type (existing or proposed)?	HVAC (proposed)	
10. Type of fuel energy (existing or proposed)?	Electric/Natural Gas (proposed)	
11. Have there ever been any environmental problems at the subject property?	No	
12. Does/will a gas station operate anywhere on the subject property?	No	
13. Do any tenants use hazardous chemicals in relatively large quantities on the subject property?	No	
14. Have any tenants ever complained about odors in the building or experience health-related problems that may have been associated with the building?	Unknown	
15. Are the operations (or proposed operations to be performed) on the subject property OSHA regulated?	No	

TABLE IV (cont'd)
Vapor Encroachment Questionnaire

QUESTION	RESPONSE	COMMENTS
16. Are there any existing or proposed under-ground storage tanks (USTs) or above-ground storage tanks (ASTs) located on the subject property?	No	
17. Are there any sensitive receptors (children, elderly, people in poor health, etc.) that occupy or will occupy the subject property?	No	

TABLE V
Additional VEC Criteria

QUESTION	RESPONSE	COMMENTS
1. Is the subject property known to have current or past contamination?	No	
2. Is contamination of the subject property suspected?	No	
3. Is an adjacent property known to have current or past contamination which may have impacted the subject property?	No	
4. Is a nearby property known to have current or past contamination which may have impacted the subject property?	No	
5. Is regional groundwater contamination known to exist beneath the subject property?	No	
6. Are you aware of other conditions which may result in vapor intrusion at the subject property?	No	

Based upon the results of SALEM's Tier 1 VES, it is SALEM's opinion that a potential VEC "likely does not exist" at the subject property. As such, no further assessment is recommended.

10.0 BUSINESS ENVIRONMENTAL RISKS

10.1 Asbestos-Containing Building Materials

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is commonly used as an acoustic insulator, thermal insulation, fire proofing and in other building materials. Friable asbestos-containing material (ACM), when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM can be crumbled, pulverized, or reduced to powder during machining, cutting, drilling, or other abrasive procedures. Friable ACM is more likely to release fibers when disturbed or damaged than non-friable ACM. Exposure to airborne friable asbestos may result in a potential health risk because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lung. Fibers embedded in lung tissue over time may cause serious lung diseases including: asbestosis, lung cancer, or mesothelioma. The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 requires certain construction materials to be *presumed* to contain asbestos, for purposes of this regulation. All thermal system insulation (TSI), surfacing material, and asphalt/vinyl flooring that are present in a building constructed prior to 1981 and have not been appropriately tested are "presumed asbestos-containing material" (PACM).

During SALEM's site reconnaissance, no structures were observed on the subject property. Therefore, ACMs are not considered an on-site environmental concern at this time.

10.2 Lead-Based Paint

Lead is a highly toxic metal that affects virtually every system of the body. While adults can suffer from excessive lead exposures, the groups most at risk are fetuses, infants and children under 6. The Consumer Product Safety Commission banned the use of lead in paint in 1978. Most manufactures, however, had ceased using lead well before this time. Paint applied after 1978 is not considered suspect LBP. Congress

passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as "Title X," to protect families from exposure to lead from paint, dust, and soil. Section 1018 of this law directed the Housing and Urban Development (HUD) and the US EPA to require the disclosure of known information on lead-based paint (LBP) and LBP hazards before the sale or lease of most housing built before 1978. Sellers, landlords, and their agents are responsible for providing this information to the buyer or renter before sale or lease.

According to Section 1017 of Title X, "LBP hazard is any condition that causes exposure to lead from lead-contaminated dust; bare, lead-contaminated soil; or LBP that is deteriorated or intact LBP present on accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects." Therefore, under Title X intact lead-based paint on most walls and ceilings is not considered a "hazard," although the condition of the paint should be monitored and maintained to ensure that it does not become deteriorated. LBP is defined as any paint, varnish, stain, or other applied coating that has 1.0 mg/cm^2 (or 5,000 µg/g by weight) or more of lead.

During SALEM's site reconnaissance, no structures were observed on the subject property. Therefore, LBP is not considered an on-site environmental concern at this time.

10.3 Radon

Radon is a naturally occurring gaseous substance resulting from the radioactive decay of uranium to radium and then to radon. Uranium is a common element found in many geologic formations and substrates, particularly igneous and metamorphic rocks. Radon has a half-life of only 3.8 days and decays to its daughter elements (polonium 218, polonium 214, bismuth 214, and lead 214). It is these daughter elements that represent the health hazard commonly associated with radon. Radon gas can enter a building through cracks in the foundation and walls and become attached to dust particles and inhaled which could cause damage to human lung tissue. Radon is measured in picocuries per liter of air (pCi/L). The EPA has an established safe radon level of 4 pCi/L. Based on the EPA Radon Zone Map of California, the subject Property is located within **EPA Zone 2**, which has a predicted indoor radon screening between 2 pCi/L and 4 pCi/L (Moderate Potential). The EDR-provided radon data cites San Bernardino County has having 100% of 1st floor spaces with <4 pCi/L. However, radon levels may vary from one area to another and the only way to accurately assess radon gas levels on the subject property is to conduct a radon gas survey.

10.4 Mold

Molds are microscopic organisms found virtually everywhere, indoors and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g.in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding). Mold growths often appear as discoloration, staining, or fuzzy growth on building materials or furnishings and are varied colors of white, gray, brown, black, yellow, and green. In large quantities, molds can cause allergic symptoms when inhaled or through the toxins the molds emit.

During SALEM's site reconnaissance, no structures were observed on the subject property. Therefore, mold is not considered an on-site environmental concern at this time.

11.0 DISCUSSION OF FINDINGS

Historical Uses

The subject property comprises four contiguous irregular-shaped parcels totaling approximately 2.67 acres (San Bernardino County APNs 0284-211-70-0000, 0284-211-71-0000, 0284-211-72-0000, and 1178-371-27-0000) located on the south corner of Reche Canyon Road and Crystal Ridge Lane in Colton, California.

SALEM's review of historical aerial photographs indicate that the subject property has been undeveloped land dating to 1930. Based on SALEM's site reconnaissance, review of historical aerial photographs, and contacts with state and local regulatory agencies, the potential for RECs to exist in connection with the historical use of the subject property appears to be low.

Current Uses
At the time of SALEM's September 22, 2021 site reconnaissance, the subject property was vacant land covered with dirt and native vegetation.

During visual observations of the subject property, no hazardous substances and/or petroleum products were observed to be stored or handled on the subject property. Exposed surface soils did not exhibit obvious signs of discoloration. No other obvious evidence (vent pipes, fill pipes, dispensers, etc.) of USTs was noted within the area observed. No standing water or major depressions were observed on the subject property.

Based on SALEM's field observations and contacts with state and local regulatory agencies, the potential for adverse environmental impacts to the subject property associated with current site use appears to be low and therefore, there is a low potential for RECs to exist in connection with the current use of the subject property.

Adjoining Properties
Based on SALEM's field observations, review of the EDR Radius Map Report and consultation with state and local regulatory agencies, the potential for RECs to exist in connection with the subject property from adjoining property uses appears to be low.

11.1 Evaluation of Data Gaps/Data Failure

In accordance with ASTM E1527-13 guidance, data gaps represent a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice. Data failure represents the failure to achieve the historical research objects of this practice even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. The following is a summary of data gaps encountered in the process of preparing this report including an observation as the presumed significance of that data gap to the conclusions of this assessment.

- Some of the intervals between documented sources exceeded five years.

However, taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that these data gaps might alter the conclusions of this assessment.

12.0 SUMMARY AND CONCLUSIONS

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527-13 of the Proposed Commercial Development site located at Reche Canyon Road and Crystal Ridge Lane in Colton, California, (San Bernardino County APNs 0284-211-70-0000, 0284-211-71-0000, 0284-211-72-0000, and 1178-371-27-0000) the *property*. Any exceptions to, or deletions from, this practice are described in Section 13 of this *report*.

During the course of this assessment, SALEM identified no evidence of RECs in connection with the subject property as defined by ASTM E1527-13.

13.0 LIMITATIONS

This Phase I ESA Report has been prepared for the exclusive use of **RAMCAM Group** and its subsidiaries and affiliates. Unauthorized use of or reliance on the information contained in this report, unless given express written consent by SALEM and **RAMCAM Group** is strictly prohibited. The following limitations and exceptions apply:

- The scope of work completed was designed solely to meet the needs of SALEM's client. SALEM shall not be liable for any unintended usage of this report by another party. In addition, based on the ASTM guidelines, the ESA is only valid if completed within 180 days of an acquisition or the transaction necessitating the ESA.

- No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. This ESA was designed to reduce, but not eliminate the potential for RECs at the subject property, within reasonable limits of time and cost. The ESA is not intended to be exhaustive or all-inclusive and does not represent a guarantee of the identification of all possible environmental risk.

- An ESA is intended to be a non-intrusive investigation and generally does not include sampling or testing of air, soil, water or building materials. No destructive testing was completed and concealed areas, such as behind walls or within machinery, were not accessed. Testing, if any, is designed solely to meet the needs of the ESA, not to meet any local, state or federal regulations and should not be utilized as such.

- Information in this report is based on personal interviews, government records, published resources, and various historical documents. Accuracy and completeness of information varies among information sources and is often inaccurate or incomplete. The information utilized in this ESA is from sources deemed to be reliable; however, no representation or warranty is made as to the accuracy thereof. SALEM will have no ongoing obligation to obtain and include information that was not reasonably ascertainable, practically reviewable or provided to SALEM in a reasonable timeframe to formulate an opinion and complete the assessment by the agreed upon due date.

- Unless specifically identified in the scope of work, the ESA excludes consideration of non-ASTM scope issues including, but not limited to, lead in drinking water, asbestos, lead-based paint, industrial hygiene, health and safety, endangered species, wetlands, indoor air quality, vapor intrusion, electromagnetic fields, biological agents or mold.

- The ESA includes some information that may be relevant to regulatory compliance, but is not intended and shall not be construed as a compliance audit and cannot be considered a verification of regulatory compliance. While the general environmental setting of the subject property is described, this assessment is not intended to be a formal flood plain or wetland determination, and no warranty is made thereof. Depending on its past, present or future intended use, the property under review may or may not be subject to regulation and permitting under environmental and health and safety laws, such as, but not limited to, the Clean Air Act, the Clean Water Act, the Solid Waste Disposal Act, the Occupational Safety and Health Act, and other federal, state and local regulations. SALEM assumes no responsibility or liability respecting regulatory permitting or compliance issues.

- Client is advised that if the ESA is obtained with the intent of qualifying the purchaser as an innocent landowner, contiguous property owner, or bona fide prospective purchaser under CERCLA, there will be continuing obligations of due care and responsiveness and additional legal requirements that likely apply to such status. SALEM accepts and undertakes no responsibility as to such requirements and advises that counsel be separately consulted with respect to such requirements.

- The findings and conclusions presented in this Phase I ESA Report are based on field review and observations and on data obtained from the sources listed in the report. The findings of this report are valid as of the present. The passage of time, natural processes or human intervention on the subject property or adjacent properties and changes in the regulations can cause changed conditions which can invalidate the findings and conclusions presented in this report.

14.0 QUALIFICATIONS

This Phase I ESA was conducted under the supervision or responsible charge of SALEM's undersigned environmental professional with oversight from the undersigned registered engineer. The work was conducted in accordance with ASTM E1527-13, generally accepted industry standards for environmental due diligence in place at the time of the preparation of this report, and SALEM's quality-control policies.

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 312 and 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 inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

15.0 REFERENCES

The following list summarizes the references utilized in preparing this report:

- Aerial photographs provided by Environmental Data Resources, Inc.
- California Department of Conservation, Division of Oil, Gas and Geothermal Resources records.
- California Environmental Protection Agency, Recorded Deed Restriction List, 1994.
- California Environmental Protection Agency, Department of Toxic Substances Control records.
- California Regional Water Quality Control Board records.
- Cal-EPA Voluntary Cleanup Program records.
- California Statewide Radon Survey Screening results conducting during 1990-1991.
- City of Colton Building Department records.
- City of Colton Municipal Water Department records.
- Federal and State regulatory agency lists compiled by EDR.
- San Bernardino County Assessor's Office records.
- San Bernardino County Fire Department-Hazardous Materials Division records.
- Sanborn Fire Insurance Maps for Colton, California (EDR).
- South Coast Air Quality Management District records.
- The Munger Map Book, California – Alaska Oil & Gas Fields, Munger Maps – 1999.
- U.S. EPA Federal Superfund Liens List and the U.S. EPA California Liens, 1995.
- U.S. Geological Survey, 7.5 minute Colton North, California topographic quadrangle map, dated 2012.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully submitted,

SALEM Engineering Group, Inc.

Reily Rivera
Environmental Project Manager

Clarence Jiang, PE, GE
Project Engineer
RCE No. 50233/ RGE No. 2477

2c: herewith

Photo 1: View of subject property facing south.

Photo 2: View of subject property facing north.

PHOTOGRAPHS	PROJECT NO. 3-421-0940	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELOPMENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DATE: Oct. 2021	
	PAGE: Page 1 of 8	

Photo 3: View of subject property from north corner facing south.

Photo 4: View of subject property from north corner facing southeast.

Photo 5: View of subject property from southeast corner facing northwest.

Photo 6: View of subject property from southeast corner facing west.

Photo 7: View of subject property from southwest corner facing east.

Photo 8: View of subject property from southwest corner facing north.

Photo 9: View of depression in northern portion of subject property.

Photo 10: View of vegetated area in northern portion of subject property.

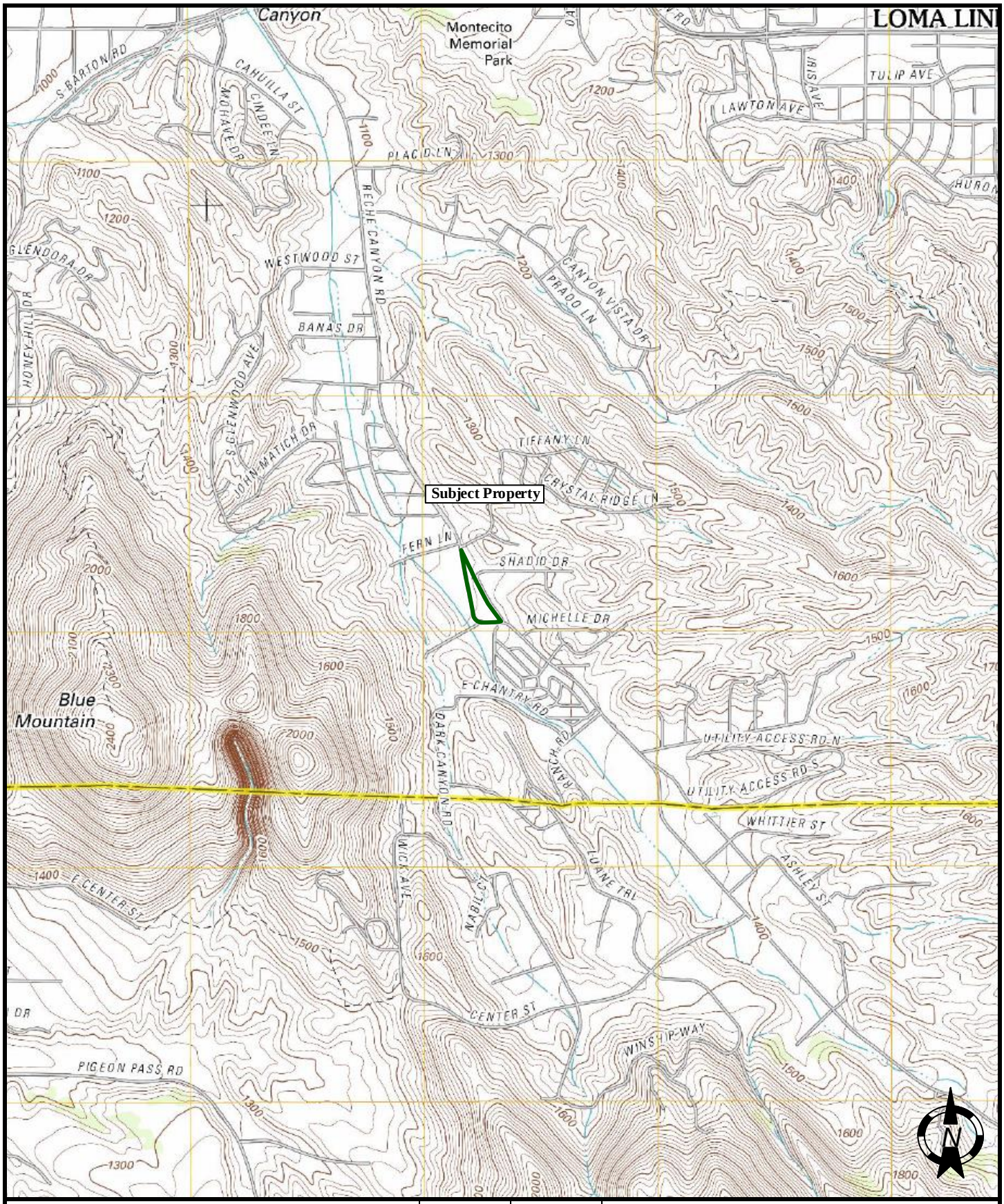
Photo 11: View of storage container on southeast corner of subject property.

Photo 12: View of power line on southeast corner of subject property.

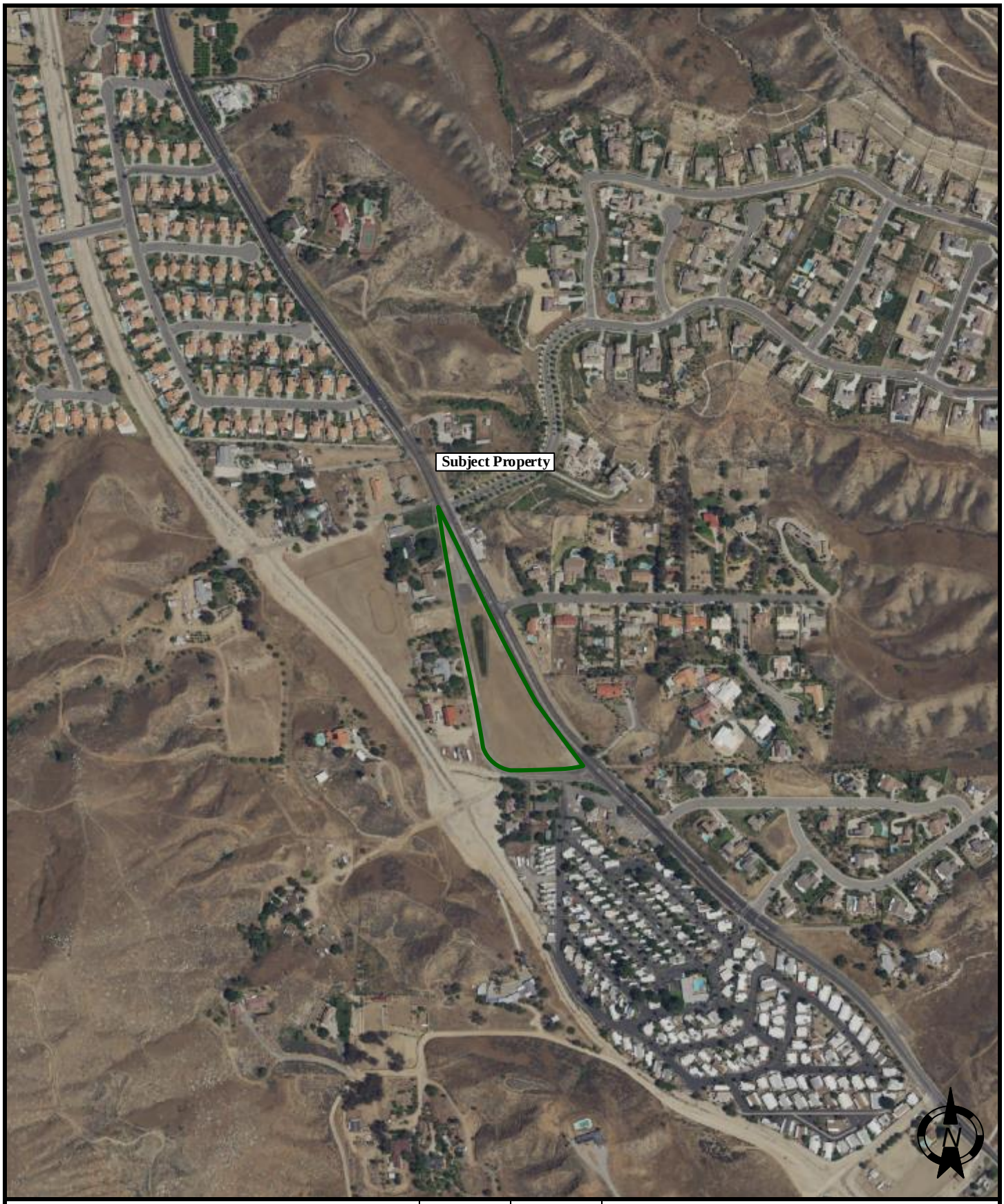
Photo 13: View of adjoining to northeast.

Photo 14: View of adjoining to south.

Photo 15: View of adjoining to west.



TOPOGRAPHIC MAP (2012)	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELOPMENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	FIGURE NO.: 1	



AERIAL PHOTOGRAPH (2016)	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELOPMENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	FIGURE NO.: 2	

SITE MAP	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELOPMENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	FIGURE NO.: 3	

APPENDIX

A

Fidelity National Title Company
451 E. Vanderbilt Way, Suite 350, San Bernardino, CA 92408
Phone: (909) 890-0601 • Fax: (909) 890-3600

Issuing Policies of Fidelity National Title Insurance Company

TITLE OFFICER: Don Ector
PHONE: (909) 890-0601 Ext. 234
FAX: (909) 890-3611
TITLE OFFICER EMAIL: dector@fnf.com

ORDER NO.: **00059418-991-IE1-DE1**

LOAN NO.:

Escrow Mart
ATTN: Jobea Langston
1255 East Highland Avenue, Suite 102
San Bernardino, CA 92404

YOUR REF: 18701

ORDER NO.: **00059418-991-IE1-DE1**

PROPERTY: **Vacant Land, Colton, CA**

PRELIMINARY REPORT

In response to the application for a policy of title insurance referenced herein, ***Fidelity National Title Company*** *hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a policy or policies of title insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an exception herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions of said policy forms.*

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Attachment One. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Attachment One. Copies of the policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Fidelity National Title Insurance Company, a Florida Corporation.

Please read the exceptions shown or referred to herein and the exceptions and exclusions set forth in Attachment One of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land.

Countersigned by:

Authorized Signature

Fidelity National Title Company
451 E. Vanderbilt Way, Suite 350, San Bernardino, CA 92408
Phone: (909) 890-0601 • *Fax: (909) 890-3600*

PRELIMINARY REPORT

EFFECTIVE DATE: **June 6, 2017 at 7:30 a.m.**

ORDER NO.: 00059418-991-IE1-DE1

The form of policy or policies of title insurance contemplated by this report is:

CLTA Standard Coverage Policy of Title Insurance (4-8-14)

1. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

   A FEE

2. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

   Fahim S. Tanios, and Nayra F. Tanios, husband and wife as joint tenants as to 2/3 interest and Ramzy F. Hanna and Salwa F. Hanna, husband and wife as joint tenants as 1/3 interest, all as Tenants in Common

3. THE LAND REFERRED TO IN THIS REPORT IS DESCRIBED AS FOLLOWS:

   See Exhibit A attached hereto and made a part hereof.

EXHIBIT A

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF COLTON, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 2 SOUTH, RANGE 4 WEST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE OFFICIAL MAP THEREOF, LYING SOUTHWESTERLY OF THE SOUTHWESTERLY LINE OF RECHE CANYON ROAD AS SAID ROAD AS DELINEATED AND DESIGNATED ON PARCEL MAP NO. 5888, ON FILE IN BOOK 60, PAGE 72 OF PARCEL MAPS, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

SAID LAND ALSO BEING DELINEATED AND DESIGNATED AS THE "REMAINDER PARCEL" ON SAID PARCEL MAP NO. 5888.

ALSO KNOWN AS PARCEL 1 OF MAP 18917 IN THE CITY OF COLTON, AS PER MAP RECORDED IN BOOK 231, PAGE 88, IN THE OFFICE OF THE COUNTY RECORDER OF SAN BERNARDINO COUNTY, CALIFORNIA.

PARCEL 2:

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST OF SECTION 2, TOWNSHIP 2 SOUTH, RANGE 4 WEST, SAN BERNARDINO MERIDIAN, ACCORDING TO THE OFFICIAL MAP THEREOF, LYING SOUTHWESTERLY OF THE SOUTHWESTERLY LINE OF RECHE CANYON ROAD AS SAID ROAD IS DELINEATED AND DESIGNATED ON PARCEL MAP NO. 5888, ON FILE IN BOOK 60, PAGE 72 OF PARCEL MAPS, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

SAID LAND ALSO BEING DELINEATED AND DESIGNATED AS THE "REMAINDER PARCEL" ON SAID PARCEL MAP NO. 5888.

ALSO KNOWN AS PARCEL 2 OF MAP 18917 IN THE CITY OF COLTON, AS PER MAP RECORDED IN BOOK 231, PAGE 88, IN THE OFFICE OF THE COUNTY RECORDER OF SAN BERNARDINO COUNTY, CALIFORNIA.

PARCEL 3:

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 2 SOUTH, RANGE 4 WEST, SAN BERNARDINO MERIDIAN, 5888, ON FILE IN BOOK 60, PAGE 72 OF PARCEL MAPS, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

SAID LAND ALSO BEING DELINEATED AND DESIGNATED AS THE "REMAINDER PARCEL" ON SAID PARCEL MAP NO. 5888.

ALSO KNOWN AS PARCEL 3 OF MAP 18917 IN THE CITY OF COLTON, AS PER MAP RECORDED IN BOOK 231, PAGE 88, IN THE OFFICE OF THE COUNTY RECORDER OF SAN BERNARDINO COUNTY, CALIFORNIA.

PARCEL 4:

LOT 'E', TRACT NO. 16289, IN THE CITY OF COLTON, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS RECORDED IN BOOK 311 PAGE(S) 71 OF MAPS, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

APN: 1178-371-27-0-000, 0284-211-70-0-000, 0284-211-71-0-000, 0284-211-72-0-000

EXCEPTIONS

AT THE DATE HEREOF, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN SAID POLICY FORM WOULD BE AS FOLLOWS:

1. Western Regional Exceptions for 2006 ALTA Policies

   This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of:

   1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records or (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

   2. Any facts, rights, interests or claims that are not shown by the Public Records, but that could be ascertained by an inspection of the land or that may be asserted by persons in possession of the land.

   3. Easements, liens or encumbrances, or claims thereof, which are not shown by the Public Records.

   4. Any encroachment, encumbrance, violation, variation or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the land and not shown by the Public Records.

   5. (a) Unpatented mining claims, (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof or (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the Public Records.

   6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

   Note: The above exceptions will not show on the 2006 ALTA Lender's policy of title insurance.

2. Property taxes, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the fiscal year 2017-2018.

3. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.

   Note: If said supplementals (if any) are not posted prior to the date of closing, this company assumes no liability for payment thereof.

4. Water rights, claims or title to water, whether or not disclosed by the public records.

5. Reservations contained in the Patent

From:	The United States of America
Recording Date:	June 26, 1915
Recording No.:	Book "J", Page 339, of Patents

   Which among other things recites as follows

   Subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes and rights to ditches and reservoirs used in connection with such water rights, as may be recognized and acknowledged by the local customs, laws and decisions of the courts, and the reservation from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States.

EXCEPTIONS
(Continued)

Affects: Parcels 1-4

6. Easement(s) for the purpose(s) shown below and rights incidental thereto as granted in a document:

Granted To:	Southern California Edison Company
Purpose:	public utilities
Recording Date:	June 6, 1956
Recording No:	Book 3956, Page 179, Official Records
Affects:	as described therein

Reference is made to said document for full particulars

Affects: Parcel 4

7. Easement(s) for the purpose(s) shown below and rights incidental thereto as granted in a document:

Granted To:	The City of Colton
Purpose:	street and utility
Recording Date:	June 4, 1990
Recording No:	90-216959, Official Records
Affects:	That portion of said land as shown therein

Affects: Parcels 1, 2 and 3

8. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

PLEASE REFER TO THE "INFORMATIONAL NOTES" AND "REQUIREMENTS" SECTIONS WHICH FOLLOW FOR INFORMATION NECESSARY TO COMPLETE THIS TRANSACTION.

END OF EXCEPTIONS

REQUIREMENTS SECTION

1. In order to complete this report, the Company requires a Statement of Information to be completed by the following party(s),

   Party(s): All Parties

   The Company reserves the right to add additional items or make further requirements after review of the requested Statement of Information.

   NOTE: The Statement of Information is necessary to complete the search and examination of title under this order. Any title search includes matters that are indexed by name only, and having a completed Statement of Information assists the Company in the elimination of certain matters which appear to involve the parties but in fact affect another party with the same or similar name. Be assured that the Statement of Information is essential and will be kept strictly confidential to this file.

END OF REQUIREMENTS

INFORMATIONAL NOTES SECTION

1. Note: The policy of title insurance will include an arbitration provision. The Company or the insured may demand arbitration provision. Arbitrable matters may include, but are not limited to any controversy or claim between the Company and the insured arising out of or relating to this policy, any service of the Company in connection with its issuance or the breach of a policy provision or other obligation. Please ask your escrow or title officer for a sample copy of the policy to be issued if you wish to review the arbitration provisions and any other provisions pertaining to your Title Insurance Coverage.

2. The only deed(s) affecting said land which recorded within twenty-four (24) months of the date of this report, is (are) as follows:

Grantor:	Adel Eskander and Tahani Eskander, as Trustees of the 2013 Adel and Tahani Eskander Revocable Trust dated October 22, 2013, under the terms of such Trust and to any successors as Trustee(s)
Grantee:	Fahim S. Tanios and Nayra F. Tanios, husband and wife as joint tenants with 2/3 interest and Ramzy F. Hanna and Salwa F. Hanna, husband and wife as joint tenants as 1/3 interest all as tenants in common
Recording Date:	November 2, 2016
Recording No.:	2016-0462890, Official Records
Affects:	Parcels 1, 2 and 3
Grantor:	Admar Management Corp., a California Corporation
Grantee:	Fahim S. Tanios, and Nayra F. Tanios, husband and wife as joint tenants as to 2/3 interest and Ramzy F. Hanna and Salwa F. Hanna, husband and wife as joint tenants as to 1/3 interest
Recording Date:	January 26, 2017
Recording No.:	2017-0037022, Official Records
Affects:	Parcel 4

3. Note: Property taxes for the fiscal year shown below are PAID. For proration purposes the amounts were:

Tax Identification No.:	0284-211-70-0-000
Fiscal Year:	2016-2017
1st Installment:	$565.36
2nd installment:	$565.34
Exemption:	$0.00
Land:	$84,021.00
Improvements:	$0.00
Code Area:	002-021
Personal Property:	$0.00
Bill No.:	160205539
Affects:	Parcel 1

4. Note: Property taxes for the fiscal year shown below are PAID. For proration purposes the amounts were:

INFORMATIONAL NOTES
(Continued)

Tax Identification No.:	0284-211-71-0-000
Fiscal Year:	2016-2017
1st Installment:	$297.85
2nd installment:	$297.82
Exemption:	$0.00
Land:	$44,261.00
Improvements:	$0.00
Code Area:	002-021
Personal Property:	$0.00
Bill No.:	160205540
Affects:	Parcel 2

5. Note: Property taxes for the fiscal year shown below are PAID. For proration purposes the amounts were:

Tax Identification No.:	0284-211-72-0-000
Fiscal Year:	2016-2017
1st Installment:	$302.00
2nd installment:	$301.98
Exemption:	$0.00
Land:	$44,880.00
Improvements:	$0.00
Code Area:	002-021
Personal Property:	$0.00
Bill No.:	160205541
Affects:	Parcel 3

6. Note: Property taxes for the fiscal year shown below are PAID. For proration purposes the amounts were:

Tax Identification No.:	1178-371-27-0-000
Fiscal Year:	2016-2017
1st Installment:	$0.00
2nd installment:	$0.00
Exemption:	$0.00
Land:	$0.00
Improvements:	$0.00
Code Area:	002-008
Personal Property:	$0.00
Affects:	Parcel 4

7. If a county recorder, title insurance company, escrow company, real estate broker, real estate agent or association provides a copy of a declaration, governing document or deed to any person, California law requires that the document provided shall include a statement regarding any unlawful restrictions. Said statement is to be in at least 14-point bold face type and may be stamped on the first page of any document provided or included as a cover page attached to the requested document. Should a party to this transaction request a copy of any document reported herein that fits this category, the statement is to be included in the manner described.

8. Any documents being executed in conjunction with this transaction must be signed in the presence of an authorized Company employee, an authorized employee of an agent, an authorized employee of the insured lender, or by using Bancserv or other approved third party service. If the above requirements cannot be met, please call the Company at the number provided in this report

INFORMATIONAL NOTES
(Continued)

9. Amended Civil Code Section 2941, which becomes effective on January 1, 2002, sets the fee for the processing and recordation of the reconveyance of each Deed of Trust being paid off through this transaction at $45.00. The reconveyance fee must be clearly set forth in the Beneficiary's Payoff Demand Statement ("Demand"). In addition, an assignment or authorized release of that fee, from the Beneficiary to the Trustee of record, must be included. An example of the required language is as follows:

   The Beneficiary identified above hereby assigns, releases or transfers to the Trustee of record, the sum of $45.00, included herein as 'Reconveyance Fees', for the processing and recordation of the Reconveyance of the Deed of Trust securing the indebtedness covered hereby, and the escrow company or title company processing this pay-off is authorized to deduct the Reconveyance Fee from this Demand and forward said fee to the Trustee of record or the successor Trustee under the Trust Deed to be paid off in full.

   In the event that the reconveyance fee and the assignment, release or transfer are not included within the demand statement, then Fidelity National Title Insurance Company and its Underwritten Agent may decline to process the reconveyance and will be forced to return all documentation directly to the Beneficiary for compliance with the requirements of the revised statute.

10. Note: Part of the RESPA Rule to simplify and Improve the Process of Obtaining Mortgages and Reduce Consumer Settlement Costs requires the settlement agent to disclose the agent and underwriter split of title premiums, including endorsements as follows:

    Line 1107 is used to record the amount of the total title insurance premium, including endorsements, that is retained by the title agent. Fidelity National Title Company retains 88% of the total premium and endorsements.

    Line 1108 used to record the amount of the total title insurance premium, including endorsements, that is retained by the title underwriter. Fidelity National Title Insurance Company retains 12% of the total premium and endorsements.

END OF INFORMATIONAL NOTES

Don Ector/sg

FIDELITY NATIONAL FINANCIAL

PRIVACY NOTICE

At Fidelity National Financial, Inc., we respect and believe it is important to protect the privacy of consumers and our customers. This Privacy Notice explains how we collect, use, and protect any information that we collect from you, when and to whom we disclose such information, and the choices you have about the use of that information. A summary of the Privacy Notice is below, and we encourage you to review the entirety of the Privacy Notice following this summary. You can opt-out of certain disclosures by following our opt-out procedure set forth at the end of this Privacy Notice.

Types of Information Collected. You may provide us with certain personal information about you, like your contact information, address demographic information, social security number (SSN), driver's license, passport, other government ID numbers and/or financial information. We may also receive browsing information from your Internet browser, computer and/or mobile device if you visit or use our websites or applications.	**How Information is Collected.** We may collect personal information from you via applications, forms, and correspondence we receive from you and others related to our transactions with you. When you visit our websites from your computer or mobile device, we automatically collect and store certain information available to us through your Internet browser or computer equipment to optimize your website experience.
Use of Collected Information. We request and use your personal information to provide products and services to you, to improve our products and services, and to communicate with you about these products and services. We may also share your contact information with our affiliates for marketing purposes.	**When Information Is Disclosed.** We may disclose your information to our affiliates and/or nonaffiliated parties providing services for you or us, to law enforcement agencies or governmental authorities, as required by law, and to parties whose interest in title must be determined.
Choices With Your Information. Your decision to submit information to us is entirely up to you. You can opt-out of certain disclosure or use of your information or choose to not provide any personal information to us.	**Information From Children.** We do not knowingly collect information from children who are under the age of 13, and our website is not intended to attract children.
Privacy Outside the Website. We are not responsible for the privacy practices of third parties, even if our website links to those parties' websites.	**International Users.** By providing us with you information, you consent to its transfer, processing and storage outside of your country of residence, as well as the fact that we will handle such information consistent with this Privacy Notice.
The California Online Privacy Protection Act. Some FNF companies provide services to mortgage loan servicers and, in some cases, their websites collect information on behalf of mortgage loan servicers. The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through those websites.	
Your Consent To This Privacy Notice. By submitting information to us or by using our website, you are accepting and agreeing to the terms of this Privacy Notice.	**Access and Correction; Contact Us.** If you desire to contact us regarding this notice or your information, please contact us at privacy@fnf.com or as directed at the end of this Privacy Notice.

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Order No. 00059418-991-IE1-DE1

FIDELITY NATIONAL FINANCIAL, INC.
PRIVACY NOTICE

Fidelity National Financial, Inc. and its majority-owned subsidiary companies providing title insurance, real estate- and loan-related services (collectively, "FNF", "our" or "we") respect and are committed to protecting your privacy. We will take reasonable steps to ensure that your Personal Information and Browsing Information will only be used in compliance with this Privacy Notice and applicable laws. This Privacy Notice is only in effect for Personal Information and Browsing Information collected and/or owned by or on behalf of FNF, including Personal Information and Browsing Information collected through any FNF website, online service or application (collectively, the "Website").

Types of Information Collected

We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- social security number (SSN), driver's license, passport, and other government ID numbers;
- financial account information; and
- other personal information needed from you to provide title insurance, real estate- and loan-related services to you.

Browsing Information. FNF may collect the following categories of Browsing Information:

- Internet Protocol (or IP) address or device ID/UDID, protocol and sequence information;
- browser language and type;
- domain name system requests;
- browsing history, such as time spent at a domain, time and date of your visit and number of clicks;
- http headers, application client and server banners; and
- operating system and fingerprinting data.

How Information is Collected

In the course of our business, we may collect *Personal Information* about you from the following sources:

- applications or other forms we receive from you or your authorized representative;
- the correspondence you and others send to us;
- information we receive through the Website;
- information about your transactions with, or services performed by, us, our affiliates or nonaffiliated third parties; and
- information from consumer or other reporting agencies and public records maintained by governmental entities that we obtain directly from those entities, our affiliates or others.

If you visit or use our Website, we may collect *Browsing Information* from you as follows:

- Browser Log Files. Our servers automatically log each visitor to the Website and collect and record certain browsing information about each visitor. The Browsing Information includes generic information and reveals nothing personal about the user.
- Cookies. When you visit our Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. When you visit a website again, the cookie allows the website to recognize your computer. Cookies may store user preferences and other information. You can choose whether or not to accept cookies by changing your Internet browser settings, which may impair or limit some functionality of the Website.

Use of Collected Information

Information collected by FNF is used for three main purposes:

- To provide products and services to you or any affiliate or third party who is obtaining services on your behalf or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you and to inform you about our, our affiliates' and third parties' products and services, jointly or independently.

When Information Is Disclosed

We may provide your Personal Information (excluding information we receive from consumer or other credit reporting agencies) and Browsing Information to various individuals and companies, as permitted by law, without obtaining your prior authorization. Such laws do not allow consumers to restrict these disclosures. Please see the section "Choices With Your Personal Information" to learn how to limit the discretionary disclosure of your Personal Information and Browsing Information.

Disclosures of your Personal Information may be made to the following categories of affiliates and nonaffiliated third parties:

- to third parties to provide you with services you have requested, and to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to our affiliate financial service providers for their use to market their products or services to you;
- to nonaffiliated third party service providers who provide or perform services on our behalf and use the disclosed information only in connection with such services;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to market financial products or services to you;
- to law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoena or court order;
- to lenders, lien holders, judgment creditors, or other parties claiming an interest in title whose claim or interest must be determined, settled, paid, or released prior to closing; and

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- other third parties for whom you have given us written authorization to disclose your Personal Information.

We may disclose Personal Information and/or Browsing Information when required by law or in the good-faith belief that such disclosure is necessary to:

- comply with a legal process or applicable laws;
- enforce this Privacy Notice;
- investigate or respond to claims that any material, document, image, graphic, logo, design, audio, video or any other information provided by you violates the rights of a third party; or
- protect the rights, property or personal safety of FNF, its users or the public.

We maintain reasonable safeguards to keep your Personal Information secure. When we provide Personal Information to our affiliates or third party service providers as discussed in this Privacy Notice, we expect that these parties process such information in compliance with our Privacy Notice or in a manner that is in compliance with applicable privacy laws. The use of your information by a business partner may be subject to that party's own Privacy Notice. Unless permitted by law, we do not disclose information we collect from consumer or credit reporting agencies with our affiliates or others without your consent.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of our bankruptcy, reorganization, insolvency, receivership or an assignment for the benefit of creditors. You expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings. We cannot and will not be responsible for any breach of security by a third party or for any actions of any third party that receives any of the information that is disclosed to us.

Choices With Your Information

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you. The uses of your Personal Information and/or Browsing Information that, by law, you cannot limit, include:

- for our everyday business purposes – to process your transactions, maintain your account(s), to respond to law
- enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court
- orders, or report to credit bureaus;
- for our own marketing purposes;
- for joint marketing with financial companies; and
- for our affiliates' everyday business purposes – information about your transactions and experiences.

You may choose to prevent FNF from disclosing or using your Personal Information and/or Browsing Information under the following circumstances ("opt-out"):

- for our affiliates' everyday business purposes – information about your creditworthiness; and
- for our affiliates to market to you.

To the extent permitted above, you may opt-out of disclosure or use of your Personal Information and Browsing Information by notifying us by one of the methods at the end of this Privacy Notice. We do not share your personal information with non-affiliates for their direct marketing purposes.

For California Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by California law. Currently, our policy is that we do not recognize "do not track" requests from Internet browsers and similar devices.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by Vermont law, such as to process your transactions or to maintain your account. In addition, we will not share information about your creditworthiness with our affiliates except with your authorization. For joint marketing in Vermont, we will only disclose your name, contact information and information about your transactions.

Information From Children

The Website is meant for adults and is not intended or designed to attract children under the age of thirteen (13).We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian. By using the Website, you affirm that you are over the age of 13 and will abide by the terms of this Privacy Notice.

Privacy Outside the Website

The Website may contain links to other websites. FNF is not and cannot be responsible for the privacy practices or the content of any of those other websites.

International Users

FNF's headquarters is located within the United States. If you reside outside the United States or are a citizen of the European Union, please note that we may transfer your Personal Information and/or Browsing Information outside of your country of residence or the European Union for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection and transfer of such information in accordance with this Privacy Notice.

The California Online Privacy Protection Act

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For some FNF websites, such as the Customer CareNet ("CCN"), FNF is acting as a third party service provider to a mortgage loan servicer. In those instances, we may collect certain information on behalf of that mortgage loan servicer via the website. The information which we may collect on behalf of the mortgage loan servicer is as follows:

- first and last name;
- property address;
- user name and password;
- loan number;
- social security number - masked upon entry;
- email address;
- three security questions and answers; and
- IP address.

The information you submit through the website is then transferred to your mortgage loan servicer by way of CCN. **The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through this website. For example, if you believe that your payment or user information is incorrect, you must contact your mortgage loan servicer.**

CCN does not share consumer information with third parties, other than (1) those with which the mortgage loan servicer has contracted to interface with the CCN application, or (2) law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court orders. All sections of this Privacy Notice apply to your interaction with CCN, except for the sections titled "Choices with Your Information" and "Access and Correction." If you have questions regarding the choices you have with regard to your personal information or how to access or correct your personal information, you should contact your mortgage loan servicer.

Your Consent To This Privacy Notice

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information by us in compliance with this Privacy Notice. Amendments to the Privacy Notice will be posted on the Website. Each time you provide information to us, or we receive information about you, following any amendment of this Privacy Notice will signify your assent to and acceptance of its revised terms for all previously collected information and information collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

Accessing and Correcting Information; Contact Us

If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing with our affiliates for their marketing purposes, please send your requests to privacy@fnf.com or by mail or phone to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer
(888) 934-3354

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Order No. 00059418-991-IE1-DE1

Notice of Available Discounts

Pursuant to Section 2355.3 in Title 10 of the California Code of Regulations Fidelity National Financial, Inc. and its subsidiaries ("FNF") must deliver a notice of each discount available under our current rate filing along with the delivery of escrow instructions, a preliminary report or commitment. Please be aware that the provision of this notice does not constitute a waiver of the consumer's right to be charged the field rate. As such, your transaction may not qualify for the below discounts.

You are encouraged to discuss the applicability of one or more of the below discounts with a Company representative. These discounts are generally described below; consult the rate manual for a full description of the terms, conditions and requirements for each discount. These discounts only apply to transaction involving services rendered by the FNF Family of Companies. This notice only applies to transactions involving property improved with a one-to-four family residential dwelling.

FNF Underwritten Title Company
FNTC - Fidelity National Title Company
FNTCCA – Fidelity National Title Company of California

FNF Underwriter
FNTIC - Fidelity National Title Insurance Company

Available Discounts

CREDIT FOR PRELIMINARY REPORTS AND/OR COMMITMENTS ON SUBSEQUENT POLICIES (FNTIC)
Where no major change in the title has occurred since the issuance of the original report or commitment, the order may be reopened within 12 months and all or a portion of the charge previously paid for the report or commitment may be credited on a subsequent policy charge within the following time period from the date of the report.

DISASTER LOANS (FNTIC)
The charge for a lender's Policy (Standard or Extended coverage) covering the financing or refinancing by an owner of record, within 24 months of the date of a declaration of a disaster area by the government of the United States or the State of California on any land located in said area, which was partially or totally destroyed in the disaster, will be 50% of the appropriate title insurance rate.

CHURCHES OR CHARITABLE NON-PROFIT ORGANIZATIONS (FNTIC)
On properties used as a church or for charitable purposes within the scope of the normal activities of such entities, provided said charge is normally the church's obligation the charge for an owner's policy shall be 50% to 70% of the appropriate title insurance rate, depending on the type of coverage selected. The charge for a lender's policy shall be 40% to 50% of the appropriate title insurance rate, depending on the type of coverage selected.

ATTACHMENT ONE

CALIFORNIA LAND TITLE ASSOCIATION
STANDARD COVERAGE POLICY – 1990

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
   Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE

EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building;
   b. zoning;
   c. land use;

d. improvements on the Land;
e. land division; and
f. environmental protection.

This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.

   This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

- For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1.00% % of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 10,000.00
Covered Risk 18:	1.00% % of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 19:	1.00% of Policy Amount Shown in Schedule A or $5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 21:	1.00% of Policy Amount Shown in Schedule A or $2,500.00 (whichever is less)	$ 5,000.00

2006 ALTA LOAN POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;

   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13 or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.

4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

(Except as provided in Schedule B - Part II,(t(or T)his policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

(PART I

(The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.

PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:)

2006 ALTA OWNER'S POLICY (06-17-06)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
      (i) the occupancy, use, or enjoyment of the Land;
      (ii) the character, dimensions, or location of any improvement erected on the Land;
      (iii) the subdivision of land; or
      (iv) environmental protection;
      or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.

5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of: (The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown in the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and that are not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.
7. (Variable exceptions such as taxes, easements, CC&R's, etc. shown here.)

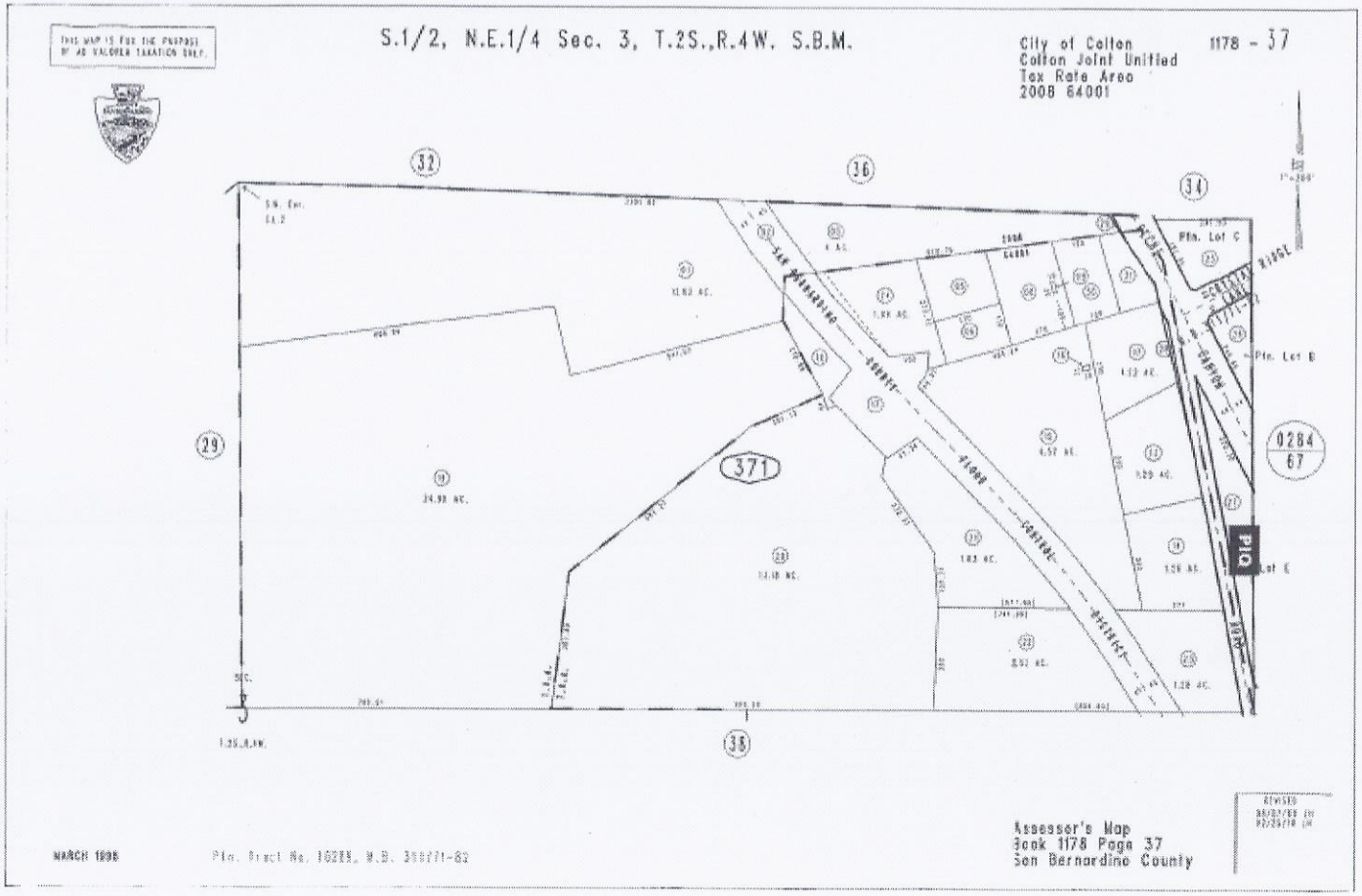
ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (12-02-13)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or
   (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.
10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.

11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.



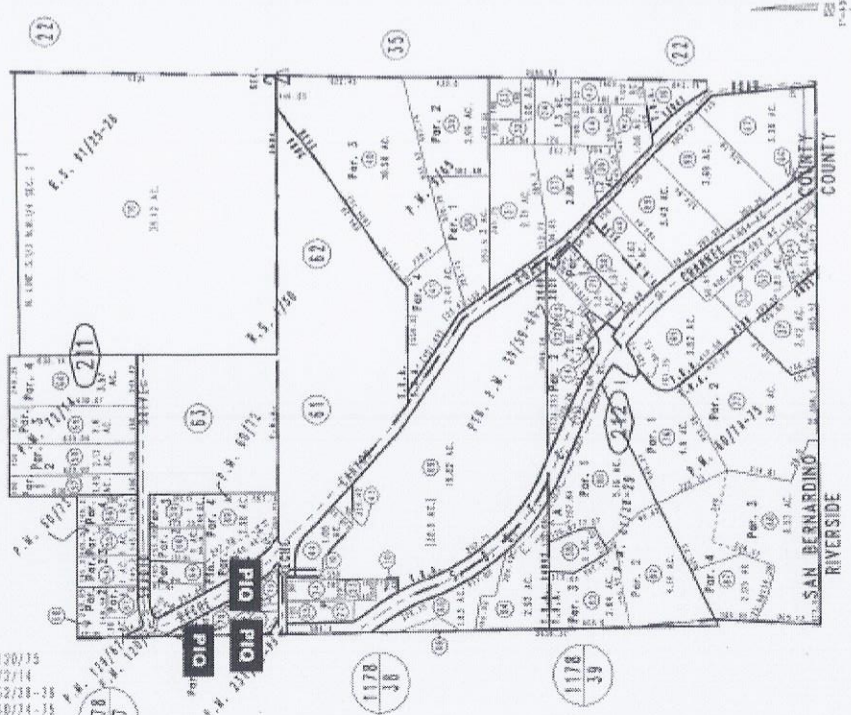
This map/plat is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land, and is not a survey of the land depicted. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances, location of easements, acreage or other matters shown thereon.

THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY.

W.1/2 Sec.2, T.2S.,R.4W., S.B.B.&M.

City of Colton
City of Loma Linda
Tax Rate Area
2021 2049 2064
2138 13041 64002

0284- 21



Parcel Map No. 8386, P.M. 120/35
Parcel Map No. 7219, P.M. 72/14
Parcel Map No. 6055, P.M. 62/38-39
Parcel Map No. 6057, P.M. 60/74-75
Parcel Map No. 5689, P.M. 60/73
Parcel Map No. 5888, P.M. 60/72
Por. Parcel Map No. 5804, P.M. 55/39-40
Parcel Map No. 1125, P.M. 9/85
Parcel Map No. 18917, P.M. 231/88-89
Record of Survey, R.S. 91/35-38
Record of Survey, R.S. 4/58
Parcel Map No. 10921, P.M. 129/63

February 2004

Assessor's Map
Book 0284 Page 21
San Bernardino County

REVISED
02/08/11 KS
09/28/11 KS

This map plat is being furnished as an aid in locating the herein described land in relation to adjoining streets, natural boundaries and other land, and is not a survey of the land depicted. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances, location of easements, acreage or other matters shown thereon.

APPENDIX

B

SALEM
engineering group, inc.

8711 Monroe Court, Suite A
Rancho Cucamonga, California 91730
(909) 980-6455 Office
(909) 980-6435 Fax

PHASE I ESA (ASTM E1527-13)
USER QUESTIONNAIRE

PROPOSED COMMERCIAL DEVELOPMENT
RECHE CANYON ROAD & CRYSTAL RIDGE LANE
COLTON, CALIFORNIA

Date: 9/15/21 Site Address: Reche Canyon, Colton CA

Respondent Name: Fahim Tanios **Phone No. (required):** 909-228-2921

Company Name & Address: 1518 Cascante Ct. Redlands, CA 92373

Introduction

"In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfield Revitalization Act of 2001 (the 'Brownfields Amendments'), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that 'all appropriate inquiry' is not completed" - American Society for Testing and Materials (ASTM) E1527-13 Appendix X3: User Questionnaire

1. Are you aware of any environmental cleanup liens against the subject property that are filed or recorded under federal, tribal, state, or local law?

No

2. Are you aware of any activity use limitations (AULs) such as engineering controls, land use restrictions, or institutional controls that are in place at the subject property and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

No

3. As the user of the Phase I Environmental Site Assessment (ESA), do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjacent property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

I have 2 gas station, one in Grand Terrace & Jurupa Valley. Both with Carwashes and Convenience Store

4. Does the purchase price being paid for the subject property reasonably reflect the fair market value of the subject property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the subject property?

Yes

5. Are you aware of commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

A. Do you know the past uses of the subject property?

Vacant Land

B. Do you know of specific chemicals that are present or once were present at the subject property?

No Chemicals Present

C. Do you know of spills or other chemical releases that have taken place at the subject property?

No

D. Do you know of any environmental cleanups that have taken place at the subject property?

No

6. As the user of the Phase I ESA, based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of contamination at the subject property?

No

I, the user of this Phase I ESA (or authorized representative of the User), do hereby attest that I have carefully considered the questions herein and have presented answers to the best of my knowledge and ability based upon the Responsibilities of the User as required within ASTM E1527-13 guidance.

Name Fahim Tanios **Date** 9/15/21
(Please Print)

Signature Fahim Tanios

APPENDIX

C

SALEM
engineering group, inc.

8711 Monroe Court, Suite A
Rancho Cucamonga, California 91730
(909) 980-6455 Office
(909) 980-6435 Fax

PHASE I ESA (ASTM E1527-13)
OWNER QUESTIONNAIRE

PROPOSED COMMERCIAL DEVELOPMENT
RECHE CANYON ROAD & CRYSTAL RIDGE LANE
COLTON, CALIFORNIA

Date: 9/15/21 Site Address: Reche Canyon, Colton CA

Owner Name: Fahim Tayios **Owner Phone No. (required):** 909-228-2921

Provide Name of Previous Owner(s) and Phone Number if known: Adel & Tahani Eskander

How long have you owned the subject property? 5 years

Have any previous investigations been conducted on the subject property? No

What is the subject property currently used for? Vacant Land

Former Uses/Occupants of the subject property? N/A

Age of onsite structure(s), if known? N/A

Do you have any knowledge of existing or previous underground or aboveground storage tanks being located on the subject property? NO

Do you know of any chemical or hazardous materials, persistent pesticides/herbicides being used, stored or discharged on the subject property? No

Do you know of any Environmental Cleanup Liens or slurry walls or vapor barriers filed or recorded against the subject property? No

Do you know of any buried materials such as garbage dumps or burn pits on the subject property? No

Are there currently or were there historically any septic systems and/or water wells located on the subject property? NO

Any dry wells/monitoring wells? No

Are there any drainage or disposal ponds located on the subject property? No

Is the subject property connected to municipal water and sewer systems? Yes

Do you have any commonly known, reasonably ascertainable, or specialized knowledge or experience related to the subject property or nearby properties? Yes

Are you aware of any contamination on the subject property? No

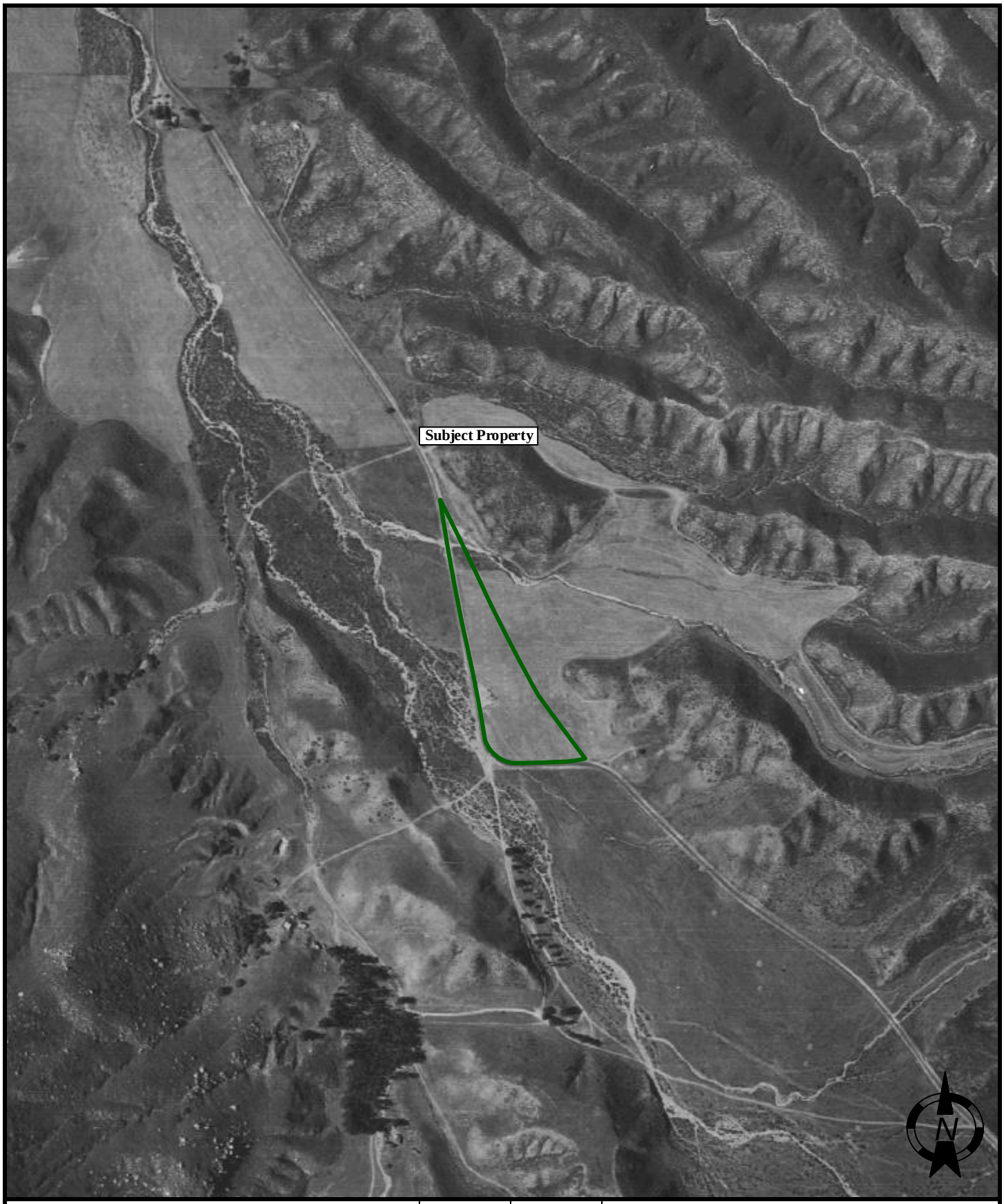
Name: Fahim Tanios (Please Print) Date: 9-15-21

Signature: Fah S. Ta

APPENDIX

D

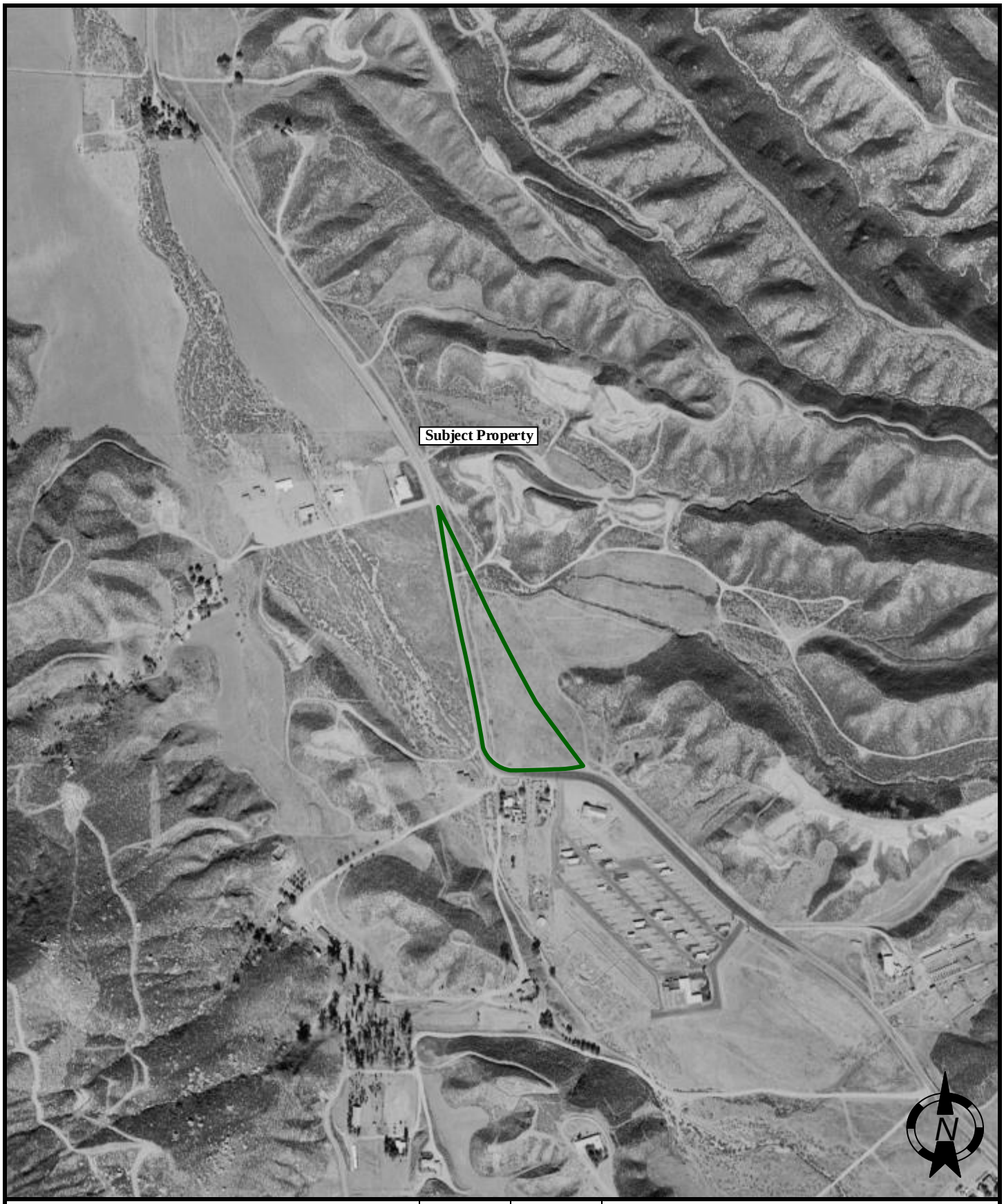
AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1930	



AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1938	

AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1949	

AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1953	



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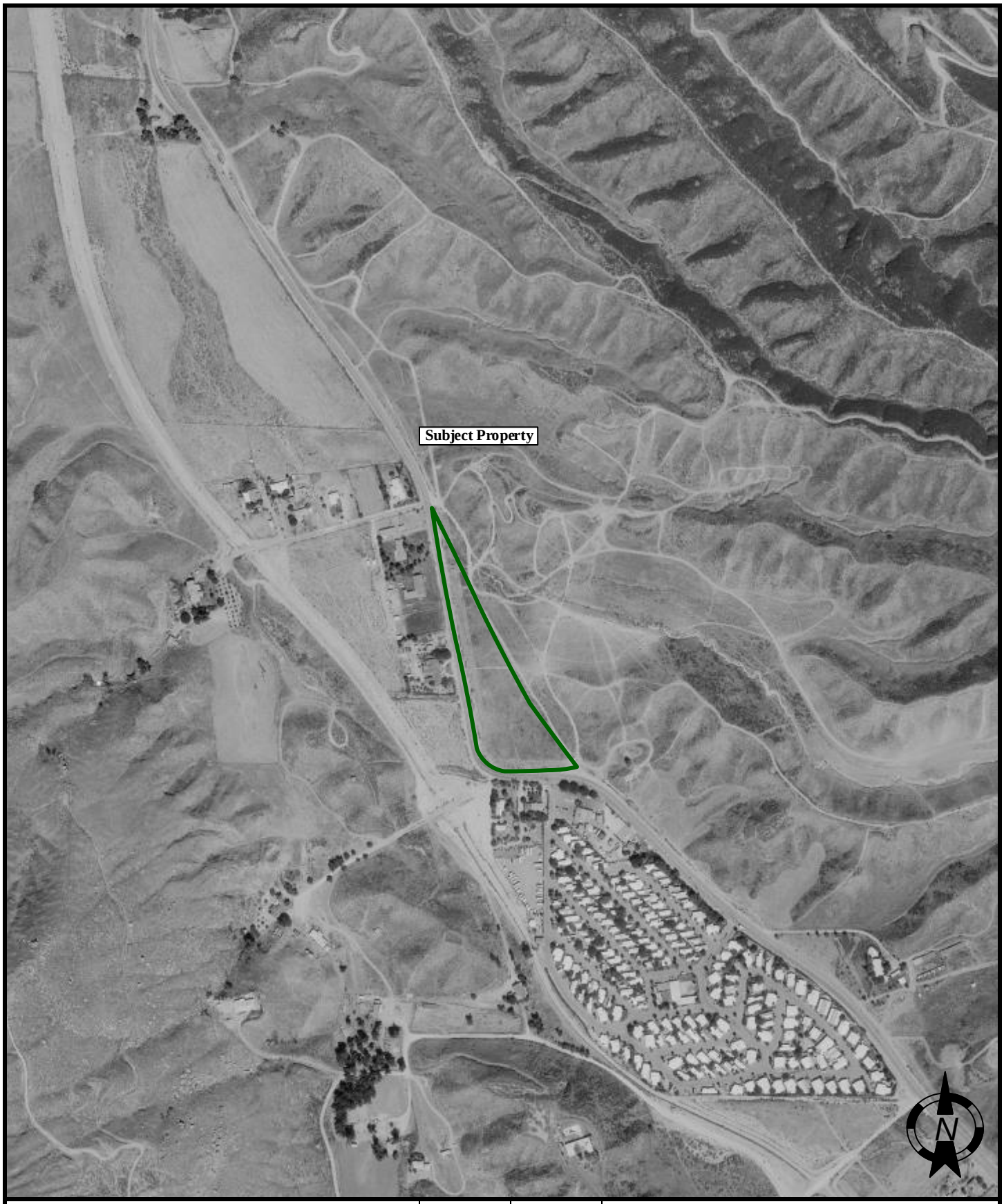
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1959	

AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1966	

AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1968	

AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1975	



AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1978	

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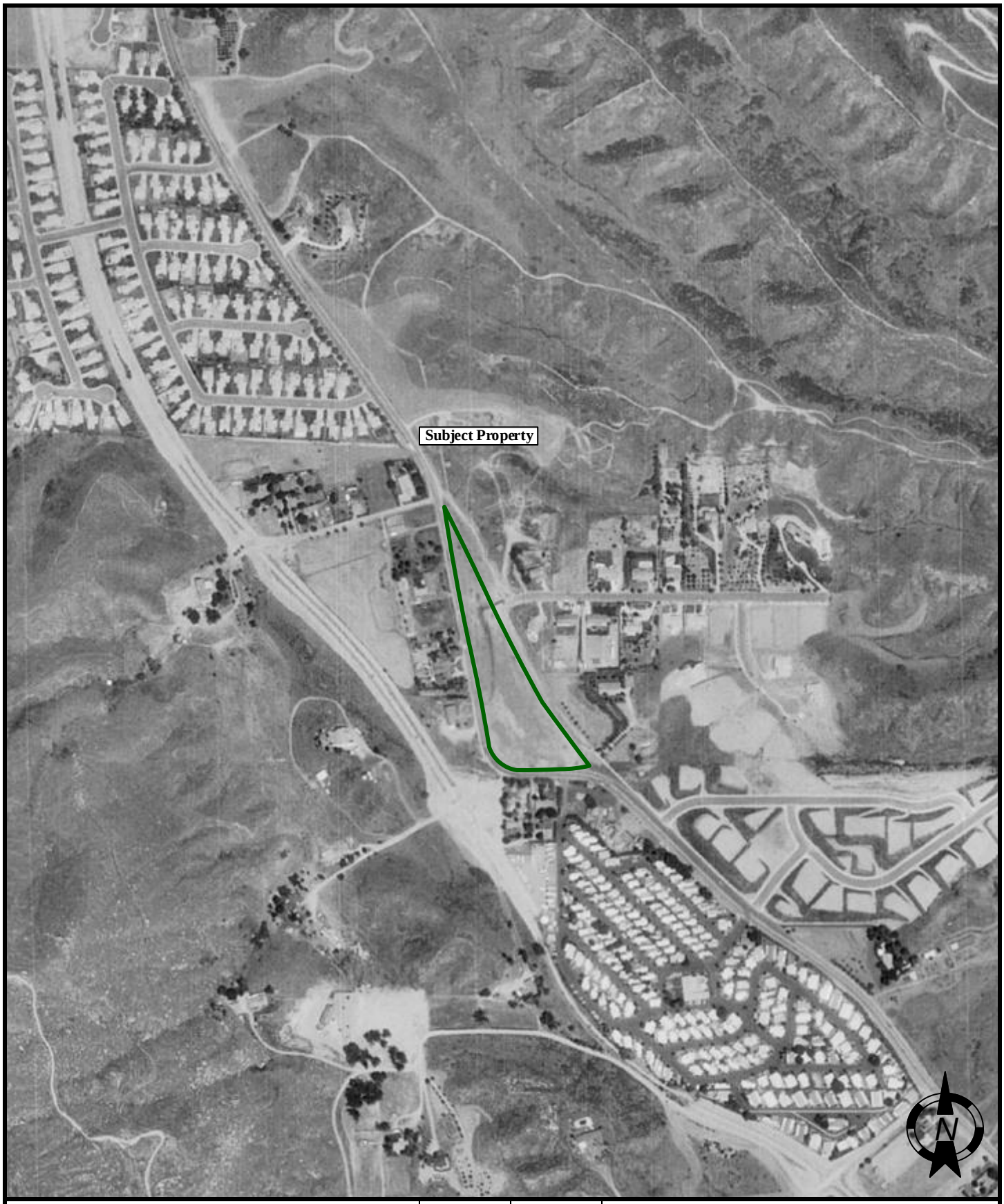
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1985	

AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 1989	



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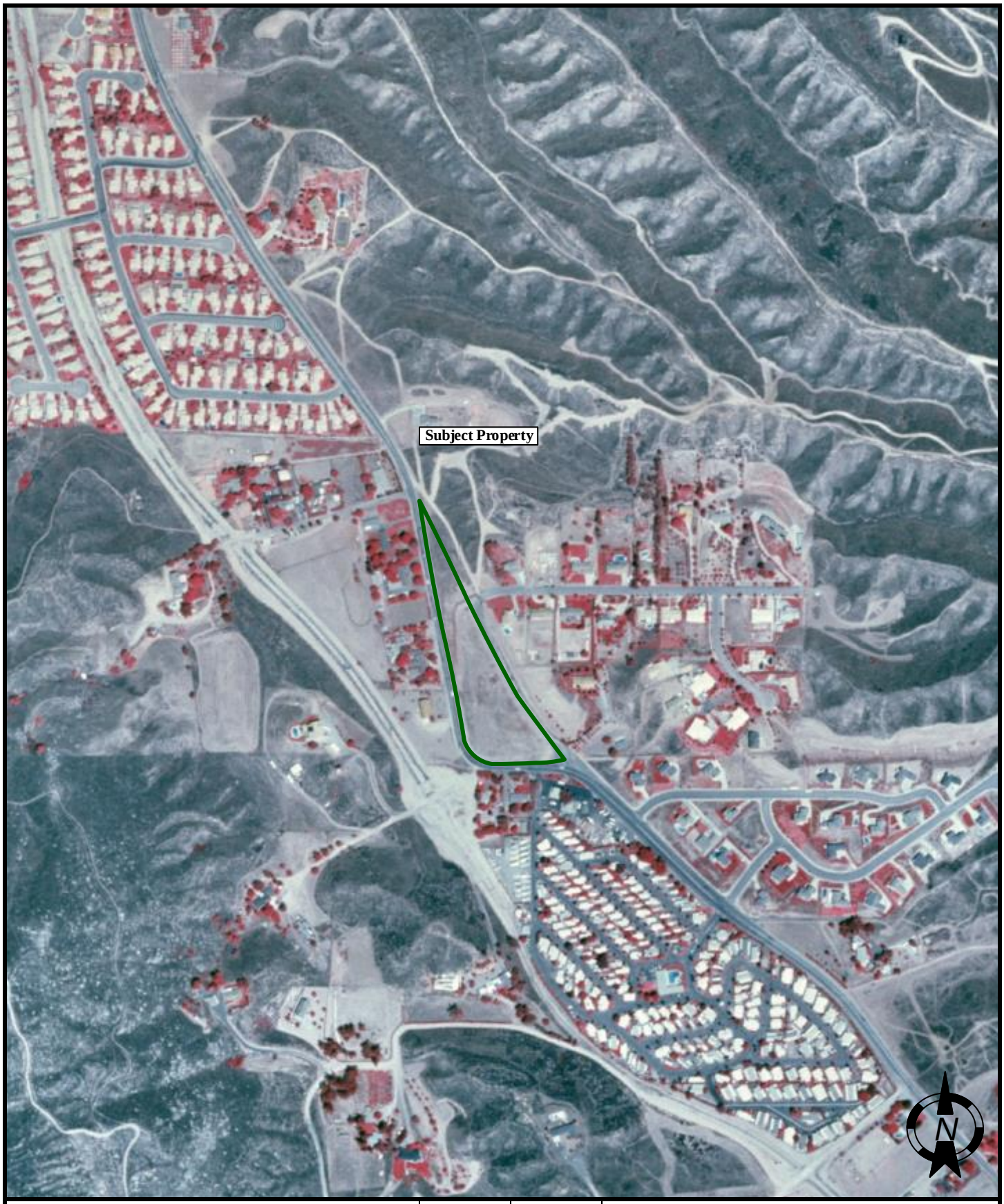
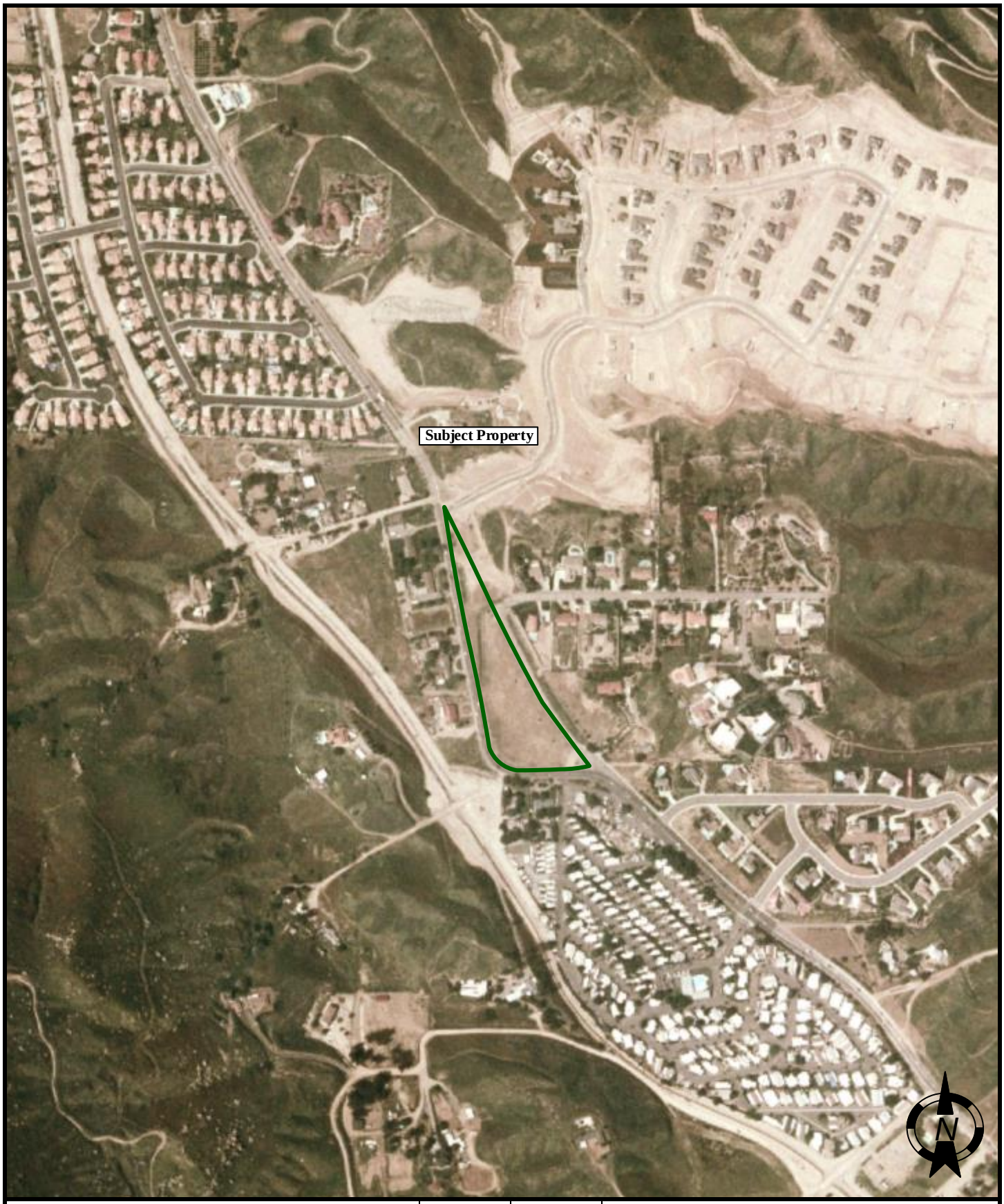
	PROJECT NO.: 3-421-0940	YEAR: 1994	



AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 2002	



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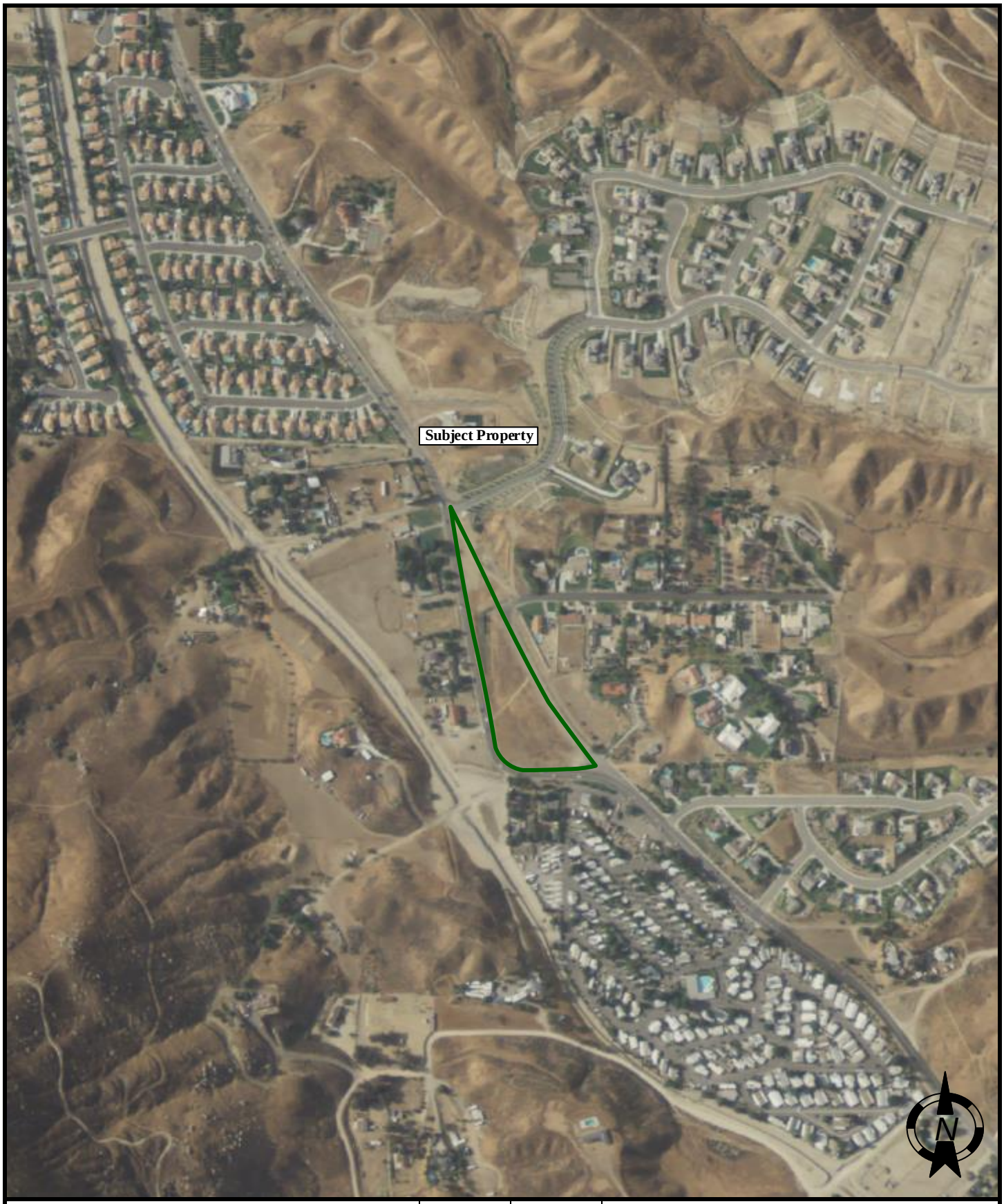
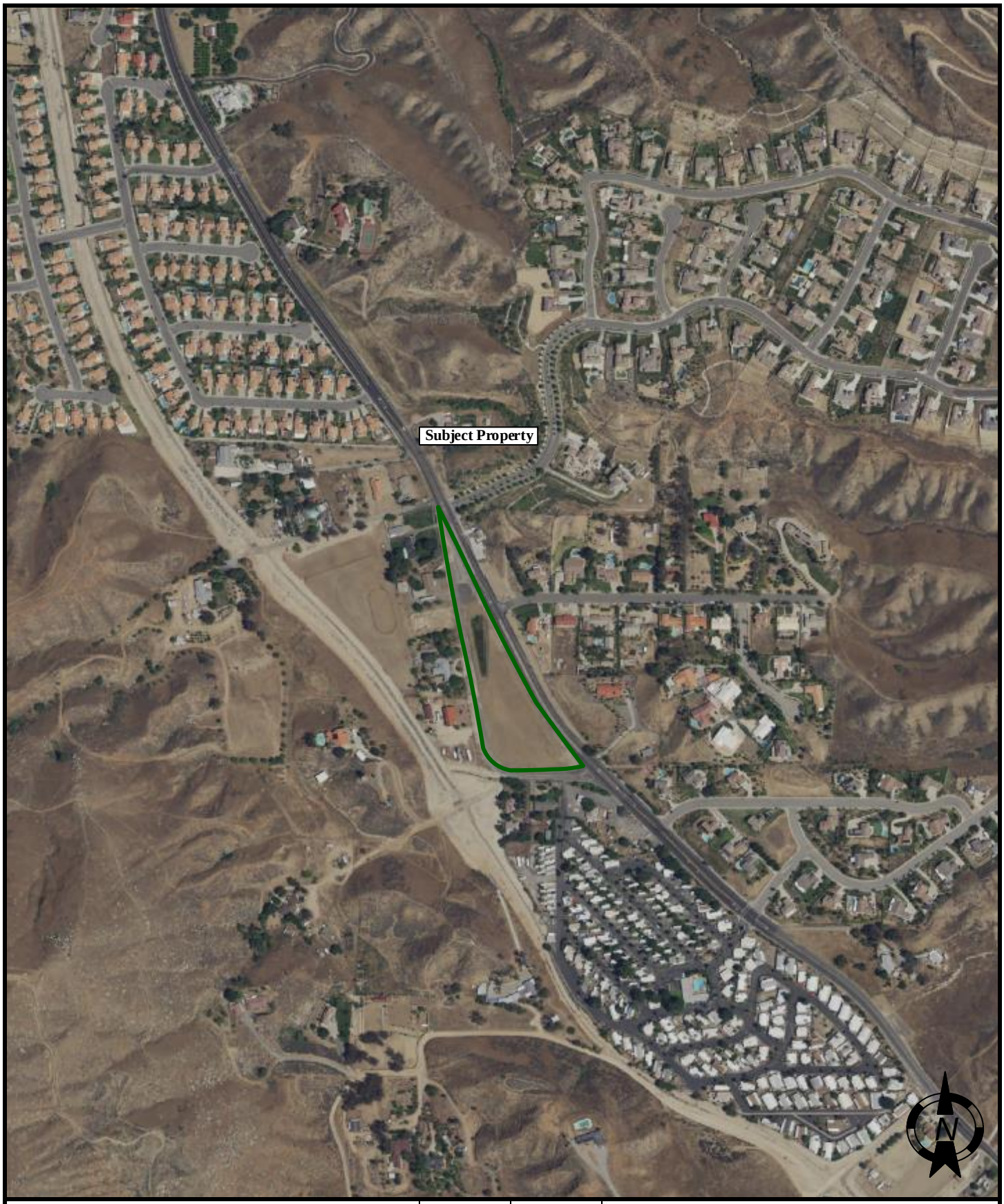
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 2006	



AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 2009	

AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 2012	



AERIAL PHOTOGRAPHS	SCALE: NTS	DATE: Oct., 2021	SALEM engineering group, inc.
PROPOSED COMMERCIAL DEVELORRENT RECHE CANYON ROAD AND CRYSTAL RIDGE LANE COLTON, CALIFORNIA	DRAWN BY: KV	APPROVED BY: RR	
	PROJECT NO.: 3-421-0940	YEAR: 2016	

APPENDIX

E

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: John Rosenman

Address: [redacted]

Phone #: [redacted]

Email: [redacted]

Comments/Suggestions:

Main problem is Traffic congestion during 3pm – 6:30 pm.
It has changed a 15 minute commute home from work to 45 minutes due to Moreno Valley commuters bypassing the freeway. The project would increase traffic congestion. It is already unacceptable.

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Kent Linda Black

Address: [redacted]

Phone #: [redacted]

Email: [redacted]

Comments/Suggestions:

What I hear from citizens @ this Mtg:

- Residents don't trust Project / City officials to help them with Traffic Team issues.
- I think Residents are not totally against (all) development, they are tired of Traffic
- City / developers should come back + Communicate with residents on solutions for traffic issues in Canyon.
- Why ~~does~~ is Loma Linda city allowed to pass a measure that does not allow traffic pass through Loma Linda? when ~~most~~ alot of Traffic is generated because of ~~them~~ them.

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

OVER →

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Terri Riesenmay

Address: [redacted]

Phone #: [redacted]

Email:

Comments/Suggestions:

#1 Traffic

We are sick of 2 mile drive taking 45 to 1 hr. routinely!!!

Are there any other roads proposed to divert off Reche.

#2 Endangered Rose Boa studies

#3) alternative exists if a fire storm occurs.

Fix the traffic issue then people would be more receptive.

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

-Traffic
-Safety

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Cindy Turner

Address: [redacted]

Phone #: [redacted]

Email: [redacted]

Comments/Suggestions:

The Canyon is Not Set up to handle any additional traffic. Currently at 15K Cars a day per Study it is inconcievable to add more traffic. When School is out for the Summer traffic is tolerable, When School is in session, it is Not. I Live in The Canyon and it feels that City of Colton is Not Listening to us as Residents that we Can Not tolerate more traffic. I am on the Straight away and have just missed a head on Collision many times. Please dont make us Scream that we really Cant have more traffic on This Canyon

Cindy Turner

No more Dead Donkeys - Save our Canyon.

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: CHARLES DEVERE

Address: [redacted]

Phone #: [redacted]

Email:

Comments/Suggestions:

1. Effect that it has on high ground water levels, there is a natural spring present. Possible storage tanks for instance.
2. Water runoff in rainy area, will it drain to near of development onto existing residents.
3. Artetic impact to resident behind development, sight of dumpsters ect. The rear of these places do not allway look good. Will it degrade property value.
4. Traffic congestion increase.
5. Effect on existing business, Helping Post Market which is also a gas station allready there. Were they included in these plans. Will it put them out of business. It is an excelent store, visit is some time.

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

City of Colton
659 N. La Cadena
Colton, Ca

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Geraldine G. Fares

Address: [redacted]

Phone #: [redacted]

Email: [redacted]

Comments/Suggestions:

1. What is the estimate of FATALITIES on Reche Canyon Rd. in the last six years?
2. Who was the zone changed from residential to commercial?
3. What is the estimate TRAFFIC @ the Point and what is the increase
4. Concern is loosing lives of canyon residents. Too many dead neighbors,
5. Did you not HEAR the residence
6. Do you care about living people

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Robert Goodrich

Address: [redacted]

Phone #: [redacted]

Email: [redacted]

Comments/Suggestions:

1) The project should be considered a project of statewide significance.
2) The scope of the environmental/Biological review should include winter and nocturnal assessments, including vernal pool/riparian habitat.
3) February 2019 I and my son discovered over a dozen Spea hammondi (Western Spadefoots) in the pond area at the site. I believe the state of California considers that "toad" to be of special significance.
4) also, nearby (<1/10 mile) I have observed Say's Phoebes and Orange-throated Whiptail lizards, which are considered to be significant to the state.
5) The area contains riparian habitat – a vernal pool
6) The assessment for species will have to be undertaken wet winter evenings

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Elizabeth Skates

Address: [redacted]

Phone #:

Email: [redacted]

Comments/Suggestions:

3 concerns:

(1) traffic: Reche canyon is already extremely impacted by commuter traffic. Night time traffic will be troublesome.

(2) Drainage: infiltration pond currently is not drained well. It is covered with green scum most of the time. It needs have a STORM DRAIN

(3) Noise: This is a CANYON. Noise at night echos up the canyon. A 24 hr business is unacceptable. & Soot, gas, fumes, I live 3 doors from this and cannot imagine how this will improve our area.

Please mail to address below with Attention to Haylie Alcorn

Over

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: PATRICIA PALACIOS

Address: [redacted]

Phone #: [redacted]

Email: [redacted]

Comments/Suggestions:

Please forward any and all notices about this project to the email above.

Thank you

Please mail to address below with Attention to Haylie Alcorn

TRANSTECH

Reche Canyon Community Meeting #2

Comment Sheet

Name: Bill Gause

Address: [redacted]

Phone #: [redacted]

Email: [redacted]

Comments/Suggestions:

Please forward any and all notices to the above email/address

Thanks

Please mail to address below with Attention to Haylie Alcorn

413 Mackay Drive | San Bernardino, CA 92408 | T 909 595 8599 | F 909 595 8863 | Transtech.org

- As part of development - can't city require infrastructure upgrades?
- Maybe part of a ~~traffic~~ solution District residents also share burden of infrastructure upgrades.
-

Its all ABOUT TRUST BETWEEN CITY + RESIDENTS!

Thank You for opportunity to voice my concerns.

Linda Black

Ken E Black

PROJECT INDEX

A0.0	TITLE SHEET AND PROJECT INFO.
A1.0	SITE PLAN
A1.1	ARTIST RENDERINGS
A1.2	ARTIST RENDERINGS
A2.0	RETAIL BUILDING- FLOOR PLAN & ELEVATION
A2.1	RETAIL BUILDING ELEVATIONS
A2.2	CONVENIENCE STORE FLOOR PLAN/ & ELEVATION
A2.3	CONVENIENCE STORE ELEVATIONS
A2.4	ROOF PLANS
1 of 2	EXTERIOR LIGHTING PLAN
2 of 2	EXTERIOR LIGHTING SPECIFICATIONS
L1.1	CONCEPTUAL LANDSCAPE PLAN
C-1	CONCEPTUAL GRADING PLAN

PROJECT DIRECTORY

ARCHITECT
J.E. ARMSTRONG ARCHITECTS, INC.
2300 KNOLL DRIVE, SUITE A
VENTURA, CA 93003
CONTACT: NICOLE HARDING
805-644-8180

LANDSCAPE ARCHITECT
BRODERSON ASSOCIATES
422 E. MAIN STREET
VENTURA, CA 93001
CONTACT: BRIAN BRODERSON
805-201-5614

CIVIL ENGINEER
RAMCAM ENGINEERING GROUP, INC.
670 E. PARKRIDGE AVE., SUITE #101
CORONA, CA 92879-6606
CONTACT: ALEX IRSHAID
951-734-6330

PROJECT DATA

PROJECT DESCRIPTION:
NEW GAS STATION, CONVENIENCE STORE, CAR WASH AND RETAIL SPACE DEVELOPMENT

BUILDING LOCATION: CORNER OF RECHE CANYON RD. AND OLD RECHE CANYON RD.

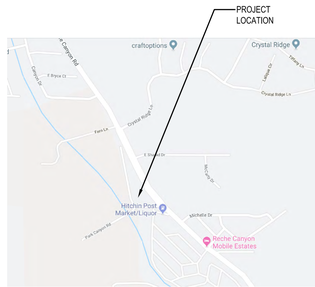
ASSESSOR PARCEL NO.: 117-837-127
028-421-170
028-421-171
028-421-172

ZONING: RECHE CANYON SPECIFIC PLAN

STORIES: SINGLE STORY

LOT COVERAGE CALCULATIONS:
LOT SIZE (TOTAL FOR 4 PARCELS): 2.67 AC (116,420 SF)
BUILDING COVERAGE: 16% (18,610 SF)

PARKING:
SEE SITE PLAN



N
VICINITY MAP
N.T.S.

J. E. ARMSTRONG
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805 / 644 - 8180

RECHE CANYON PLAZA

RECHE CANYON RD.
COLTON, CA
92324

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SHT. 1 OF 13

01-06-2020 JEA # 1976

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KEYNOTES

1. NEW TRASH ENCLOSURE FOR ONE 3 CY RECYCLING BIN AND ONE 3 CY REFUSE BIN.
2. NEW MONUMENT SIGN
3. NEW GAS PRICE SIGN
4. RUSTIC THEMED SEATING AREA, SEE LANDSCAPE PLANS
5. CONCRETE SIDEWALK
6. PLANTING AREA PER LANDSCAPE PLAN
7. EXISTING FIRE HYDRANT LOCATION
8. RUSTIC WATER TOWER SIGN
9. DECOMPOSED GRANITE TRAIL, SEE LANDSCAPE PLAN
10. SPLIT-RAIL FENCE, SEE LANDSCAPE PLAN
11. GAS STATION CANOPY
12. GAS PUMP
13. EXTERIOR POLE MOUNTED LIGHT FIXTURE, BY ANP LIGHTING VW524 IN BLACK

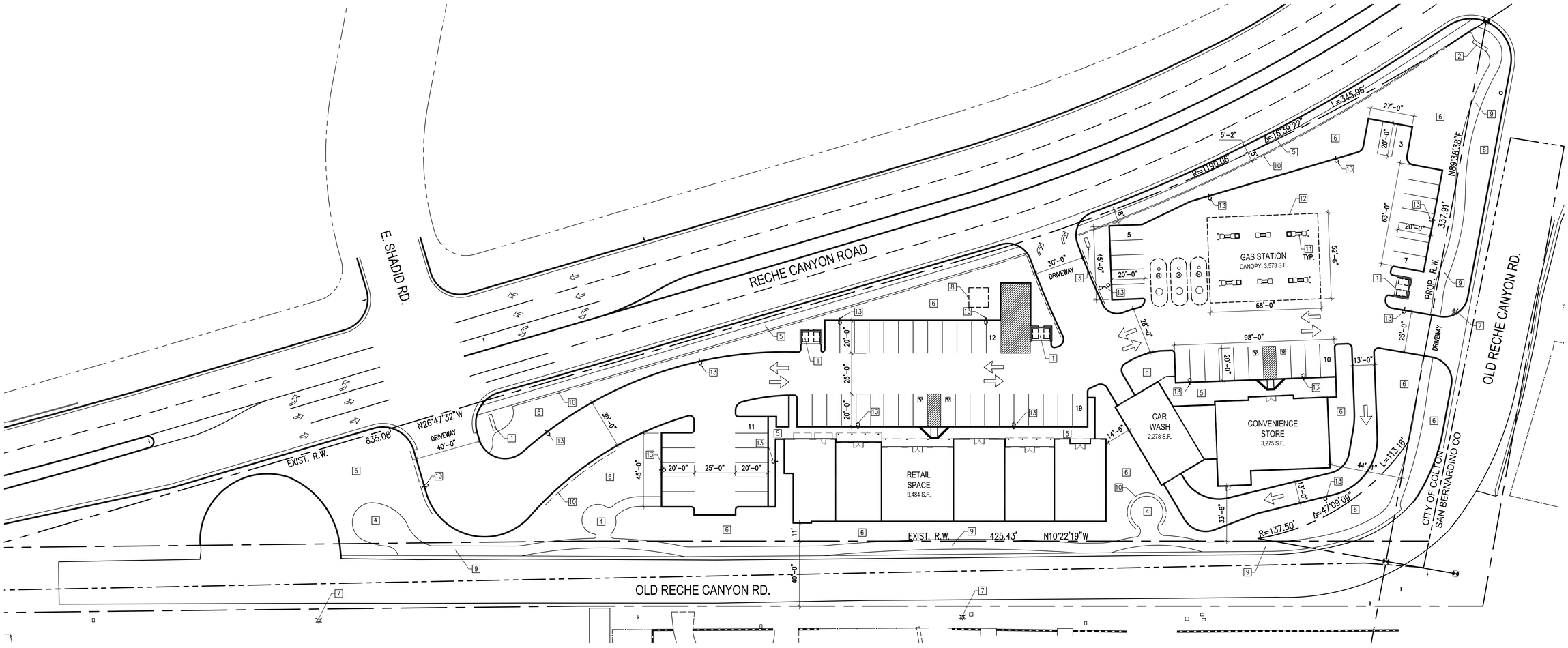
PROPERTY INFORMATION

COMMERCIAL :

RETAIL:	9,484 S.F.
CONVENIENCE STORE:	3,275 S.F.
CAR WASH:	2,278 S.F.

PARKING CALCULATIONS

RETAIL:	9,484/ 250 =	38 SPACES
CONVENIENCE STORE:	3,275/ 250 =	6 SPACES
	TOTAL REQUIRED	44 SPACES
	TOTAL PROVIDED	67 SPACES



PROPOSED SITE PLAN

1" = 30'-0"

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VIEW OF RETAIL SHOPS- LOOKING SOUTH-WEST FROM NORTH DRIVEWAY ENTRANCE

VIEW OF CONVENIENCE STORE- LOOKING NORTH WEST FROM SOUTH DRIVE-WAY ENTRANCE

VIEW OF RETAIL SHOPS & CAR WASH - LOOKING NORTH-WEST AT BUILDINGS

VIEW FROM RECHE CANYON ROAD LOOKING SOUTH-WEST AT PROJECT

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VIEW FROM RECHE CANYON ROAD LOOKING NORTH-WEST AT PROJECT

VIEW OF CAR-WASH AND CONVENIENCE STORE FROM CENTER DRIVE-WAY

VIEW OF GAS STATION LOOKING NORTH-WEST

VIEW FROM OLD RECHE CANYON RD. LOOKING NORTH-EAST AT BACK OF PROJECT

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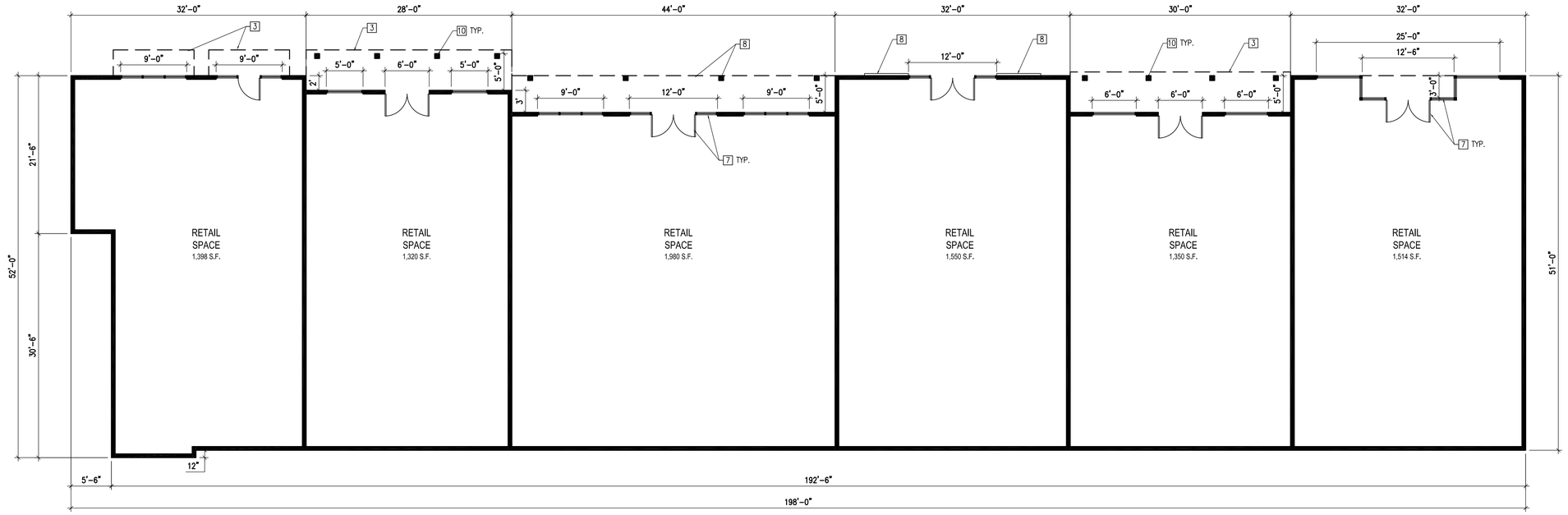


FLOOR PLAN

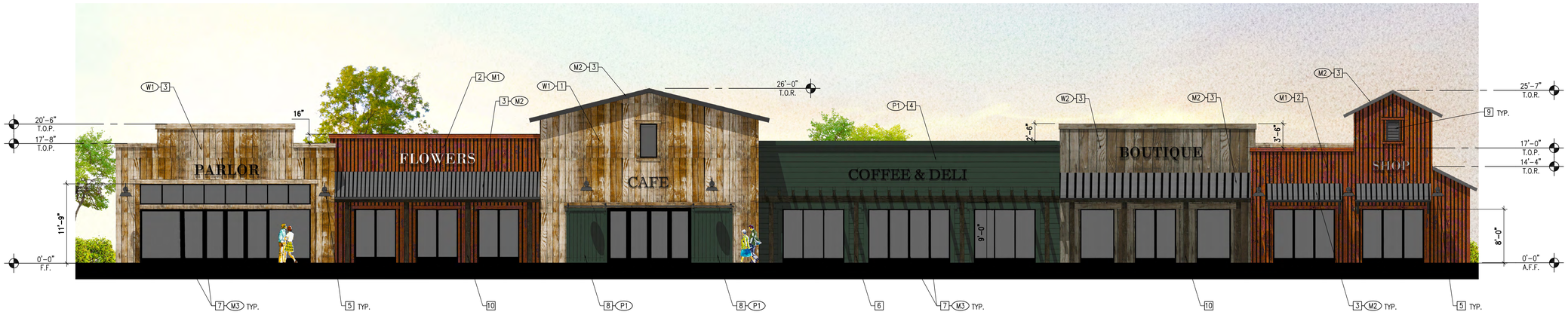
1/8" = 1'-0"

KEYNOTES

1. RECLAIMED WOOD SHIP LAP SIDING
2. 8" CORRUGATED CORTEN STEEL SIDING
3. STANDING SEAM METAL ROOFING AND AWNING
4. PAINTED WOOD SHIP-LAP SIDING
5. EXTERIOR LIGHT FIXTURE, BY TMS LIGHTING: "CALVIN WALL" IN MATTE BLACK
6. 8"X8" WEATHERED WOOD POSTS AND TRELLIS
7. ALUMINUM STOREFRONT FRAMED DOORS AND WINDOWS
8. PAINTED WOOD BARN STYLE DOORS
9. 24"X36" ALUMINUM RECTANGLE LOUVERED GABLE VENT IN BLACK
10. 8"X8" WEATHERED WOOD POSTS

FINISH SCHEDULE

NO	DESCRIPTION (SEE MATERIAL BD. FOR SAMPLE)
W-1	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: CODY
W-2	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: LARAMIE
M-1	METAL CORTEN CORRUGATED STEEL SIDING, 8" DEPTH "WESTERN STATES METAL ROOFING" A606-4 (CORTEN)
M-2	STANDING SEAM METAL ROOFING, WESTERN LOCK "WESTERN STATES METAL" COLOR: CHARCOAL GREY
M-3	ALUMINUM FRAMED METAL WINDOWS "ARCADIA" COLOR: BLACK
P-1	PAINT "BENJAMIN MOORE" COLOR: DEEP RIVER, 1582



EAST ELEVATION

1/8" = 1'-0"

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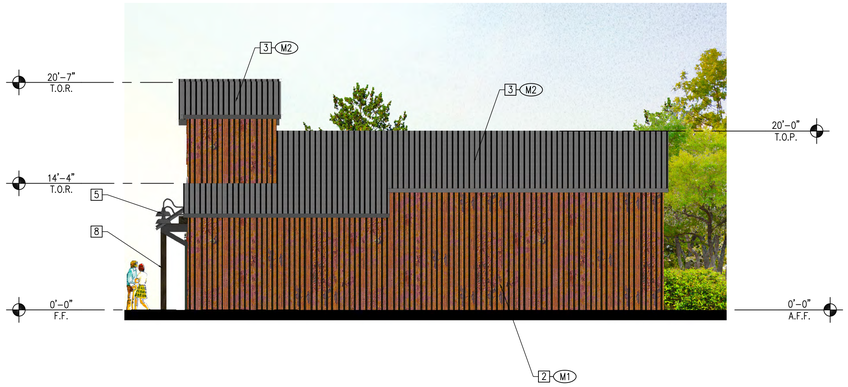
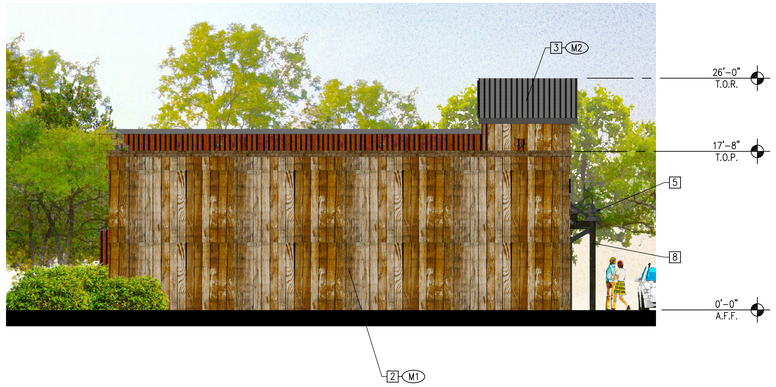
WEST ELEVATION

1/8" = 1'-0"



NORTH ELEVATION

1/8" = 1'-0"



SOUTH ELEVATION

1/8" = 1'-0"

KEYNOTES

1. RECLAIMED WOOD SHIP LAP SIDING
2. 7/8" CORRUGATED CORTEN STEEL SIDING
3. STANDING SEAM METAL ROOFING AND AWNING
4. PAINTED WOOD SHIP-LAP SIDING
5. EXTERIOR LIGHT FIXTURE, BY TMS LIGHTING: "CALVIN WALL" IN MATTE BLACK
6. 8"X8" WEATHERED WOOD POSTS AND TRELLIS
7. ALUMINUM STOREFRONT FRAMED DOORS AND WINDOWS
8. 8"X8" WEATHERED WOOD POSTS
9. PAINTED WOOD BARN STYLE DOORS

FINISH SCHEDULE

NO	DESCRIPTION (SEE MATERIAL BD FOR SAMPLE)
W-1	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: CODY
W-2	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: LARAMIE
M-1	METAL CORTEN CORRUGATED STEEL SIDING, 7/8" DEPTH "WESTERN STATES METAL ROOFING" A606-4 (CORTEN)
M-2	STANDING SEAM METAL ROOFING, WESTERN LOCK "WESTERN STATES METAL" COLOR: CHARCOAL GREY
M-3	ALUMINUM FRAMED METAL WINDOWS "ARCADIA" COLOR: BLACK
P-1	PAINT "BENJAMIN MOORE" COLOR: DEEP RIVER, 1582

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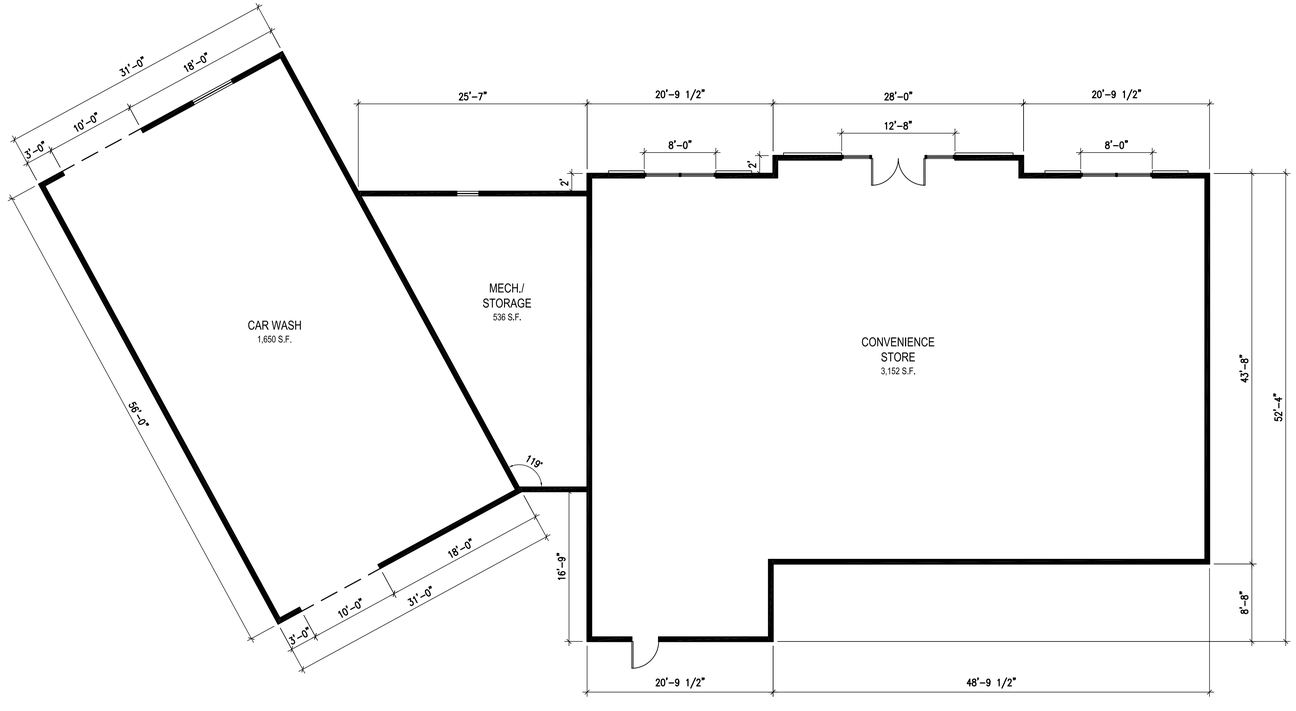

FLOOR PLAN

1/8" = 1'-0"

KEYNOTES

1. RECLAIMED WOOD SHIP LAP SIDING
2. 7/8" CORRUGATED CORTEN STEEL SIDING
3. STANDING SEAM METAL ROOFING AND AWNING
4. EXTERIOR LIGHT FIXTURE, BY TMS LIGHTING: "CALVIN WALL" IN MATTE BLACK
5. ALUMINUM STOREFRONT FRAMED DOORS AND WINDOWS
6. PAINTED WOOD BARN STYLE DOORS

FINISH SCHEDULE

NO	DESCRIPTION (SEE MATERIAL BD FOR SAMPLE)
W-1	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: CODY
W-2	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: LARAMIE
M-1	METAL CORTEN CORRUGATED STEEL SIDING, 7/8" DEPTH "WESTERN STATES METAL ROOFING" A606-4 (CORTEN)
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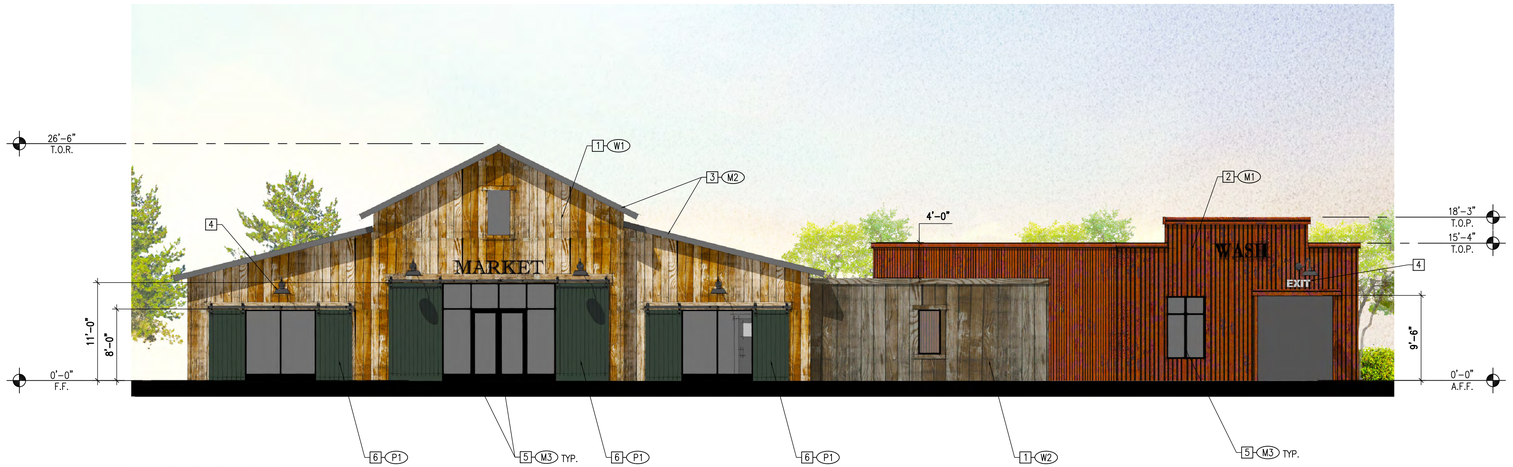
M-3	ALUMINUM FRAMED METAL WINDOWS "ARCADIA" COLOR: BLACK
P-1	PAINT "BENJAMIN MOORE" COLOR: DEEP RIVER, 1582



NORTH ELEVATION

1/8" = 1'-0"

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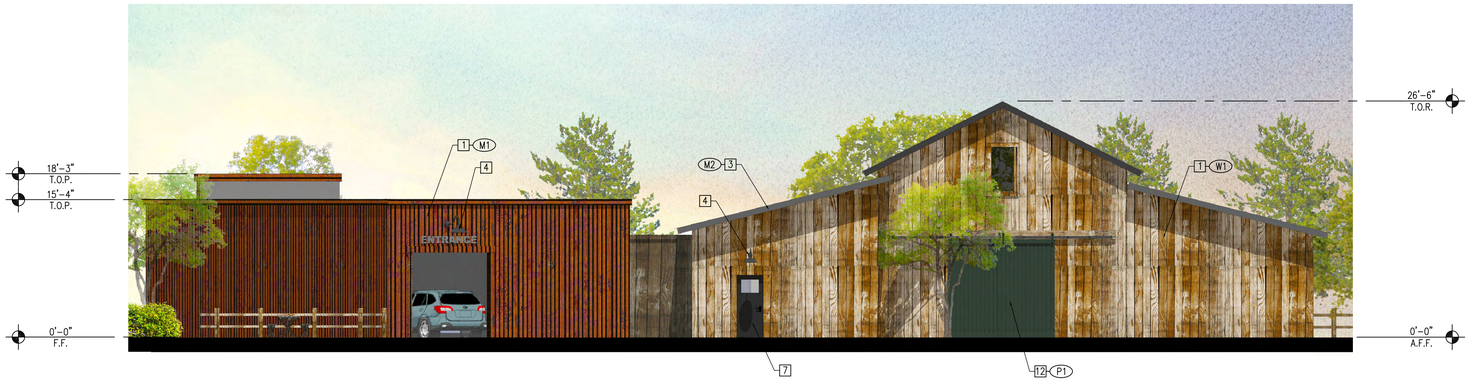
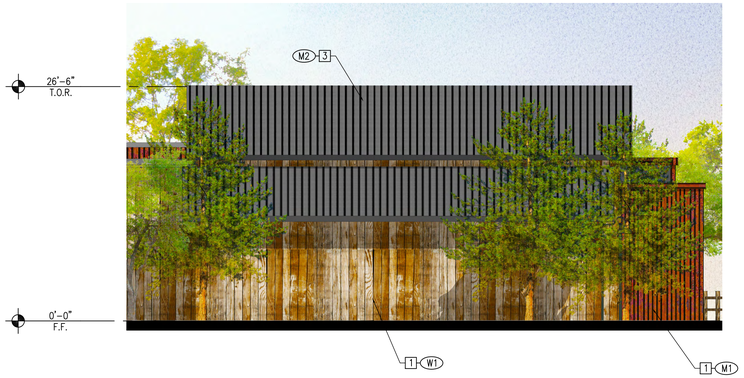


SOUTH ELEVATION

1/8" = 1'-0"

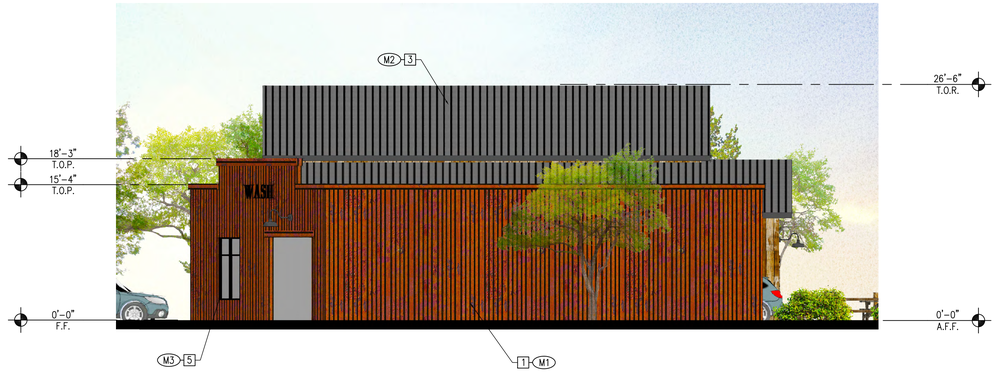
KEYNOTES

1. RECLAIMED WOOD SHIP LAP SIDING
2. ⅜" CORRUGATED CORTEN STEEL SIDING
3. STANDING SEAM METAL ROOFING AND AWNING
4. EXTERIOR LIGHT FIXTURE, BY TMS LIGHTING: "CALVIN WALL" IN MATTE BLACK
5. ALUMINUM STOREFRONT FRAMED DOORS AND WINDOWS
6. PAINTED WOOD BARN STYLE DOORS
7. STEEL DOOR, PAINTED FINISH
8. GAS STATION CANOPY, ALUMINUM CLAD FASCIA
9. 30"X30" STONE CLAD COLUMN BASE
10. 18"X18" POST- STEEL POST CLAD IN RECLAIMED WOOD.
11. RUSTIC WATER-TOWER SIGN
12. PAINTED WOOD BARN STYLE DOORS
13. STONE CLAD CMU TRASH ENCLOSURE WALL
14. STEEL TRASH ENCLOSURE CANOPY ROOF
15. RECLAIMED WOOD TRASH ENCLOSURE GATE



EAST ELEVATION

1/8" = 1'-0"



WEST ELEVATION

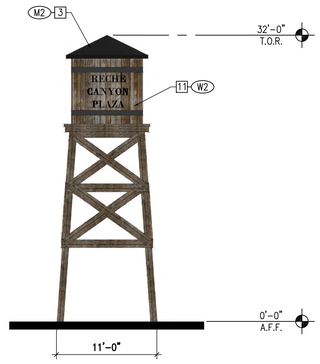
1/8" = 1'-0"

FINISH SCHEDULE

NO.	DESCRIPTION (SEE MATERIAL BD FOR SAMPLE)
W-1	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: CODY
W-2	WOOD SIDING: RECLAIMED WOOD SHIP SLAP SIDING, 5" WIDTH "CENTENNIAL WOODS" COLOR: LARAMIE
M-1	METAL CORTEN CORRUGATED STEEL SIDING, ⅜" DEPTH "WESTERN STATES METAL ROOFING" A606-4 (CORTEN)
M-2	STANDING SEAM METAL ROOFING, WESTERN LOCK "WESTERN STATES METAL" COLOR: CHARCOAL GREY
M-3	ALUMINUM FRAMED METAL WINDOWS "ARCADIA" COLOR: SATIN BLACK
P-1	PAINT "BENJAMIN MOORE" COLOR: DEEP RIVER, 1582
ST-1	STONE "EL DORADO STONE": COUNTRY RUBBLE, BELLA

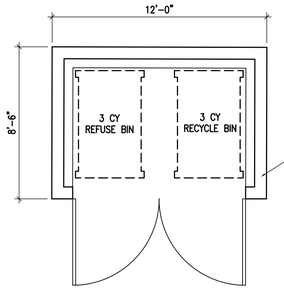
GAS STATION CANOPY - WEST ELEVATION

1/8" = 1'-0"



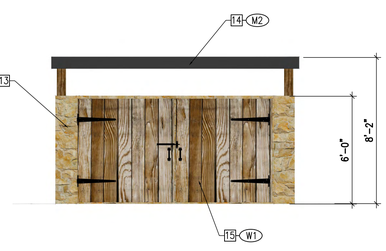
WATER-TOWER SIGN

1/8" = 1'-0"



TRASH ENCLOSURE PLAN

1/4" = 1'-0"



TRASH ENCLOSURE ELEVATION

1/4" = 1'-0"

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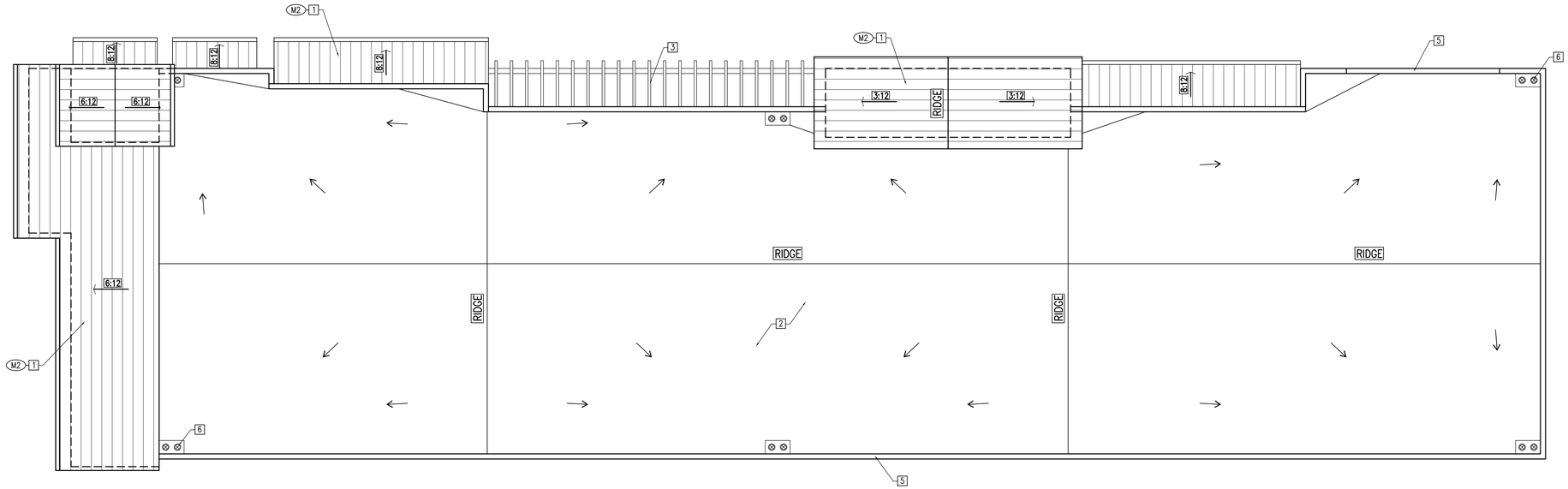


RETAIL BUILDING - ROOF PLAN

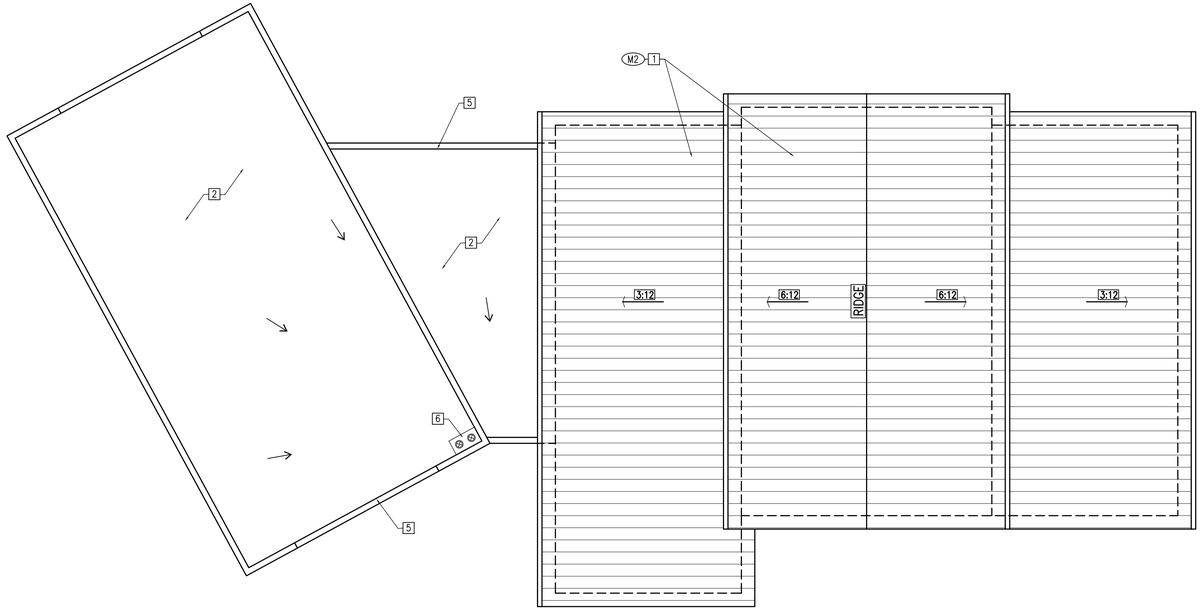
1/8" = 1'-0"

KEYNOTES

1. STANDING SEAM METAL ROOF
2. BUILT UP ROOFING, SLOPE MIN. ¼" PER FOOT TO ROOF DRAINS.
3. WEATHERED WOOD TRELLIS
4. STANDING SEAM METAL AWNINGS
5. PARAPET, VARIES IN HEIGHT. SEE ELEVATIONS
6. ROOF DRAIN

FINISH SCHEDULE

NO	DESCRIPTION (SEE MATERIAL BD. FOR SAMPLE)
M-2	STANDING SEAM METAL ROOFING, WESTERN LOCK "WESTERN STATES METAL" COLOR: CHARCOAL GREY



CONVENIENCE STORE ROOF PLAN

1/8" = 1'-0"

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Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens per Lamp	LLF	Wattage
	S1	16	ANP LIGHTING	VW524-P046LD 4 N T3 30K PM30	20.25"DIA. X 18"H. TOP MOUNT SUSPENDED LED LUMINAIRE	LED	1	5661	0.95	47.68
	S2	1	ANP LIGHTING	VW524 P046LD 4 N T3 30K PM40 BD4S16	20.25"DIA. X 18"H. TOP MOUNT SUSPENDED LED LUMINAIRE	LED	1	5661	0.95	95.36
	W1	14	TMS LIGHTING INC.	2W-O-19LED-30K-WM-DIML	CALVIN WALL MOUNT LUMINAIRE 16" DIA. ALUMINUM REFLECTOR WHITE POLYESTER POWDER COAT ON INNER SURFACE	LED	9	207	0.95	21.5
	F1	6	Lithonia Lighting	CNY LED P3 40K MVOLT	CNY LED Canopy P3=11,100lm		216	10755	0.95	86.58

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
CARWASH DRIVE THROUGH	+	1.0 fc	2.8 fc	0.1 fc	28.0:1	10.0:1
GAS PUMPS	+	13.3 fc	29.9 fc	5.1 fc	5.9:1	2.6:1
PARKING LOT	+	1.7 fc	26.4 fc	0.3 fc	88.0:1	5.7:1
STORE FRONT	+	5.1 fc	19.7 fc	0.5 fc	39.4:1	10.2:1

Luminaire Locations

		Location					
No.	Label	X	Y	Z	MH	Tilt	Orientation
1	F1	5018.93	5788.64	10.96	11.30	0.00	79.10
4	F1	5046.88	5794.95	10.96	11.30	0.00	79.10
5	F1	5023.71	5767.21	10.96	11.30	0.00	79.10
6	F1	5051.63	5773.39	10.96	11.30	0.00	79.10
7	F1	5028.55	5745.66	10.96	11.30	0.00	79.10
8	F1	5056.47	5751.84	10.96	11.30	0.00	79.10
3	S1	5083.01	5671.41	16.00	16.00	0.00	0.00
5	S1	4953.13	5800.73	16.00	16.00	0.00	78.11
6	S1	4967.21	5731.88	16.00	16.00	0.00	78.69
8	S1	4954.55	6020.24	16.00	16.00	0.00	258.88
9	S1	4971.26	5932.20	16.00	16.00	0.00	258.88
1	S2	5002.95	5863.69	16.00	16.00	0.00	144.35
10	S1	4842.87	6112.43	16.00	16.00	0.00	166.60
11	S1	4861.23	6041.80	16.00	16.00	0.00	347.35
14	S1	4889.29	5997.15	16.00	16.00	0.00	80.43
15	S1	4906.40	5902.43	16.00	16.00	0.00	80.43
16	S1	4853.57	6186.29	16.00	16.00	0.00	222.31
17	S1	4913.96	6101.24	16.00	16.00	0.00	249.12
18	S1	4806.22	6255.66	16.00	16.00	0.00	149.19
19	S1	4896.69	5705.21	16.00	16.00	0.00	69.21
20	S1	5023.66	5678.92	16.00	16.00	0.00	271.69
21	S1	5108.11	5737.93	16.00	16.00	0.00	236.10
22	S1	5071.36	5810.33	16.00	16.00	0.00	240.90
1	W1	4910.70	5850.88	11.00	11.00	0.00	17.74
2	W1	4906.83	5872.72	11.00	11.00	0.00	96.23
3	W1	4899.48	5913.13	11.00	11.00	0.00	96.23
4	W1	4895.90	5932.38	11.00	11.00	0.00	96.23
5	W1	4877.13	6035.72	12.00	12.00	0.00	166.95
6	W1	4879.40	6022.82	12.00	12.00	0.00	170.47
7	W1	4882.04	6010.18	12.00	12.00	0.00	0.00
8	W1	4957.96	5741.71	14.00	14.00	0.00	100.18
9	W1	4959.21	5727.28	11.00	11.00	0.00	0.00
10	W1	4954.06	5760.42	14.00	14.00	0.00	100.18
11	W1	4948.92	5773.76	11.00	11.00	0.00	0.00
12	W1	4937.83	5838.14	12.00	12.00	0.00	197.88
13	W1	4893.47	5800.42	12.00	12.00	0.00	208.76
14	W1	4895.10	5766.22	9.00	9.00	0.00	160.76

Plan View
Scale - 1" = 40ft

RECHE CANYON
EXTERIOR LIGHTINNG PLAN
012020

Designer
STEVE DOMINGUEZ
Tel
562 701-8156

Date
6/15/2015
Scale
Not to Scale
Drawing No.

Summary

ANP Lighting

Specifications VW524

Project: _____ Quantity: _____
Fixture Type: _____
Customer: _____

Specifications

Material
Body and shade are constructed of heavy duty spun aluminum. Wire base and socket housing are cast aluminum. All fasteners are stainless steel. Reflector is anodized high purity aluminum. Socket is porcelain with nickel plated brass screw shell and center contact. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion.

Lens
Clear acrylic lens, frosted or prismatic glass lens available.

Electrical
Ballast rated for 120V, 277V, 347V, 480V, 50/60 Hz. Ballast is CE marked and is non-PCB. Meets part 15 of emissions standards for FCC. Class P thermally protected.

See page 2 table for LED module and driver/ballast information and wiring diagrams.

Finish
Finish is a polyester powder coat high quality finish is electro-statically applied and baked at 400° for exceptional durability and color retention. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion. Marine grade finish provides superior salt, humidity, and UV protection. This coating withstands up to 3000 hours of continuous salt spray; comes with a 5-year warranty and is available in either a textured or gloss surface.

Certifications
cULlisted for dry locations.

Accessories
Banner arms, bolder mounts, signage, flag pole holder and GFI receptacles are optional.

Modifications
Please consult factory for custom or modified designs.

VW524 Weight: 5.5 lbs

LED

Ordering Number: VW524 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11

VW524 M024LD _ D _ W 40K RTC UNV E6 100GLCL PC 41

1 LIGHT SOURCE & WATTAGES	5 VOLTAGE	8 GLASS & GUARD
M024 55LM Socket Only, 120v only	UNV 120-277V	Up to 30w MAX
M13LD 13w LED Module (1000lm, 3000K, 4000K, 5000K, 80CRI) Wiring & Lens Options Below		
P24DLD4 48w Platform 300mA Driven		
M07LD 7.5w (500-700lm) Cree module		
M01LD 11w (720-1000lm, Cree module)		
M02LD 15w (1000-1400lm, Cree module)		
M03LD 20w (1400-1800lm, Cree module)		
M07LD 27w, 4000-lumen, Cree module		
2 DIMMING	6 MOUNTING SOURCES	9 ACCESSORIES
B Standard 0-10v, TRIAC and ELV dimming	Post Mounts (Positive drive angle of 225-230 with 10gauge)	CBC (Cord basis plate Sauer Acorn Cover)
E (Except dimming 20ma unsafety from 2700K & 3000K)		GRGK (22' Wire Grill)
*Dis is dimming only, select "B"		PC (Button Photo Cell) Remote Only
See page 3 for dimming protocols and limitations.		*MPC (Motion Photocell with Photo Cell override) Control Button Only
3 DISTRIBUTION		*EWCL1537 (7'x1537 Emergency Driver, remote connection) Cube Battery only
*W (T5 Wide Distribution with Dome LED Lens)		*EWCL1537 (7'x1537 Emergency Driver, remote connection) Cube Battery only
*M (T5 Narrow Distribution with Flat LED Lens)		*EWCL-EDTH (The LED Emergency Driver, remote connection) Cube Battery only
*Dis to narrow only, select "M".		BL (Black Antler)
4 COLOR TEMPERATURE (CCT)	Stem Mounts	BLK (Detailed Ceiling Canopy Mount, 20" Max)
27K (2700K)	1/2" (0.5"OD 180 Right Stems with #10 Pan Canopy)	DL (Glossed Back Plate)
30K (3000K) (Not Sunset Dim)	20016 20712 20716 20724 20730 20760	DWL (Adjustable Locking Elastic)
50K (5000K) (Not Sunset Dim)	20736 20772 20796	TBK (Turn Buckle Kit)
40K 4000K (Not Sunset Dim)	1/4" (1" OD Right Stems with 5/16 Part Canopy)	*For Emergency lumen output data, see Resources section at www.ANPlighting.com.
5 DRIVER HOUSING	20976 20712 20716 20724 20730 20760	
RTC (Primed Canopy)	20736 20772 20796	
RTCWC (Drive Canopy for Color)		
NA Housing kit required for 12pc		

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Specifications VW524

Project: _____ Quantity: _____
Fixture Type: _____
Customer: _____

Specifications

Material
Body and shade are constructed of heavy duty spun aluminum. Wire base and socket housing are cast aluminum. All fasteners are stainless steel. Reflector is anodized high purity aluminum. Socket is porcelain with nickel plated brass screw shell and center contact. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion.

Lens
Clear acrylic lens, frosted or prismatic glass lens available.

Electrical
Ballast rated for 120V, 277V, 347V, 480V, 50/60 Hz. Ballast is CE marked and is non-PCB. Meets part 15 of emissions standards for FCC. Class P thermally protected.

See page 2 table for LED module and driver/ballast information and wiring diagrams.

Finish
Finish is a polyester powder coat high quality finish is electro-statically applied and baked at 400° for exceptional durability and color retention. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion. Marine grade finish provides superior salt, humidity, and UV protection. This coating withstands up to 3000 hours of continuous salt spray; comes with a 5-year warranty and is available in either a textured or gloss surface.

Certifications
cULlisted for dry locations.

Accessories
Banner arms, bolder mounts, signage, flag pole holder and GFI receptacles are optional.

Modifications
Please consult factory for custom or modified designs.

VW524 Weight: 5.5 lbs

LED

Ordering Number: VW524 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11

VW524 M024LD _ D _ W 40K RTC UNV E6 100GLCL PC 41

1 LIGHT SOURCE & WATTAGES	5 VOLTAGE	8 GLASS & GUARD
M024 55LM Socket Only, 120v only	UNV 120-277V	Up to 30w MAX
M13LD 13w LED Module (1000lm, 3000K, 4000K, 5000K, 80CRI) Wiring & Lens Options Below		
P24DLD4 48w Platform 300mA Driven		
M07LD 7.5w (500-700lm) Cree module		
M01LD 11w (720-1000lm, Cree module)		
M02LD 15w (1000-1400lm, Cree module)		
M03LD 20w (1400-1800lm, Cree module)		
M07LD 27w, 4000-lumen, Cree module		
2 DIMMING	6 MOUNTING SOURCES	9 ACCESSORIES
B Standard 0-10v, TRIAC and ELV dimming	Post Mounts (Positive drive angle of 225-230 with 10gauge)	CBC (Cord basis plate Sauer Acorn Cover)
E (Except dimming 20ma unsafety from 2700K & 3000K)		GRGK (22' Wire Grill)
*Dis is dimming only, select "B"		PC (Button Photo Cell) Remote Only
See page 3 for dimming protocols and limitations.		*MPC (Motion Photocell with Photo Cell override) Control Button Only
3 DISTRIBUTION		*EWCL1537 (7'x1537 Emergency Driver, remote connection) Cube Battery only
*W (T5 Wide Distribution with Dome LED Lens)		*EWCL1537 (7'x1537 Emergency Driver, remote connection) Cube Battery only
*M (T5 Narrow Distribution with Flat LED Lens)		*EWCL-EDTH (The LED Emergency Driver, remote connection) Cube Battery only
*Dis to narrow only, select "M".		BL (Black Antler)
4 COLOR TEMPERATURE (CCT)	Stem Mounts	BLK (Detailed Ceiling Canopy Mount, 20" Max)
27K (2700K)	1/2" (0.5"OD 180 Right Stems with #10 Pan Canopy)	DL (Glossed Back Plate)
30K (3000K) (Not Sunset Dim)	20016 20712 20716 20724 20730 20760	DWL (Adjustable Locking Elastic)
50K (5000K) (Not Sunset Dim)	20736 20772 20796	TBK (Turn Buckle Kit)
40K 4000K (Not Sunset Dim)	1/4" (1" OD Right Stems with 5/16 Part Canopy)	*For Emergency lumen output data, see Resources section at www.ANPlighting.com.
5 DRIVER HOUSING	20976 20712 20716 20724 20730 20760	
RTC (Primed Canopy)	20736 20772 20796	
RTCWC (Drive Canopy for Color)		
NA Housing kit required for 12pc		

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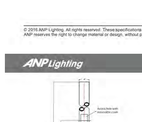
Specifications PM30



Project: _____ Quantity: _____
Fixture Type: _____
Customer: _____

Specifications

Material
Body and shade are constructed of heavy duty spun aluminum. Wire base and socket housing are cast aluminum. All fasteners are stainless steel. Reflector is anodized high purity aluminum. Socket is porcelain with nickel plated brass screw shell and center contact. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion.

Lens
Clear acrylic lens, frosted or prismatic glass lens available.

Electrical
Ballast rated for 120V, 277V, 347V, 480V, 50/60 Hz. Ballast is CE marked and is non-PCB. Meets part 15 of emissions standards for FCC. Class P thermally protected.

See page 2 table for LED module and driver/ballast information and wiring diagrams.

Finish
Finish is a polyester powder coat high quality finish is electro-statically applied and baked at 400° for exceptional durability and color retention. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion. Marine grade finish provides superior salt, humidity, and UV protection. This coating withstands up to 3000 hours of continuous salt spray; comes with a 5-year warranty and is available in either a textured or gloss surface.

Certifications
cULlisted for dry locations.

Accessories
Banner arms, bolder mounts, signage, flag pole holder and GFI receptacles are optional.

Modifications
Please consult factory for custom or modified designs.

PM30
21 5/8" x 28 7/8"
Weight: 5.0 lbs

ACCESSORIES

SC
Stool

FINISHES

Standard	Series	Bronze	Series
40	NA Raw Unfinished	62	196 Antique Gray
41	191 Black	66	192 Silver
42	192 Frosted Green	67	193 Black Vanilla
43	194 Bright Red	78	194 Flymesh Chinook
44	195 Navy	79	195 Flymesh Black
47	197 Bright Blue	73	196 Textured Black
48	193 Sunny Yellow	74	193 Matte Black
47	198 Aqua Green	75	198 Gloss Black
48	NA Galvanized	77	197 Textured White
56	191 Ivory	76	194 Textured Silver
51	NA Architectural Bronze	55	199 Aspen Green
52	199 Patina Verde	61	192 Cantaloupe
53	195 Lilac	63	198 Prairy

Textures	Series	Bronze	Series
Standard	Series	Standard	Series
81	197 Metallic Chrome	86	196 Candy Apple Red
82	NA Standard Electric Blue	85	196 Forest Moss
87	195 Galvanized	82	198 Grasslore
88	193 Cyclades	83	193 Gunmetal Gray
58	196 Black Ebon	84	194 10-Painted Bronze

Consult factory for additional paint charges and availability

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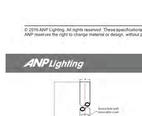
Specifications PM40



Project: _____ Quantity: _____
Fixture Type: _____
Customer: _____

Specifications

Material
Body and shade are constructed of heavy duty spun aluminum. Wire base and socket housing are cast aluminum. All fasteners are stainless steel. Reflector is anodized high purity aluminum. Socket is porcelain with nickel plated brass screw shell and center contact. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion.

Lens
Clear acrylic lens, frosted or prismatic glass lens available.

Electrical
Ballast rated for 120V, 277V, 347V, 480V, 50/60 Hz. Ballast is CE marked and is non-PCB. Meets part 15 of emissions standards for FCC. Class P thermally protected.

See page 2 table for LED module and driver/ballast information and wiring diagrams.

Finish
Finish is a polyester powder coat high quality finish is electro-statically applied and baked at 400° for exceptional durability and color retention. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion. Marine grade finish provides superior salt, humidity, and UV protection. This coating withstands up to 3000 hours of continuous salt spray; comes with a 5-year warranty and is available in either a textured or gloss surface.

Certifications
cULlisted for dry locations.

Accessories
Banner arms, bolder mounts, signage, flag pole holder and GFI receptacles are optional.

Modifications
Please consult factory for custom or modified designs.

PM40
43 3/8" x 29 7/8"
Weight: 6.0 lbs

ACCESSORIES

SC
Stool

FINISHES

Standard	Series	Bronze	Series
40	NA Raw Unfinished	62	196 Antique Gray
41	191 Black	66	192 Silver
42	192 Frosted Green	67	193 Black Vanilla
43	194 Bright Red	78	194 Flymesh Chinook
44	195 Navy	79	195 Flymesh Black
47	197 Bright Blue	73	196 Textured Black
48	193 Sunny Yellow	74	193 Matte Black
47	198 Aqua Green	75	198 Gloss Black
48	NA Galvanized	77	197 Textured White
56	191 Ivory	76	194 Textured Silver
51	NA Architectural Bronze	55	199 Aspen Green
52	199 Patina Verde	61	192 Cantaloupe
53	195 Lilac	63	198 Prairy

Textures	Series	Bronze	Series
Standard	Series	Standard	Series
81	197 Metallic Chrome	86	196 Candy Apple Red
82	NA Standard Electric Blue	85	196 Forest Moss
87	195 Galvanized	82	198 Grasslore
88	193 Cyclades	83	193 Gunmetal Gray
58	196 Black Ebon	84	194 10-Painted Bronze

Consult factory for additional paint charges and availability

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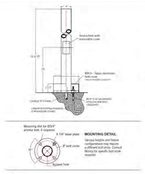
Bolt Down Round Aluminum Smooth Poles



Project: _____
Fixture Type: _____ Quantity: _____
Customer: _____

Ordering Number: BD3510.125 - BAA - CCS1902 - 41

Ordering Number	1	2	3	4
	Pole	Accessory	Clearcoat	Finish

See page 2 for more ordering info

Material
Aluminum pole bases and base plates shall be cast from 356 aluminum alloy. Shafts shall be extruded 6063-T6 aluminum. Available in 3", 4" or 5" diameter. Wall thickness 0.125" or 0.188" or 0.250.

Mounting
Four anchor bolts provided are 1x1x18" . Anchor bolts, nuts and washers are hot dipped galvanized steel. Spun aluminum bolt cover provided.

Access
All poles are provided with a hand access opening and cover. Hand hole cover is secured by two stainless steel machine screws. (Tamper-proof screws provided upon request).

Grounding
All poles are provided with an aluminum grounding lug integrated to inner wall of shaft, 180 degrees to hand hole. Grounding lug is drilled and tapped to accommodate 1x20 stainless steel machine screw.

Pole Height
Maximum pole height is 20-feet.

Accessories
Banner arms, bolder reels, signage, flag pole holder and GFI receptacles are optional.

Finish
A polyester powder coat high quality finish is electro-statically applied and baked at 400° for exceptional durability and color retention. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion.
Marine grade finish provides superior salt, humidity, and UV protection. This coating withstands up to 3000 hours of continuous salt spray; comes with a 5-year warranty and is available in either a textured or gloss surface.

Item Number	TQ	Height	Wall	90 MPH	100 MPH
BD3507	4	7	0.125	12.97	9.97
BD3507	4	7	0.188	13.80	9.80
BD3507	4	7	0.250	14.63	9.63
BD3508	4	8	0.125	12.97	9.97
BD3508	4	8	0.188	13.80	9.80
BD3508	4	8	0.250	14.63	9.63
BD3509	4	9	0.125	12.97	9.97
BD3509	4	9	0.188	13.80	9.80
BD3509	4	9	0.250	14.63	9.63
BD3510	4	10	0.125	12.97	9.97
BD3510	4	10	0.188	13.80	9.80
BD3510	4	10	0.250	14.63	9.63
BD3511	4	11	0.125	12.97	9.97
BD3511	4	11	0.188	13.80	9.80
BD3511	4	11	0.250	14.63	9.63
BD3512	4	12	0.125	12.97	9.97
BD3512	4	12	0.188	13.80	9.80
BD3512	4	12	0.250	14.63	9.63
BD3513	4	13	0.125	12.97	9.97
BD3513	4	13	0.188	13.80	9.80
BD3513	4	13	0.250	14.63	9.63
BD3514	4	14	0.125	12.97	9.97
BD3514	4	14	0.188	13.80	9.80
BD3514	4	14	0.250	14.63	9.63
BD3515	4	15	0.125	12.97	9.97
BD3515	4	15	0.188	13.80	9.80
BD3515	4	15	0.250	14.63	9.63
BD3516	4	16	0.125	12.97	9.97
BD3516	4	16	0.188	13.80	9.80
BD3516	4	16	0.250	14.63	9.63
BD3517	4	17	0.125	12.97	9.97
BD3517	4	17	0.188	13.80	9.80
BD3517	4	17	0.250	14.63	9.63
BD3518	4	18	0.125	12.97	9.97
BD3518	4	18	0.188	13.80	9.80
BD3518	4	18	0.250	14.63	9.63
BD3519	4	19	0.125	12.97	9.97
BD3519	4	19	0.188	13.80	9.80
BD3519	4	19	0.250	14.63	9.63
BD3520	4	20	0.125	12.97	9.97
BD3520	4	20	0.188	13.80	9.80
BD3520	4	20	0.250	14.63	9.63

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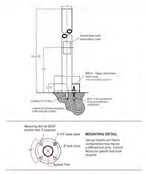
Bolt Down Round Aluminum Smooth Poles



Project: _____
Fixture Type: _____ Quantity: _____
Customer: _____

Ordering Number: BD3510.125 - BAA - CCS1902 - 41

Ordering Number	1	2	3	4
	Pole	Accessory	Clearcoat	Finish

See page 2 for more ordering info

Material
Aluminum pole bases and base plates shall be cast from 356 aluminum alloy. Shafts shall be extruded 6063-T6 aluminum. Available in 3", 4" or 5" diameter. Wall thickness 0.125" or 0.188" or 0.250.

Mounting
Four anchor bolts provided are 1x1x18" . Anchor bolts, nuts and washers are hot dipped galvanized steel. Spun aluminum bolt cover provided.

Access
All poles are provided with a hand access opening and cover. Hand hole cover is secured by two stainless steel machine screws. (Tamper-proof screws provided upon request).

Grounding
All poles are provided with an aluminum grounding lug integrated to inner wall of shaft, 180 degrees to hand hole. Grounding lug is drilled and tapped to accommodate 1x20 stainless steel machine screw.

Pole Height
Maximum pole height is 20-feet.

Accessories
Banner arms, bolder reels, signage, flag pole holder and GFI receptacles are optional.

Finish
A polyester powder coat high quality finish is electro-statically applied and baked at 400° for exceptional durability and color retention. Products undergo an intensive five-step cleaning and pretreatment process for maximum paint adhesion.
Marine grade finish provides superior salt, humidity, and UV protection. This coating withstands up to 3000 hours of continuous salt spray; comes with a 5-year warranty and is available in either a textured or gloss surface.

Item Number	TQ	Height	Wall	90 MPH	100 MPH
BD3507	4	7	0.125	12.97	9.97
BD3507	4	7	0.188	13.80	9.80
BD3507	4	7	0.250	14.63	9.63
BD3508	4	8	0.125	12.97	9.97
BD3508	4	8	0.188	13.80	9.80
BD3508	4	8	0.250	14.63	9.63
BD3509	4	9	0.125	12.97	9.97
BD3509	4	9	0.188	13.80	9.80
BD3509	4	9	0.250	14.63	9.63
BD3510	4	10	0.125	12.97	9.97
BD3510	4	10	0.188	13.80	9.80
BD3510	4	10	0.250	14.63	9.63
BD3511	4	11	0.125	12.97	9.97
BD3511	4	11	0.188	13.80	9.80
BD3511	4	11	0.250	14.63	9.63
BD3512	4	12	0.125	12.97	9.97
BD3512	4	12	0.188	13.80	9.80
BD3512	4	12	0.250	14.63	9.63
BD3513	4	13	0.125	12.97	9.97
BD3513	4	13	0.188	13.80	9.80
BD3513	4	13	0.250	14.63	9.63
BD3514	4	14	0.125	12.97	9.97
BD3514	4	14	0.188	13.80	9.80
BD3514	4	14	0.250	14.63	9.63
BD3515	4	15	0.125	12.97	9.97
BD3515	4	15	0.188	13.80	9.80
BD3515	4	15	0.250	14.63	9.63
BD3516	4	16	0.125	12.97	9.97
BD3516	4	16	0.188	13.80	9.80
BD3516	4	16	0.250	14.63	9.63
BD3517	4	17	0.125	12.97	9.97
BD3517	4	17	0.188	13.80	9.80
BD3517	4	17	0.250	14.63	9.63
BD3518	4	18	0.125	12.97	9.97
BD3518	4	18	0.188	13.80	9.80
BD3518	4	18	0.250	14.63	9.63
BD3519	4	19	0.125	12.97	9.97
BD3519	4	19	0.188	13.80	9.80
BD3519	4	19	0.250	14.63	9.63
BD3520	4	20	0.125	12.97	9.97
BD3520	4	20	0.188	13.80	9.80
BD3520	4	20	0.250	14.63	9.63

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CNY LED
LED Canopy/Ceiling Luminaire

Catalog Number: _____
Notes: _____
Type: _____

Specifications

	CNY-LED-PDP1/P2	CNY-LED P3/P4
Width:	10"	14"
Height:	4.5"	4"
Depth:	10"	14"
Weight:	4.5lbs	13lbs

Introduction

The CNY LED canopy luminaires are energy efficient and budget friendly, perfect for replacing up to 400W metal halide luminaires while saving up to 80% energy costs. Quick mount mechanism significantly reduces the installation time. An LED and translucent lens create uniform and visually comfortable illumination. CNY LED luminaires are DLC Premium listed,and deliver quick payback!

Ordering Information EXAMPLE: CNY LED P1 50K MVOLT DDB

Series	Performance Package	Color Temperature*	Voltage	Finish
CNY LED	P1 (3200lm) P2 (4800lm) P3 (6400lm) P4 (9,600lmlm)	50K 5000K NA 3100K	MVOLT (120-277V)	DDB Dark Bronze WHT White

Accessories
CNYEMG Electric Pack/Back Pack

NOTES
1. Color temperature of P3/P4 NA is not available.
2. Not available in NA.
3. Combined color temperature (CCT) shown is nominal per ANSI C78.377-2008
4. Not available with Emergency Battery.
5. *MVOLT driver may be specified at the factory for 347-277V 50/60 Hz.
6. Available with PP or PB.

LISTINGS
UL Listed for wet locations and canopy combustible for wet locations.
Complies with ANSI C136.41 and C136.46 flash testing.
Designed per Consumer/IEC/EN/CP premium qualification. Rev of version.
DLC Qualified Products List at www.designlights.org/QPL or current version any DLC Qualified Products List at www.designlights.org/QPL or current version and may not qualify. Can be used to comply with Colorado 1% (0.4 Part) (0.8 High Efficacy) (0.5 Part) (1.0 High Efficacy).

WARRANTY
Five-year limited warranty. Complete warranty terms posted at

Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.

LITHONIA LIGHTING

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8241 •

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CNY LED
Rev. 09/07/19

Calvin Wall

TMS LIGHTING
ESTABLISHED 1933

Features

- Provides excellent coverage and uniformity with cut-off
- Practical and aesthetic options for application and design flexibility
- Weatherproof construction to withstand the elements
- Quality components combined with the most current technology for high efficiency and reduced lighting costs

Applications
The Calvin wall-mount luminaire is ideal for illuminating areas where localized distribution is necessary, such as doorways and entrances, tamperproof, patios and could provide adequate night time security lighting. It lends itself to commercial, and industrial applications that could benefit from materials and maintenance cost reductions. Calvin could either augment the existing lighting, or illuminate a small to medium-sized area.

Calvin is also available as a pendant-style model.

Construction
Type 3 grade repuri aluminum, brushed solid copper, or brushed 316L stainless steel reflector, with stainless steel mounting hardware, for indoor and outdoor applications.

Lamp
Luminaires with Cree™ LED (19W max.), compact fluorescent (42W max.), metal halide (100W max.), or incandescent (150W max.). Specify 3000K, 3500K or 4000K CCT for LED systems. A dimmable, screw-type, 17W LED lamp is also available (PAR 38, E26 base, 120V, 4000K CCT).

Note: LED systems are available with 120-277V supply voltage only.
LED modules do not require a socket, and are wired directly to the integral driver.
Incandescent and metal halide systems, and those using the 17W LED PAR 38 lamp, use a medium base socket (E26).

Diffuser
Glass: clear and prismatic, elongated, glass globes are available.
Lens: the clear, flat lens provides slight diffusion, and protects any components located in the reflector.
Note: G3 is used with 100W, 3/2CF, and 15/LED max.
Only prismatic globes are compatible with LED systems.
Globes are not available with the 17W LED PAR 38 lamps.

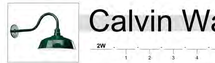
Option
Wire Guard: a steel, chrome-plated wire guard is available for lamp protection against light projectiles, wildlife, and serves as a vandal deterrent.

Ballast/LED Driver
Ballasts are efficient with a high power factor greater than 90%, and quiet with an "A" sound rating.
The LED source is controlled by an advanced electronic driver that delivers consistent power.
Ballast and LED drivers are electronic, and available for integral and remote mounting, indoor or outdoor.

IP23

Calvin Wall

TMS LIGHTING
ESTABLISHED 1933



2W

Project: _____
Type: _____
Quantity: _____
Notes: _____

Note: Some options may not be compatible with others. To determine compatibilities between options, please visit lmelighting.com, on the "details" page of this luminaire, and use the configuration tool.

1 • Location
— Indoor
DL Outdoor

2 • Lamping
150IN 150W Incandescent
42CF 42W CF (PL-T)
32CF 32W CF (PL-T)
42CF 42W CF (PL-T)
70MH 70W MH (E-17)
100MH 100W MH (E-17)
17LED 17W LED (screw-in, supplied)
15LED 15W LED (CRI 80)
15LED-1000 15W LED (CRI 90)

3 • LED CCT (color temp.)
50K 5000K
35K 3500K
40K 4000K

4 • Voltage
120 120V
277 277V
347 347V (CF and MH only)

5 • Ballast/Driver
— Native
HIM Wall mount (integral)
RIM Remote outdoor mount (NEMA 1)
NA Remote outdoor mount (NEMA 4)

6 • Finish
Specialty
BR Brushed aluminum
Painted
AN Anodized (bright)
Powder-coated
F05 White
F09 Midnight blue
F09 Pewter
F11 Dark red
F13 Forest green
F14 Sunshine yellow
F16 Matte black
F16 Gloss black
F18 Flat aluminum
F24 Verde
F25 Architectural bronze
F24 Melted platinum (textured)
F25 Melted gold (textured)
F26 Melted copper (textured)
F31 Silver metallic
F32 Bronze metallic
RAL RAL custom color (specify)

7 • Dimming
— None
DIM CF dimming (Advance Mark 10 IB)
DMG CF dimming (Advance Mark 7 IS; 0-10V)
DMD CF dimming (Advance DALI)
DME CF dimming (Lutron Ecosystem R)
DML LED dimming (0-10V; current-sinking)

8 • Emergency
— None
EM Integral LED or CF
EMC Integral LED or CF cold pack
EMR Remote LED or CF
EMCR Remote LED or CF cold pack

9 • Globes
— None
G1 Clear, elongated globe
G3 Prismatic elongated globe
LNS Clear, flat lens

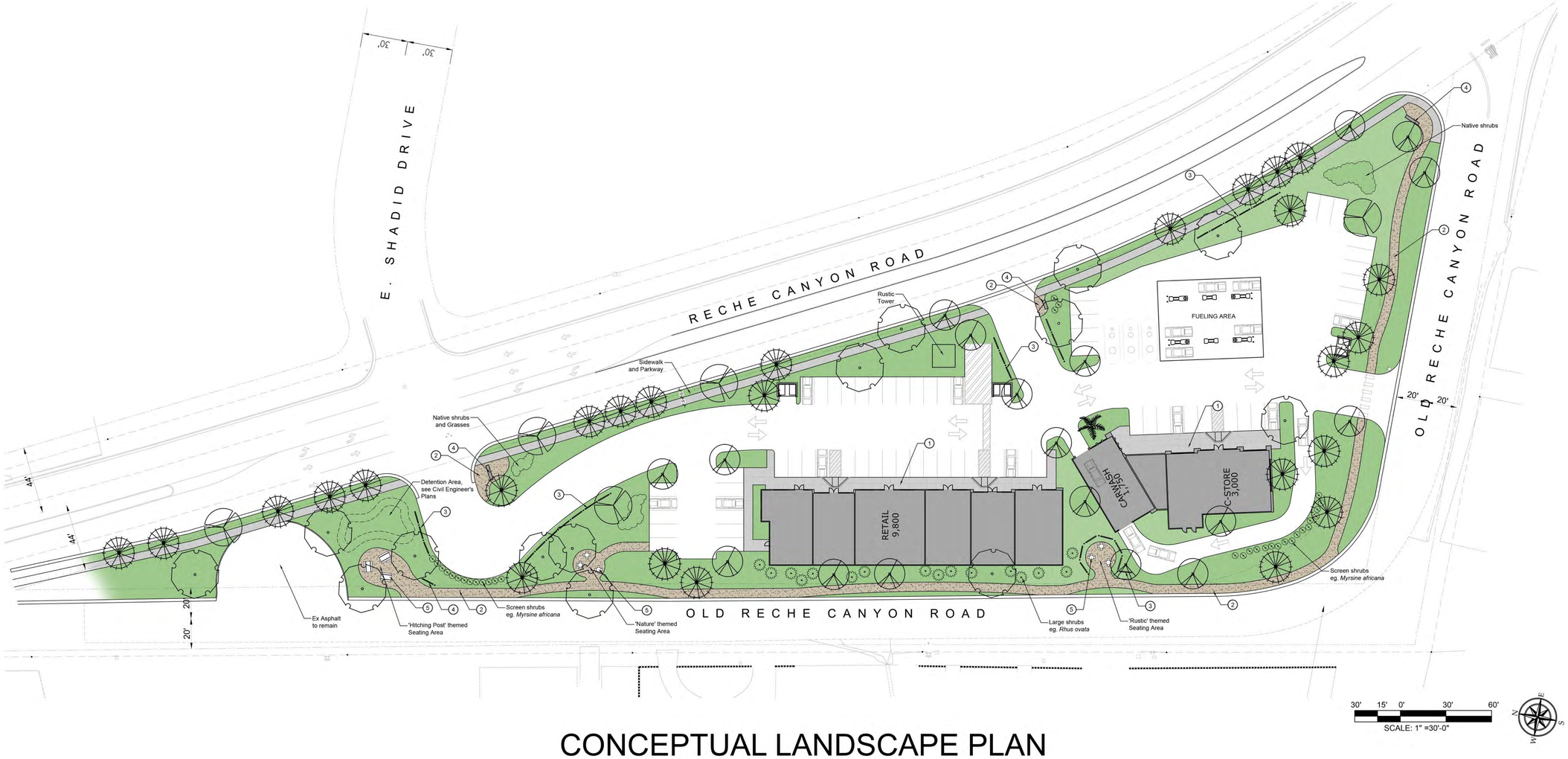
10 • Wire Guard
— None
WTE 16" Wire guard (chrome-plated)

RECHE CANYON
EXTERIOR LIGHTINNG PLAN
012020

Designer
Michael Blackmon
805-937-8676
Date
XX/XX/2018
Scale
Not to Scale
Drawing No.

Summary

2 of 2



CONCEPTUAL LANDSCAPE PLAN

Chamaerops humilis

Chilopsis linearis

Pinus coulteri

Platanus racemosa

Quercus agrifolia

Arctostaphylos glauca glandulosa

Ceanothus gloriosus 'Anchor Bay'

Encelia farinosa

Erigeron fasciculatum

Muhlenbergia rigens

Myrsine africana

Rhus ovata

PLANT LEGEND

TREES

Chamaerops humilis	Mediterranean Fan Palm
Chilopsis linearis	Desert Willow
Pinus coulteri	Coulter Pine
Platanus racemosa	California Sycamore
Quercus agrifolia	California Live Oak

SHRUBS, GRASSES, & GROUNDCOVERS

Achillea 'Moonshine'	Yarrow
Arctostaphylos glauca glandulosa	Bigberry Manzanita
Baccharis pilularis 'Twin Peaks'	Dwarf Coyote Bush
Ceanothus gloriosus 'Anchor Bay'	Pt. Reyes Ceanothus
Encelia farinosa	Brittlebush
Erigeron fasciculatum	California Buckwheat
Muhlenbergia rigens	Deer Grass
Myrsine africana	African Boxwood
Rhus ovata	Sugar Bush

SITE IMPROVEMENT LEGEND

1. Concrete Paving
2. DG Paving - Decomposed Granite, stabilized
3. Fence - Split-rail, wood construction
4. Fence - "Hitching Post", wood construction
5. Sign
6. Site Furniture

3 Fence - Split-rail, wood construction

BRODERSEN ASSOCIATES
Landscape Architecture / Horticulture / Documentation
422 E. Main Street, Ventura, CA 93001
tel 805 201 5614
brodersenassoc@gmail.com
CA#4880

REGISTERED LANDSCAPE ARCHITECT
BRIAN D BRODERSEN
No. 4880
EXP. 4/30/21
STATE OF CALIFORNIA

These drawings, including all related design, details, specifications, and information are and shall remain the sole property of Brodersen Associates and are for use on this specific project and shall not be copied, disclosed to others or used without the expressed written consent of Brodersen Associates.

RECHE CANYON PLAZA
COLTON, CA 92324

Date 12.04.19 — 19.20

Drawn by JH | Checked by BB

Sheet L-1 Of X Sheets

CONCEPTUAL LANDSCAPE PLAN

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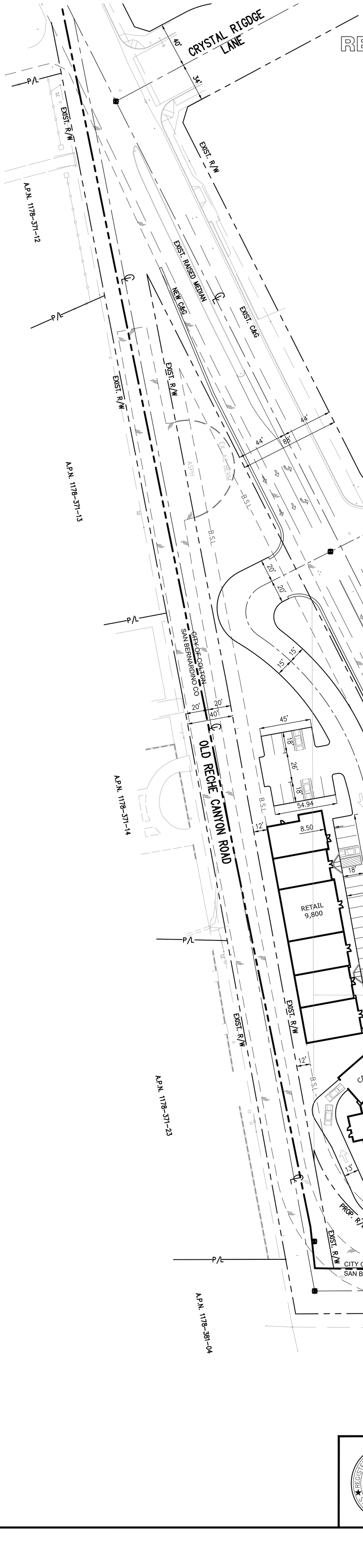
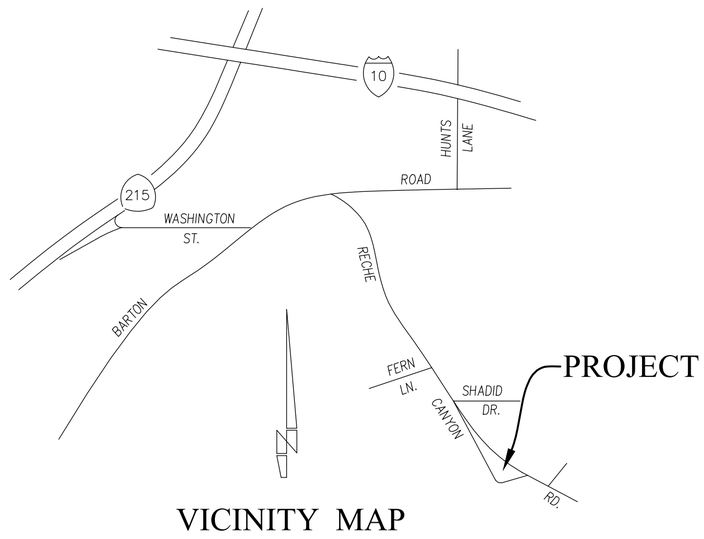
RECHE CANYON PLAZA

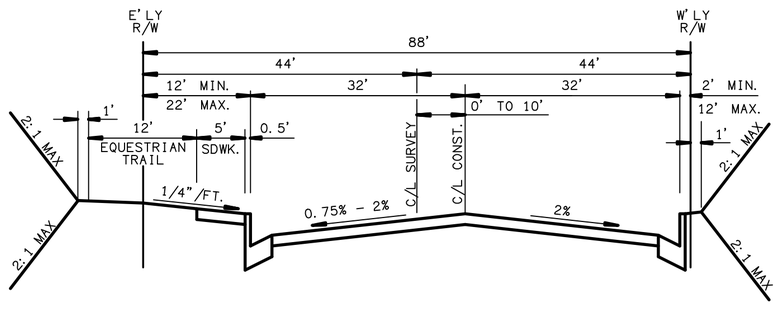
SITE PLAN





VICINITY MAP

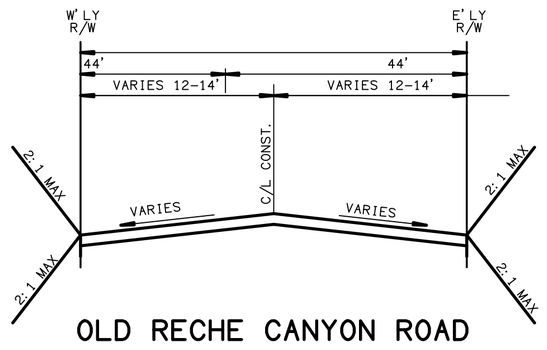
NO SCALE



RECHE CANYON ROAD

TYPICAL SECTION

NOT TO SCALE



OLD RECHE CANYON ROAD

TYPICAL SECTION

NOT TO SCALE

NORTH

SCALE: 1" = 40'

40' 0' 40' 80' 120'

GRAPHIC SCALE: 1" = 40'

LEGEND

COUNTY AND CITY LIMITS	
CENTER LINE	
RIGHT OF WAY	
PROPERTY LINE	P/L
BUILDING SETBACK LINE	B.S.L.
EXISTING EDGE OF PAVEMENT	
TRAFFIC STRIPING NEW	
TRAFFIC STRIPING LEGEND NEW	

SETBACKS

FRONT ---------- 35'

SIDE ---------- 15'

REAR ---------- 20'

REGISTERED PROFESSIONAL ENGINEER
MICHAEL ACKERMAN
REG. NO. 64663
EXP. 6-30-19
CIVIL
STATE OF CALIFORNIA

TRANSTECH

CIVIL ENGINEERING,
LAND SURVEYING
AND BUILDING DESIGN

413 MACKAY DRIVE
SAN BERNARDINO, CA. 92408
PH. (909) 384-7464
FAX (909) 384-7475

MICHAEL ACKERMAN RCE NO. 64663 DATE: 7-30-2018

CITY OF COLTON

PUBLIC WORKS DEPARTMENT

SITE IMPROVEMENT PLAN
RECHE CANYON PLAZA

ADDRESS: AT RECHE CANYON ROAD S/O SHADID DR.

REVISIONS	DATE	APPR.

CITY ENGINEER

NAME:

R.C.E. NO:

APPROVED:

SCALE

HORIZ: AS SHOWN

VERT: N/A

DATE:

PLAN NO. 16280

SHEET 1 OF 1

Colton Reche Canyon Plaza Project CLT1601

CONSTRUCTION AIR QUALITY EMISSIONS

Construction would require heavy equipment during mass grading, utility installations, building construction and paving. Construction equipment estimates are based on default values in CalEEMod, Version 2013.2.2 model. CalEEMod is designed to model construction emissions for land development projects and allows for the input of project-specific information, such as the number of equipment, hours of operations, duration of construction activities, and selection of emission control measures. Results from the model are shown in Appendix A. Table A shows the construction emissions from the CalEEMod output tables listed as "Mitigated Construction," even though the only measures that have been applied to the analysis are the SCAQMD required construction emissions control measures, or standard conditions. All Project-related construction equipment was assumed to meet EPA-Certified Tier 2 emissions standards. In addition, all construction equipment would be outfitted with best available control technology (BACT) devices certified by the CARB. Any emissions control device used by the contractor would achieve emissions reductions that are no less than what could be achieved by a Level 1 diesel emissions control strategy for a similarly sized engine in accordance with the CARB regulations. Application of water during grading was taken into consideration. Based on CalEEMod, Version 2016.3.1, the fugitive dust control efficiency for on-site watering three times daily is 61 percent. The Project proposes balanced grading activity, which means that no soil would be transported off site for disposal nor would soil be transported on site for use in construction activities. CalEEMod outputs are included in Appendix A.

Table 1, *Estimated Construction Emissions,* provides a summary of the daily construction emission estimates by construction activity during the respective calendar year.

Table 1: Estimated Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Construction Year 2017	3.69	26.76	19.20	0.03	3.96	2.53
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Significant Emissions?	**No**	**No**	**No**	**No**	**No**	**No**
Construction Year 2018	**10.10**	22.71	18.24	0.03	1.79	1.36
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Significant Emissions?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (February 2017).
CO = carbon monoxide
CO_2e = carbon dioxide equivalent
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

As discussed above, Table 1 presents the total construction emissions (i.e., fugitive-dust emissions and construction-equipment exhausts) that have incorporated a number of feasible control measures. These measures which include using minimum Tier 2 equipment engine standard with particulate control devices and on-site watering at least three times daily are required by SCAQMD and can be reasonably implemented to significantly reduce PM_{10} emissions from construction.

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. The proposed project will be required to comply with SCAQMD Rule 403 to control fugitive dust. Table 1 includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of three times per day, reducing speed limit to 15 miles per hour on unpaved surfaces and replacing ground cover quickly.

Results from the CalEEMod analysis, as shown in Table 1 indicate the construction emissions from the proposed project would not exceed the corresponding SCAQMD daily emission thresholds for criteria pollutants. Therefore construction impacts would be less than significant.

Localized Impacts Analysis

The SCAQMD has issued guidance on applying CalEEMod modeling results to localized impacts analyses. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. There are several existing residences surrounding the project site, the closest of which is approximately 82 feet (25 m). Using the LST guidance from SCAQMD, Table 2 shows that the emissions of the pollutants on the peak day of construction will result in concentrations of pollutants at these nearest residences that are all below the SCAQMD thresholds of significance.

Table 2: Construction Localized Impacts Analysis

Emissions Sources	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
On-Site Emissions (lbs/day)	27	16	3.9	2.5
LST Thresholds (lbs/day)	**200**	**1204**	**9.1**	**5.2**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (February 2017).
Note: SRA – Central San Bernardino Valley, 2.9 acres, 25-meter distance
CO = carbon monoxide
lbs/day = pounds per day
LST = local significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

OPERATIONAL AIR QUALITY EMISSIONS

Operational emissions from area sources include the combustion of natural gas for heating and hot water, engine emissions from landscape maintenance equipment, and the use of appliances at the residences also would be generated. Mobile source emissions are associated with Project-related vehicle trip generation. Based on the Traffic Impact Analysis at full buildout the Project would generate 1,446 average daily trips (ADT) (Transtech February, 2017). The default vehicle fleet mix in CalEEMod version 2016.3.1 was used for the purpose of this analysis. Table 3 presents the estimated operational emissions for the proposed project.

Table 3: Operational Emissions

Source	**Pollutant Emissions (lbs/day)**					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Proposed Project						
Area Sources	0.07	0	<0.01	0	0	0

Table 3: Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Energy Sources	<0.01	0.02	0.01	<0.01	<0.01	<0.01
Mobile Sources	0.5	2.8	3.7	<0.01	0.5	0.2
Total Project Emissions	**0.5**	**2.8**	**3.7**	**<0.01**	**0.5**	**0.2**
SCAQMD Thresholds	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: Compiled by LSA Associates, Inc. (February 2017).
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

As shown in Table 3, criteria pollutant emissions from operational activities associated with the proposed project would be below the SCAQMD thresholds. Therefore, project related operational emissions would be less than significant.

Localized Impacts Analysis

Table 4 shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. By design, the localized impacts analysis only includes on-site sources; however, the CalEEMod model outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 4 include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that will occur on site. All off-site emissions are subtracted out from the total emissions.

Table 4: Long-Term Operational Localized Impacts Analysis

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions[1]	0.79	1.1	0.16	0.05
LST Thresholds	**200**	**1204**	**2.6**	**1.3**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (February 2017).
Note: SRA – Central San Bernardino Valley, 2.9 acres, 25-meter distance, 25-meter distance, on-site traffic 5 percent of total mobile source trips within the project area (i.e., driveways and parking lots).
[1] CalEEMod clearly delineates the on-site and off-site emissions; thus, this includes all on-site emissions without having to include a percentage of the mobile source emissions.
CO = carbon monoxide
LST = Local Significance Thresholds
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

A total of 5 percent is considered conservative as the average worker trip lengths assumed are 14.7 miles for home to work, and 40 miles for all truck trips. It is unlikely that the average on-site distance driven will be even 1,000 feet, which is approximately 2 percent of the total miles traveled.

Considering the total trip length included in the CalEEMod model, the 5 percent assumption is conservative.

Table 4 shows that the operational emission rates would not exceed the LSTs for receptors at 82 feet (25 m). Therefore, the proposed operational activity would not result in a locally significant air quality impact.

CONSTRUCTION GREENHOUSE GAS EMISSIONS

Construction activities produce combustion emissions from various sources, such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.
See the CalEEMod modeling output in Appendix A for details. The construction phase in Table 5 shows GHG emissions from equipment exhaust and energy use. Results indicate that project construction would generate approximately 281.7 MT of CO_2e/yr. Amortized over 30 years, the total construction emissions would generate approximately 9.4 MT of CO_2e/yr.

Table 5: Estimated Construction GHG Emissions

Construction Phase	Peak Annual Emissions (mt/yr)			Total Emissions ($MTCO_2e$)
	CO_2	CH_4	N_2O	
2017	280.45	0.05	0	281.7
2018	59.51	0.01	0	59.8
Total Construction Emissions				**281.7**
Total Construction Emissions Amortized over 30 years				**9.4**

Source: Compiled by LSA Associates, Inc. (February 2017).
CO_2 = carbon dioxide
CH_4 = methane
N_2O = nitrous oxide
$MTCO_2e$ = metric tons of carbon dioxide equivalent
mt/yr = metric tons per year
CO_2e = carbon dioxide equivalent

OPERATIONAL GREENHOUSE GAS EMISSIONS

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with on-site facilities and customers/visitors to the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary-source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

The GHG emission estimates presented in Table 6 show the emissions associated with the level of development envisioned by the proposed project at opening. Appendix A includes the model outputs. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for space heating.

Table 6: Estimated Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/yr)			
	CO_2	**CH_4**	**N_2O**	**CO_2e**
Construction emissions amortized over 30 years	9.3	0.05	0	9.4
Operational Emissions				
Area Sources	<0.01	0	0	<0.01
Energy Sources	85	<0.01	<0.01	86
Mobile Sources	883	0.08	0	885
Waste Sources	2.7	0.2	0	6.8
Water Usage	5.3	0.03	<0.01	6.2
Total Project Emissions	**977**	**0.3**	**<0.01**	**984**
SCAQMD GHG Threshold	-	-	-	**10,000**
Significant Emissions?	-	-	-	**No**

Source: Compiled by LSA Associates, Inc. (February 2017).
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two decimal places.
MT/yr = metric tons per year
CH_4 = methane
N_2O = nitrous oxide
CO_2e = carbon dioxide equivalent
CO_2 = carbon dioxide

As shown in Table 6, the project will result in a net increase of 984 MT of CO_2e/yr. The emissions level of 984 MT CO_2e/yr is less than the SCAQMD Tier 3 threshold of 10,000 MT CO_2e/yr for industrial projects; thus, project-level and cumulative GHG emissions would be less than significant.

BERKELEY
CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

February 22, 2017

Mr. Mario Suarez
City of Colton
Department of Planning
650 N. La Cadena Drive
Colton, California 92324

Subject: Biological Resources Assessment for the Reche Canyon Plaza Commercial Project, City of Colton, California (LSA Project No. CLT1601)

Dear Mr. Suarez:

LSA was retained by the City of Colton to conduct a biological resources assessment of the 2.9-acre project site located between the abandoned Reche Canyon Road and the new road alignment at Shadid Road in the City of Colton, San Bernardino County. The project site is located in Section 3 in Township 2 South, Range 4 West as shown on the U.S. Geological Survey (USGS) *San Bernardino South, California* 7.5-minute quadrangle (attached Figure 1). The proposed project includes a convenience store, gas station, carwash, equestrian rest station, and riding trail. Refer to attached Figure 2 for a drawing of the proposed project.

METHODS

A literature review was conducted to investigate the potential occurrence of sensitive species on or in the vicinity of the project site. Database records for *San Bernardino South, California* and *Redlands, California* USGS 7.5-minute quadrangles were searched on February 9, 2017, using *Rarefind* 5 version 5.2.7, California Department of Fish and Wildlife (CDFW), Natural Diversity Data Base, dated February 3, 2017, and the California Native Plant Society (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* online edition, v8-02, accessed February 9, 2017.

The general biological resources assessment included a site visit on February 9, 2017, by LSA biologist Maria Lum. Notes were made on general site conditions, the vegetation, potential jurisdictional waters, and the suitability of habitat for various species of special concern. Plant and animal species observed during the field survey were recorded (attached Table A). The assessment was conducted to address compliance with the California Environmental Quality Act (CEQA). Weather conditions were sunny, warm, and without wind during the site survey.

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

ENVIRONMENTAL SETTING

Existing and Adjacent Land Use

The project site is currently an open vacant lot located in a residential area and a busy transportation corridor. The project site was recently modified as part of the Reche Canyon Road realignment (attached Figure 3). The regional road was relocated to the east side of the parcels in order to remove the L-shaped turn at Shadid Drive and Park Canyon Drive.

Elevation, Topography, and Soils

The site elevation is 1,250 feet above mean sea level and the project site is flat. The upper half of the property was used to excavate a retention basin for local runoff from surrounding upland areas as part of the Reche Canyon Road Realignment Project in 2014. The majority of the project site is mapped with San Emigdio fine sandy loam, 2 to 9 percent slope with the southwest corner mapped with Tujunga loamy sand, 0 to 5 percent slope (*Soil Survey of San Bernardino County, Southwestern Part, California*, G.A. Woodruff 1980). Soils observed on the site appeared consistent with these designations despite having been previously graded. The soils map is attached as Figure 4.

Vegetation and Disturbance

Vegetation on the site consists primarily of non-native annual grasses and exotic mustard. The site is normally unvegetated but, with the wet winter, it is now covered with dense vegetation. This area is dominated by mouse barley (*Hordeum murinum*), Sahara mustard (*Brassica tournefortii*), stork's bill (*Erodium sp.*), fiddleneck (*Amsinkia menziesii*), common sunflower (*Helianthus annuus*), and sweetclover (*Melilotus* sp.). Refer to attached Figures 5a through 5d for site photographs. The retention basin is maintained to ensure storage capacity and the vegetation within it is minimal. Cattail (*Typha angustifolia*) and sedge (*Cyperus involucratus*) are resprouting in the basin bottom. A complete list of plant species observed on the site is attached as Table A.

Wildlife

A few wildlife species common to urban and disturbed areas were observed during the field survey. A mourning dove (*Zenaida macroura*) and Say's phoebe (*Sayornis saya*) were heard. A mallard pair (*Anas platyrhynchos*) and a killdeer (*Charadrius vociferus*) were seen in the basin during the survey. California ground squirrels (*Spermophilus beecheyi*) were abundant throughout the site, along with numerous scattered active burrow clusters. A complete list of wildlife species observed is attached as Table A.

CEQA COMPLIANCE

Adopted Habitat Conservation Plans

The site does not lie within an adopted Habitat Conservation Plan (HCP) area.

Threatened and Endangered Species

No threatened or endangered species are expected to inhabit the project site. The site is not within designated critical habitat of any species. It is an in-fill parcel previously graded along with adjacent development and road improvements. Public utilities currently exist.

Other Special-Status Species

No substantial project impacts to other special-status species are anticipated.

Ground squirrels are abundant on the project site, but none of the burrows had western burrowing owl (*Athene cunicularia*) sign at the entrances and no owls were observed while walking east-to-west transects across the site. Currently, the vegetation is becoming too tall for burrowing owl habitat suitability. Furthermore, the vacant project site is isolated within a developed residential area and there are numerous utility poles that would increase the risk of owl mortality from larger predatory raptors.

Because the proposed project site is graded and maintained to reduce fire risk, surrounded by existing development, has low habitat quality, and is small relative to the areas of suitable habitat in the region, impacts to burrowing owl and other special-status species would not be considered significant.

Wildlife Movement, Corridors, and Nursery Sites

The project site is not in a wildlife corridor and does not contain nursery sites. The project would not substantially limit wildlife movement.

Sensitive Natural Communities

There are no sensitive natural communities on the project site. The open areas are graded and maintained as a developed site.

Wetlands

The retention basin was constructed in upland areas to receive runoff collected by local roads, residential curb and gutters, and storm drains. Currently, the basin retains water on site. The retention basin is temporary storm water infrastructure and is not a jurisdictional water per federal or state regulations.

Local Policies and Ordinances Protecting Biological Resources

Due to its existing developed condition, the project will not conflict with local policies or ordinances applicable to biological resources.

Indirect Effects

Indirect impacts to surrounding areas as a result of the project may include, but are not limited to, increased dust, noise, lighting, traffic, and storm water runoff. Because of the isolation of the project site from higher quality habitat, substantial indirect impacts on sensitive biological resources are not anticipated.

Cumulative Effects

The project site is within an urban area and is isolated from areas of open space and suitable wildlife habitat. The project's contribution to biological impacts is not expected to be cumulatively significant.

If you require any additional information, please contact me by phone at (951) 781-9310 or by email at maria.lum@lsa.net.

Sincerely,

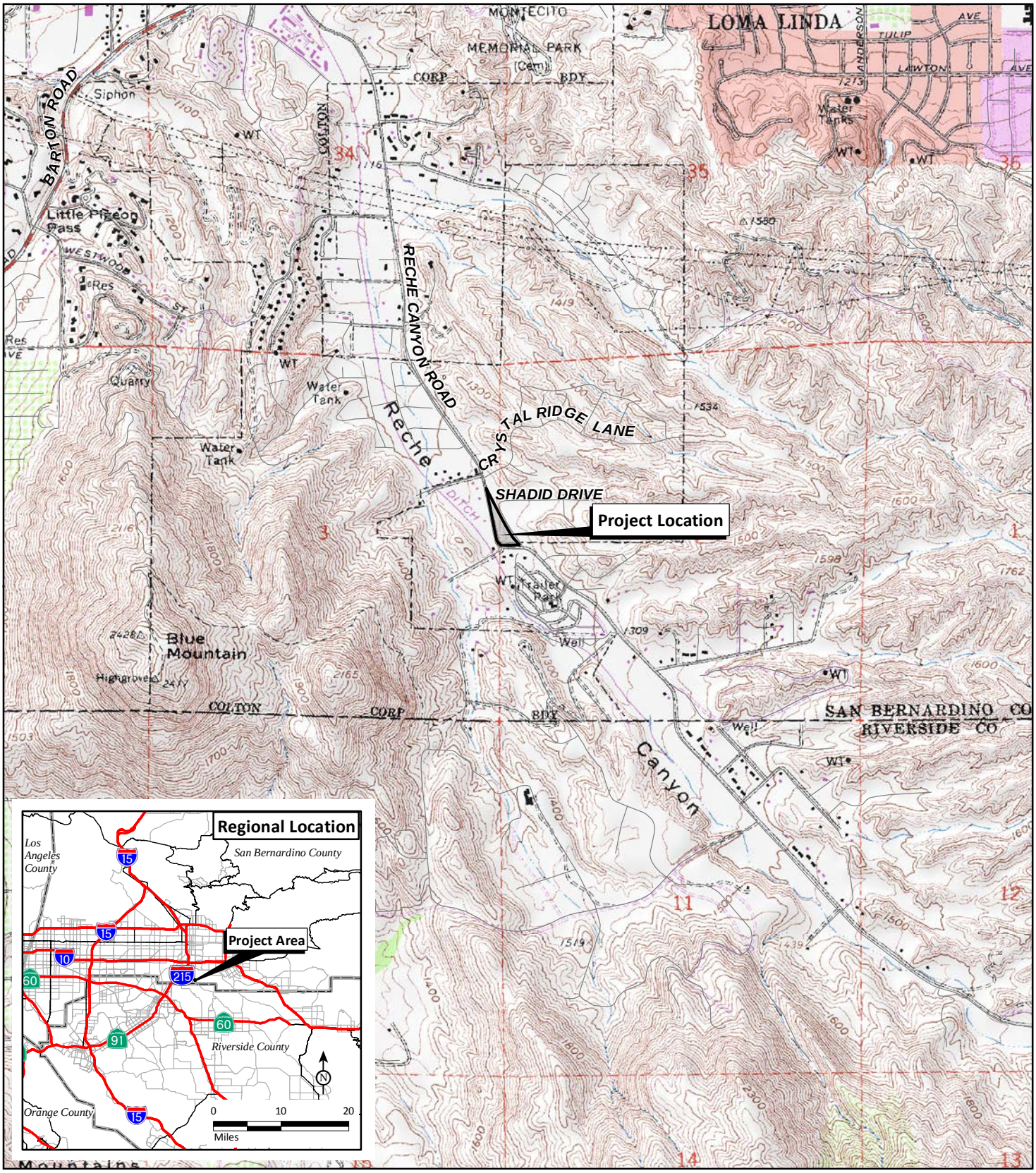
LSA Associates, Inc.

Maria A. Lum, M.S.
Associate/Biologist

Attachments: Table A: Plant and Animal Species Observed
Figure 1: Regional and Project Location
Figure 2: Site Plan
Figures 3: Project Study Area and Photo Location Key Map
Figure 4: Soils
Figures 5A through 5D: Site Photographs

Table A: Plant and Animal Species Observed at the Reche Canyon Plaza Community Project

Scientific Name	Common Name
MAGNOLIOPHYTA: MAGNOLIOPSIDA	**DICOT FLOWERING PLANTS**
Asteraceae	**Sunflower family**
Helianthus annuus	Common sunflower
Boraginaceae	**Borage family**
Amsinckia menziesii	Menzies' fiddleneck
Brassicaceae	**Mustard family**
Brassica tournefortii (non-native species)	Sahara mustard
Fabaceae	**Pea family**
Melilotus albus (non-native species)	White sweetclover
Geraniaceae	**Geranium family**
Erodium botrys (non-native species)	Longbeak stork's bill
Erodium cicutarium (non-native species)	Redstem stork's bill
MAGNOLIOPHYTA: LILIOPSIDA	**MONOCOT FLOWERING PLANTS**
Cyperaceae	**Sedge family**
Cyperus involucratus (non-native species)	Umbrella plant
Poaceae	**Grass family**
Hordeum murinum (non-native species)	Mouse barley
Typhaceae	**Cattail family**
Typha angustifolia	Narrow-leaved cattail
REPTILES	
Crotaphytidae	**Collared and Leopard Lizards**
Uta stansburiana	Common side-blotched lizard
BIRDS	
Anatidae	**Swans, Geese, and Ducks**
Anas platyrhynchos	Mallard
Charadriidae	**Plovers and Lapwings**
Charadrius vociferus	Killdeer
Columbidae	**Pigeons and Doves**
Zenaida macroura	Mourning dove
Tyrannidae	**Tyrant Flycatchers**
Sayornis saya	Say's phoebe
MAMMALS	
Sciuridae	**Squirrels**
Spermophilus beecheyi	California ground squirrel



LSA

FIGURE 1

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Colton Reche Canyon Plaza Project

Regional and Project Location

SOURCE: USGS 7.5' Quad: San Bernardino South (1980), CA; ESRI Streetmap, 2013.

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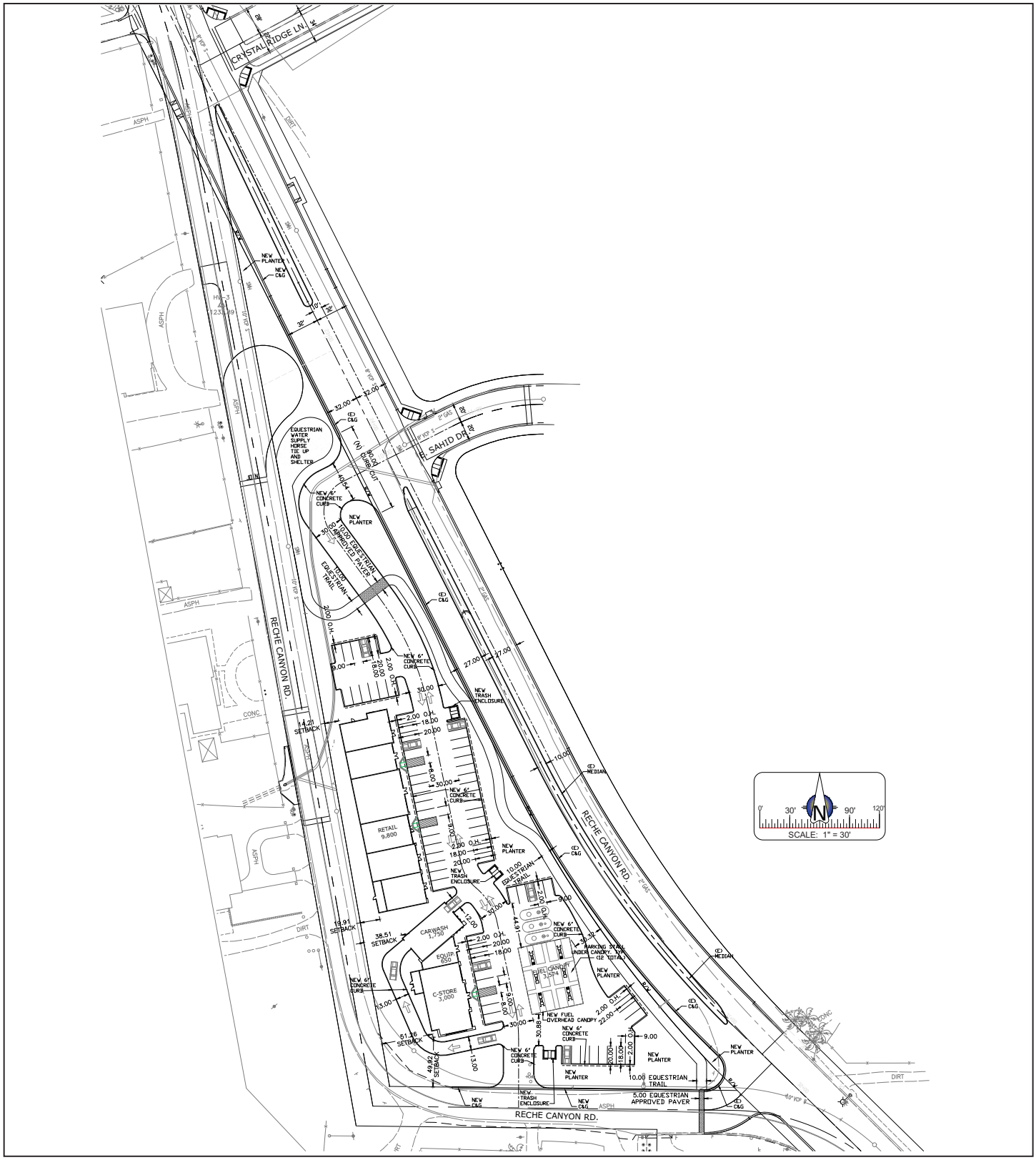

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FIGURE 2

Colton Reche Canyon Plaza Project

Site Plan

SOURCE: RamCam Engineering Group, Inc., 2016

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LSA

LEGEND

- Project Location
- Ground Squirrel Burrow Cluster
- Photo Location
- Culvert

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SOURCE: Google Earth, 2016.

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FIGURE 3

Colton Reche Canyon Plaza Project

Project Study Area and Photo Location Key Map

LSA

FIGURE 4

LEGEND

Project Location

Soils

ScC: San Emigdio Fine Sandy Loam, 2-9% SLOPES

TuB: Tujunga Loamy Sand, 0-5% Slopes

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Colton Reche Canyon Plaza Project

Soils

SOURCE: Google Earth, 2016; Soil Data Mart, 2015.

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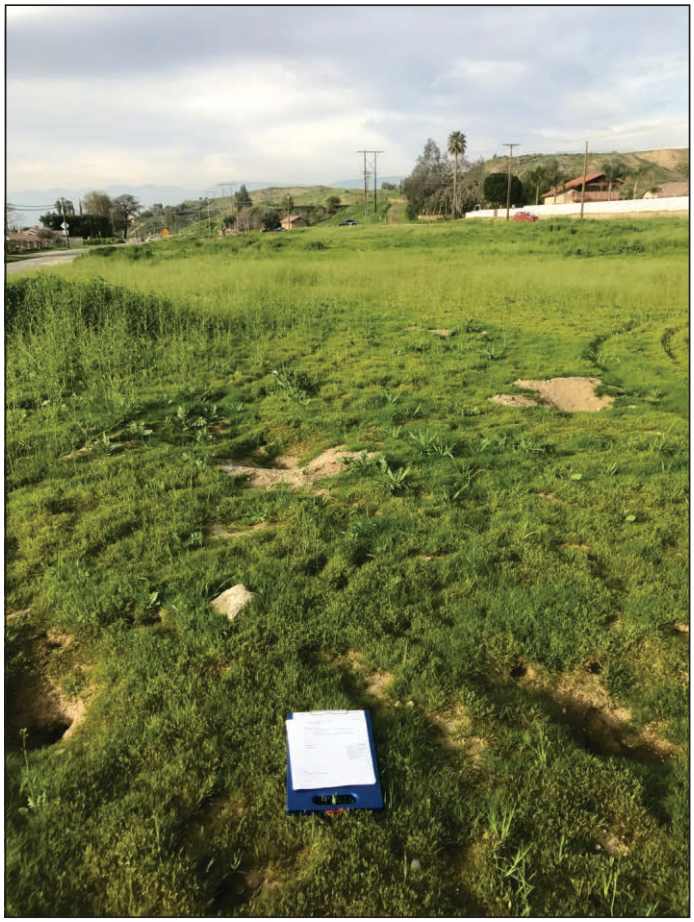
Photograph 1:
View from the southeast corner of the project at the Reche Canyon re-alignment.



Photograph 2:
View of annual non-native vegetation and ground squirrel burrows in the foreground at the southwest corner of the project site.

LSA

FIGURE 5A

Colton Reche Canyon Plaza Project

Site Photographs

Photograph 3:
View of central area of the project site showing level grade and abundance of annual vegetation.

Photograph 4:
California ground squirrels are abundant on the 2.9 acre parcel. There are 10 or more clusters of 4 to 6 burrows at each location.

LSA

FIGURE 5B

Colton Reche Canyon Plaza Project

Site Photographs

Photograph 5:
View of cattails and sedge supported by local runoff stored in the retention basin.

Photograph 6:
View of a retention basin built on the in-fill parcel as part of Reche Canyon Road re-alignment.

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FIGURE 5C

Colton Reche Canyon Plaza Project

Site Photographs

Photograph 7:
The retention basin has no outlet. It overflows onto the street and may enter into a storm drain which empties into Reche Canyon Creek (Homoa Creek).

Photograph 8:
View of sediment deposited onto abandoned Reche Canyon Road below the basin overflow.

LSA

FIGURE 5D

Colton Reche Canyon Plaza Project

Site Photographs

BERKELEY
CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

February 21, 2017

Mr. Maurio Suarez, Planning Division
City of Colton Development Services Department
659 La Cadena Drive
Colton, California 92324

Subject: Summary of Archaeological Resources Records Search Results for the Colton Reche Canyon Plaza Project in the City of Colton, San Bernardino County, California (LSA Project No. CLT1601)

Dear Mr. Suarez:

At your request, LSA conducted an archaeological records search for the proposed Colton Reche Canyon Plaza Project on 2.9 acres near the intersection of Shadid Drive and Reche Canyon Road, (Assessor's Parcel Numbers 0284-211-70, -71, and -72, and 1178-371-27) in the City of Colton, San Bernardino County, California (attached Figure 1). The objective of this archival research was to establish the status and extent of previously recorded resources within and adjacent to the project area and to note what types of resources might be expected to occur on the proposed project site based on the existing data from known cultural resource sites located within a one-mile radius.

METHODS

The records search was conducted by LSA Senior Archaeologist Gini Austerman on February 8, 2017, at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. A portion of the records search radius fell within Riverside County; therefore, a search was also conducted on February 16, 2017, at the Eastern Information Center (EIC) located at the University of California Riverside. The records search included a review of all recorded historic and prehistoric archaeological sites within one mile of the project, as well as a review of known cultural resource survey and excavation reports. In addition, the California State Historic Property Data File, which includes the National Register of Historic Places, California Historical Landmarks, and California Points of Historical Interest, was also searched.

RESULTS

Table A lists the cultural resources within one mile of the project site that are mapped, documented on California Department of Parks and Recreation (DPR) forms, and on file at the SCCIC and the EIC.

Table A: Cultural Resources within One Mile of the Project Site

Primary #	Site Description
33-001067	Prehistoric bedrock milling feature

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

Table A: Cultural Resources within One Mile of the Project Site

Primary #	Site Description
36-026050	Devers – Vista #1 transmission line; constructed in 1966
36-026051	Hayfield – Chino transmission line; constructed in 1945

Resources

Data from the SCCIC and EIC noted three cultural resources within the one-mile radius of the project, none of which are located within the project parcel. As noted in Table A, these resources consist of one prehistoric milling site and two historic-period transmission lines. All three resources are more than one-half mile from the project.

Reports

Data from the SCCIC and EIC indicates that there have been nine previous cultural resource studies conducted in the records search area, none of which include the project.

CONCLUSION

Based on information from the SCCIC and the EIC, there is a low sensitivity for buried historic cultural deposits within project site. Three historic sites have been documented within the one-mile search area; all are more than one-half mile from the project. If you would like to discuss these findings or require further information, please contact me at (951) 264-4287 or gini.austerman@lsa.net. Thank you for the opportunity to assist you with this due diligence analysis.

Sincerely,

LSA ASSOCIATES, INC.

Gini Austerman, M.A.
Senior Archaeologist/Cultural Resources Manager

Attachment: Figure 1

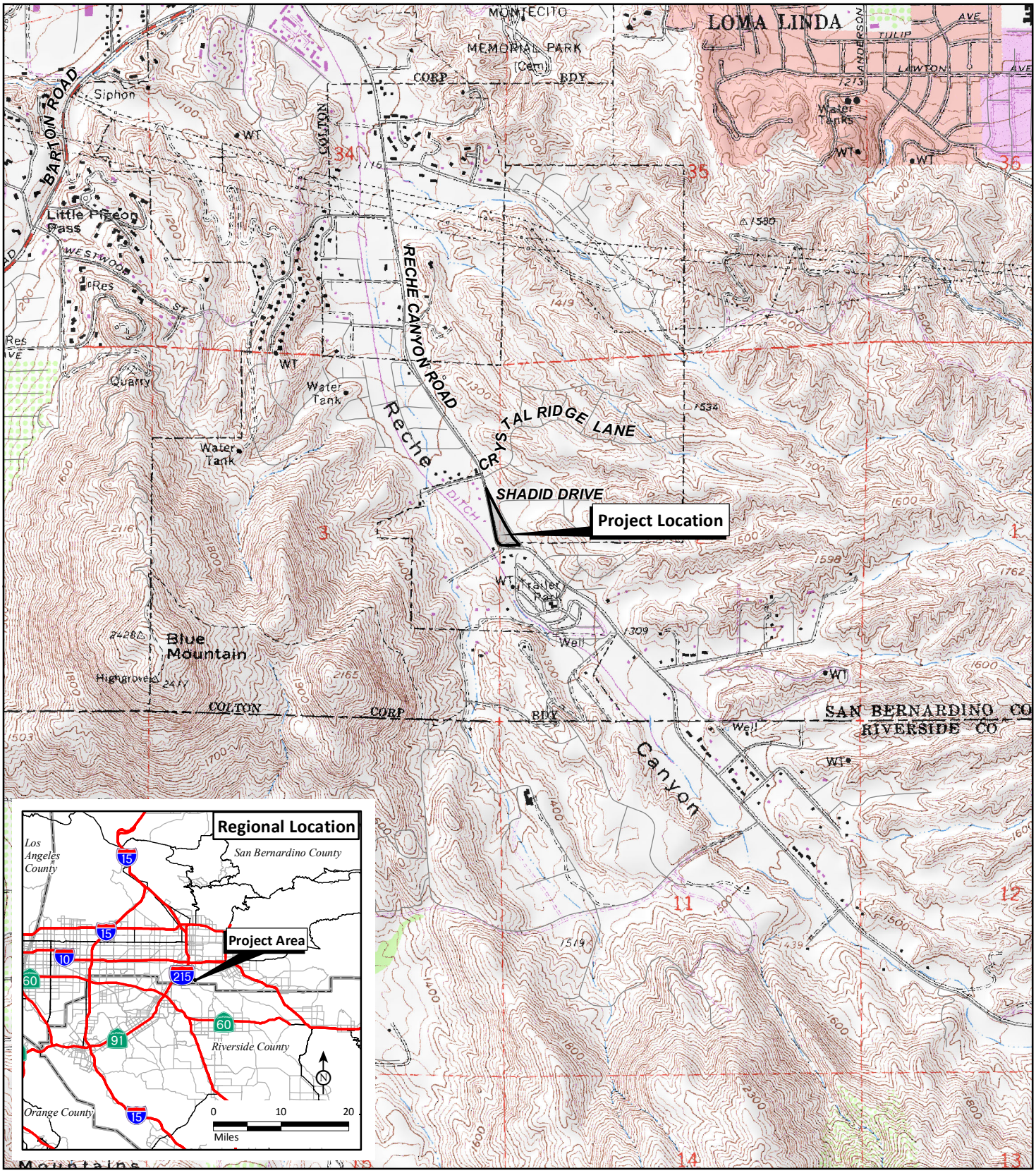

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FIGURE 1

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Colton Reche Canyon Plaza Project
Cultural Resources Assessment

Regional and Project Location

SOURCE: USGS 7.5' Quad: San Bernardino South (1980), CA; ESRI Streetmap, 2013.

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BERKELEY
CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
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SAN LUIS OBISPO

February 21, 2017

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1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

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Gini Austerman, M.A.
Senior Archaeologist/Cultural Resources Manager

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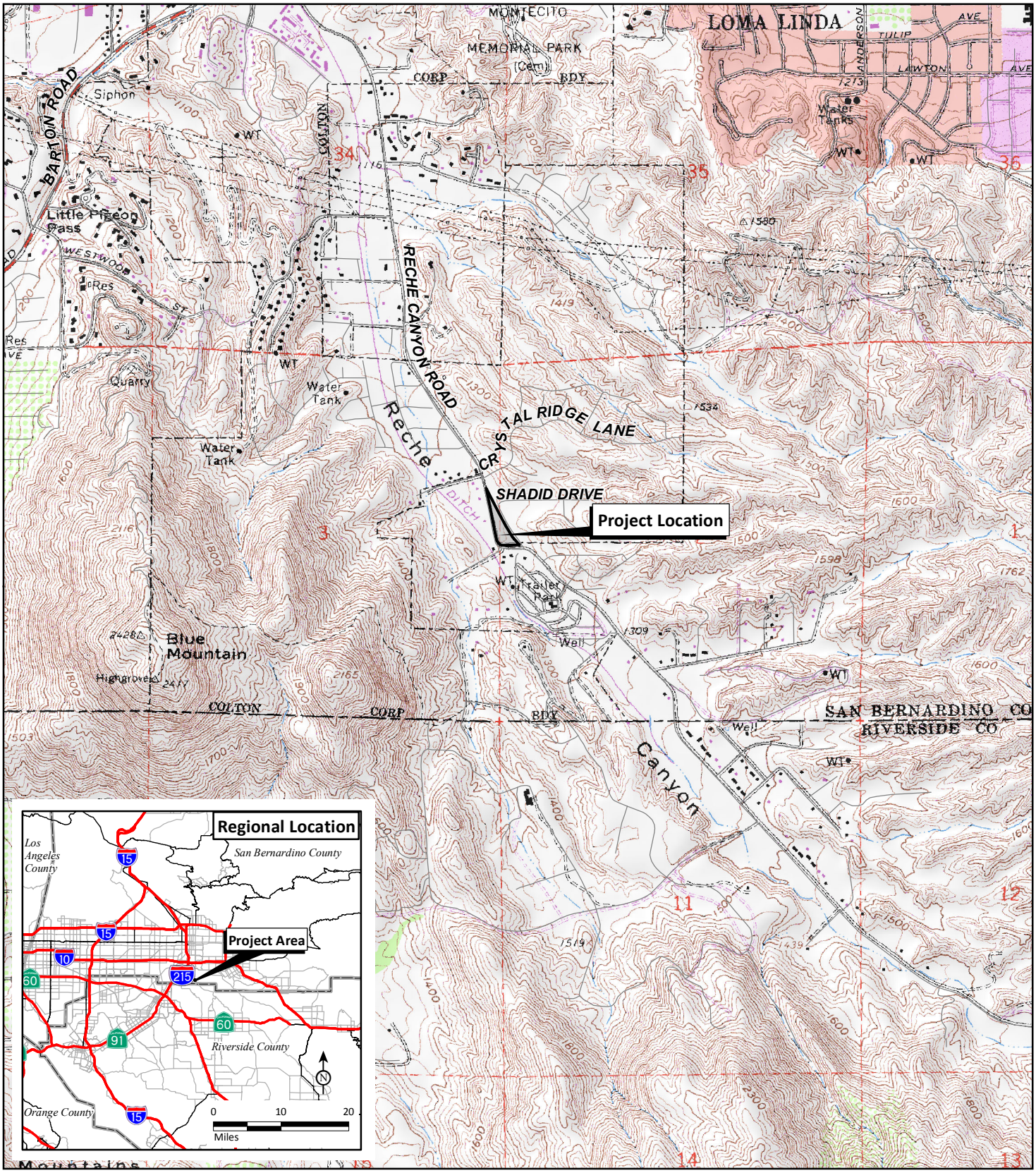

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FIGURE 1

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Colton Reche Canyon Plaza Project
Cultural Resources Assessment

Regional and Project Location

SOURCE: USGS 7.5' Quad: San Bernardino South (1980), CA; ESRI Streetmap, 2013.

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Gas Station Front Elevation

1/16" = 1'-0"

Retail Front Elevation

1/16" = 1'-0"

Reche Canyon Plaza
Colton, CA

NOISE AND VIBRATION IMPACT ANALYSIS

RECHE CANYON PLAZA

CITY OF COLTON, CALIFORNIA

LSA

February 2017

NOISE AND VIBRATION IMPACT ANALYSIS

RECHE CANYON PLAZA

CITY OF COLTON, CALIFORNIA

Prepared for:

City of Colton
659 La Cadena Drive
Colton, California 92324

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614
(949) 553-0666

Project No. CLT1601

LSA

February 2017

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LIST OF ABBREVIATIONS AND ACRONYMS

µin/sec	microinches per second
µPA	Micropascals
ACEC	American Council of Engineering Companies
ADT	average daily traffic
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Colton
CNEL	Community Noise Equivalent Level
County	County of San Bernardino
dB	Decibels
dBA	A-weighted decibels
FHWA	Federal Highway Administration
ft	foot/feet
FTA	Federal Transit Administration
ft-lb/blow	foot-pounds per blow
HP	Horsepower
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
I-15	Interstate 15
in/sec	inches per second
kVA	kilovolt-amperes
L_{dn}	day/night average noise level
L_{eq}	equivalent continuous sound level
L_{max}	maximum instantaneous noise level
mi	mile/miles
PPV	peak particle velocity
RCNM	Roadway Construction Noise Model
RMS	root-mean-square
sf	square feet
VdB	vibration velocity decibels
VMS	variable message sign

INTRODUCTION

This noise and vibration impact analysis has been prepared to evaluate the potential noise and vibration impacts and mitigation measures associated with the proposed Reche Canyon Plaza commercial development project located in the City of Colton (City), County of San Bernardino (County), California. This report is intended to satisfy the City's requirement for a project-specific noise and vibration impact analysis by examining the impacts of the proposed project on noise-sensitive uses in the project area and evaluating the mitigation measures incorporated as part of the project design.

PROJECT DESCRIPTION

LOCATION

The proposed project involves construction of a commercial project to be developed on approximately 2.9 acres (ac) located near the intersection of Shadid Drive and Reche Canyon Road (APNs 0248-211-70, 71, 72, and 1178-371-27) in the Reche Canyon portion of the City of Colton. Figures 1 and 2 show the project's location.

PROJECT DESCRIPTION

The subject site is located in Planning Area 9 of the Reche Canyon Specific Plan (RCSP). Phase I of the project will consist of development of a convenience store with 3,650 square feet (sq.ft.) of sales and storage areas, 6 fuel dispensers, a 3,574 sq.ft. overhead canopy, and a 1,750 sq.ft. express carwash. Phase II of the project consists of development of 9,800 sq.ft. of retail uses (Neighborhood Commercial Services). The overall project will include all required parking stalls (regular and ADA compliant), drive aisles, landscaping, and an equestrian trail along Reche Canyon Road including horse tie-ups and rest/shelter and water supply. The proposed architectural theme will be Western Architecture to blend with the existing nature and historical values of the canyon. Figure 3 shows the proposed site plan.

Existing Sensitive Land Uses in the Project Area

Sensitive receptors include residences, schools, hospitals, and similar uses sensitive to noise and vibration. The closest sensitive receptors would be single family residences to the east along Shadid Drive and further to the west across Reche Canyon Road.

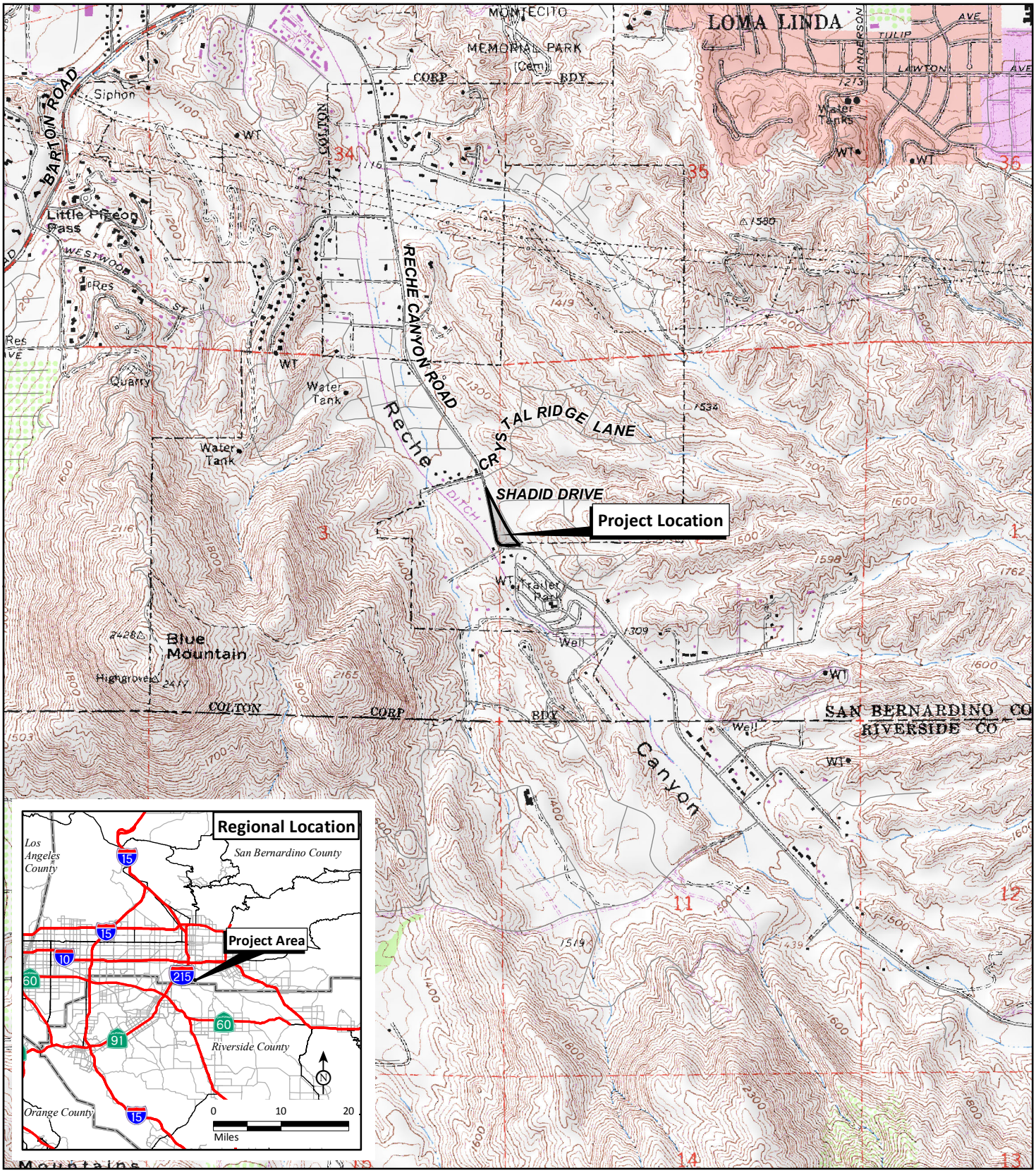

FIGURE 1

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Colton Reche Canyon Plaza Project

Regional and Project Location

SOURCE: USGS 7.5' Quad: San Bernardino South (1980), CA; ESRI Streetmap, 2013.

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LSA

FIGURE 2

LEGEND

Project Location

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SOURCE: Google Earth, 2016

Colton Reche Canyon Plaza Project

Project Location

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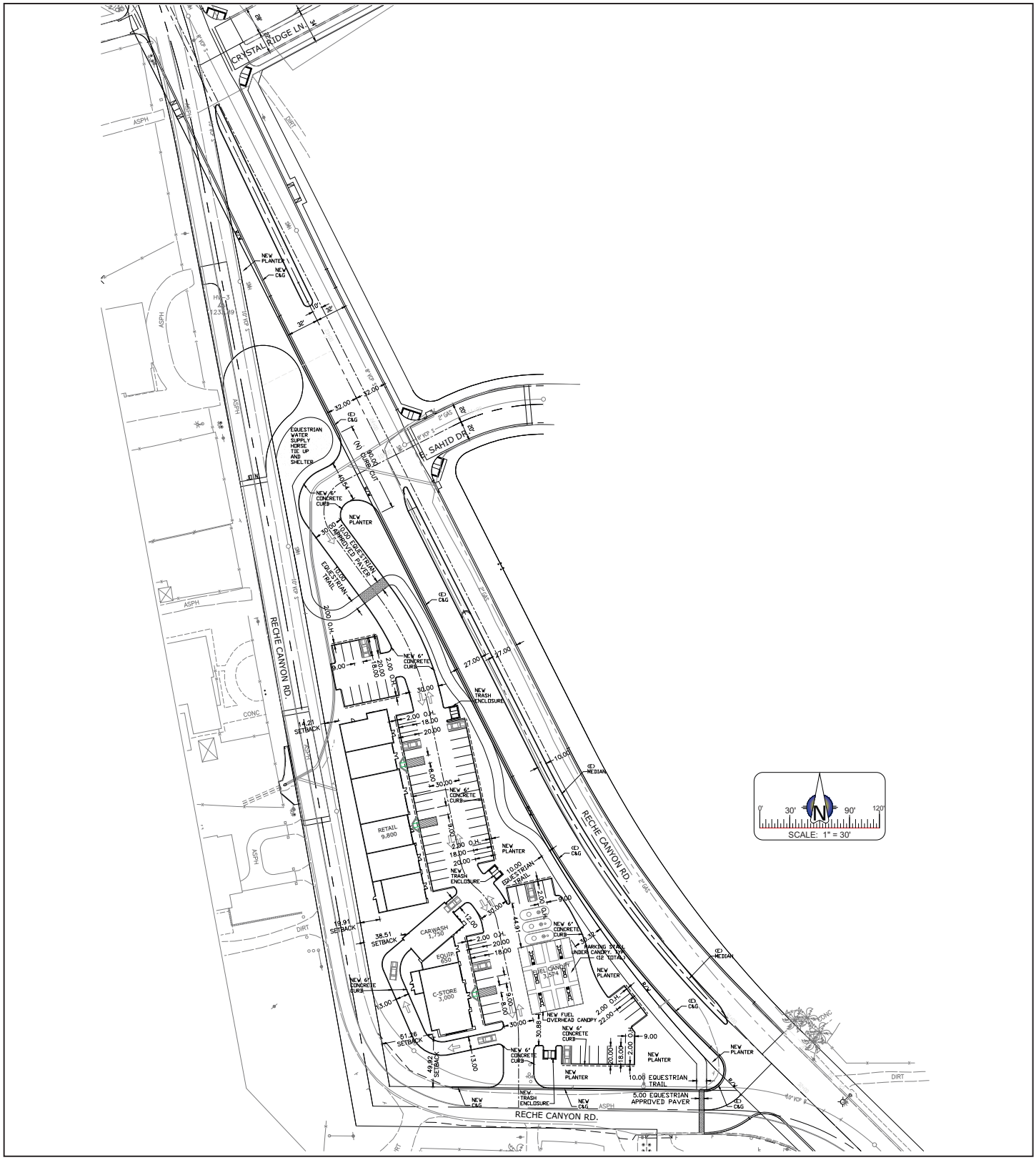

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FIGURE 3

Colton Reche Canyon Plaza Project

Site Plan

SOURCE: RamCam Engineering Group, Inc., 2016

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SETTING

METHODOLOGY RELATED TO NOISE AND VIBRATION IMPACT ASSESSMENT

Evaluation of noise and vibration impacts associated with the proposed project includes the following:

- Determine the short-term construction noise and vibration impacts on off-site noise-sensitive uses.
- Determine the long-term noise and vibration impacts, including off-site vehicular traffic, on the proposed on-site noise-sensitive uses.
- Determine the required mitigation measures to reduce long-term noise and vibration impacts, if any, from all sources.

CHARACTERISTICS OF SOUND

Sound is increasing to such disagreeable levels in our environment that it can threaten our quality of life. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations or cycles per second of a wave that result in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

Measurement of Sound

Sound intensity is measured through the A-weighted scale (i.e., A-weighted decibels [dBA]) to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units such as inches or pounds, decibels (dB) are measured on a logarithmic scale, representing points on a sharply rising curve. For example, 10 dB are 10 times more intense than 1 dB, 20 dB are 100 times more intense, and 30 dB are 1,000 times more intense. Thirty decibels (30 dB) represent 1,000 times as much acoustic energy as 1 dB. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human

ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single-point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source such as highway traffic or railroad operations, the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. However, the predominant rating scales for human communities in the State of California are the equivalent continuous sound level (L_{eq}) and Community Noise Equivalent Level (CNEL) based on dBA. L_{eq} is the total sound energy of time-varying noise over a sample period. CNEL is the time-varying noise over a 24-hour period, with a weighting factor of 5 dBA applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a weighting factor of 10 dBA from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). The noise adjustments are added to the noise events occurring during the more sensitive hours. Day-night average noise (L_{dn}) is similar to the CNEL but without the adjustment for nighttime noise events. CNEL and L_{dn} are normally exchangeable and within 1 dB of each other. Other noise-rating scales of importance when assessing an annoyance factor include the maximum noise level, or L_{max}, and percentile noise exceedance levels, or L_N. L_{max} is the highest exponential time-averaged sound level that occurs during a stated time period. It reflects peak operating conditions and addresses the annoying aspects of intermittent noise. L_N is the noise level that is exceeded "N" percent of the time during a specified time period. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the lowest noise level experienced during a monitoring period. It is normally referred to as the background noise level.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions and thereby affecting blood pressure, functions of the heart, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA can result in dizziness and loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying less developed areas.

Table A lists definitions of acoustical terms. Table B shows common sound levels and their noise sources. Table C presents the land use compatibility for exterior community noise ranges recommended by the California Department of Health, Office of Noise Control (1976).

Table A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dBA to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control* (Harris 1991).

Table B: Common Sound Levels and their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environment	Subjective Evaluation
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	
Near Freeway Auto Traffic	70	Moderately Loud	Baseline
Average Office	60	Quiet	One-half as loud
Suburban Street	55	Quiet	
Light Traffic; Soft Radio Music in Apartment	50	Quiet	One-quarter as loud
Large Transformer	45	Quiet	
Average Residence without Stereo Playing	40	Faint	One-eighth as loud
Soft Whisper	30	Faint	
Rustling Leaves	20	Very Faint	
Human Breathing	10	Very Faint	Threshold of Hearing
	0	Very Faint	

Source: Compiled by LSA Associates, Inc. (2014).

Table C: Land Use Compatibility for Exterior Community Noise

Land Use Category	Noise Range (L_{dn} or CNEL), dB			
	I	II	III	IV
Passively used open spaces	50	50–55	55–70	70+
Auditoriums, concert halls, amphitheaters	45–50	50–65	65–70	70+
Residential: low-density single-family, duplex, mobile homes	50–55	55–70	70–75	75+
Residential: multifamily	50–60	60–70	70–75	75+
Transient lodging: motels, hotels	50–60	60–70	70–80	80+
Schools, libraries, churches, hospitals, nursing homes	50–60	60–70	70–80	80+
Actively used open spaces: playgrounds, neighborhood parks	50–67	—	67–73	73+
Golf courses, riding stables, water recreation, cemeteries	50–70	—	70–80	80+
Office buildings, business commercial and professional	50–67	67–75	75+	—
Industrial, manufacturing, utilities, agriculture	50–70	70–75	75+	—

Source: Land Use Compatibility for Exterior Community Noise (Office of Noise Control 1976).

Noise Range I—Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Noise Range II—Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Noise Range III—Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Noise Range IV—Clearly Unacceptable: New construction or development should generally not be undertaken.

CNEL = Community Noise Equivalent Level L_{dn} = day/night noise level
dB = decibels

FUNDAMENTALS OF GROUND-BORNE VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernable; however, without the effects associated with the shaking of a building, there is less adverse reaction. Building damage is not a factor for normal projects, with the occasional exception of blasting and pile driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by up to 10 dB. This is an order of magnitude below the damage threshold for normal buildings.

Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by its occupants as the motion of building surfaces, the rattling of items on shelves or wall hangings, or a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS in vibration velocity decibels [VdB]) or peak particle velocity (PPV in inches per second [in/sec]). Of these two, RMS is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage.

EXISTING NOISE ENVIRONMENT

Sensitive Land Uses in the Project Vicinity

Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest sensitive receptors would be single family residences to the east along Shadid Drive and further to the west across Reche Canyon Road.

Overview of the Existing Noise Environment

The existing noise environment includes traffic noise, mostly on Reche Canyon Road and Shadid Drive in the project vicinity. Noise from motor vehicles is generated by engine vibrations, interaction between tires and the road, and exhaust systems. Reche Canyon Road, Shadid Drive, and other local streets comprise the dominant source of traffic noise contributing to ambient levels in the project vicinity.

THRESHOLDS OF SIGNIFICANCE

Existing policies and regulations with respect to noise include those found in the City General Plan (1987), noise standards for operations activities, and the City Municipal Code (October 2016).

CITY OF COLTON NOISE STANDARDS

Noise Element of the General Plan

The Noise Element of the General Plan (last updated October 2016) contains noise standards for mobile noise sources. These standards address the impacts of noise from adjacent roadways and airports. The City lists the following noise standards in its Noise Element Policy Plan:

- Residential structures should be constructed to maintain interior noise levels of not greater than 45 dBA (CNEL), through the use if sound barrier improvements, building design, construction materials and/or insulating techniques.
- Residential growth in Community Noise Exposure Areas greater than 70 dBA (CNEL) should be discouraged, unless on-site noise levels can be reduced to 60 dBA or lower via on- and –off-site noise alleviating improvements.
- Exterior noise levels should not exceed 65 dBA (Leq) during the day or 55 dBA (Leq) at night for commercial land uses, including general business and general merchandising.
- Exterior noise levels should not exceed 60 dBA (Lmax) at any time for such areas important to public need, and where the preservation of serenity and quietness is essential if the area is to continue to serve its intended purpose. Such areas could include parks, open spaces, amphitheaters, and other areas dedicated for activities requiring special quality of serenity.

A CNEL value of 65 dBA is the upper limit of what is considered a "normally acceptable" noise environment for multifamily residential uses, although a CNEL as high as 70 dBA is considered "conditionally acceptable." New development should generally be discouraged within the "unacceptable" category. However, if new development does proceed, a detailed analysis of the noise reduction requirements must be made, and the necessary noise insulation features must be included in the design.

Municipal Code

The City Noise Standards for stationary sources are provided in Section 18.42.040. Noise of the City of Colton Municipal Code.

The City's Municipal Code has not adopted time periods in which exterior construction activities would not be permitted nor any maximum noise level associated specifically with construction noise.

Noise Standards for Operations Activities of the Proposed Project

The *California Environmental Quality Act (CEQA) Guidelines* (ACEC 2015) do not define the levels at which temporary and permanent increases in ambient noise are considered "substantial." A noise level increase of 3 dBA is barely perceptible to most people, a 5 dBA increase is readily noticeable, and a difference of 10 dBA would be perceived as a doubling of loudness. Based on this information, the following generally acceptable standards would apply to the operation activities of the proposed project:

- Less than 3 dBA difference in noise levels would not be discernable; therefore, the difference would not be significant.
- Noise level differences between 3 dBA and 5 dBA would be noticeable, but not significant, if noise levels were to remain below the noise level standards recommended by the County of San Bernardino 2007 Development Code.
- A noise level difference of 5 dBA or greater would be readily noticeable and therefore considered significant.

In addition to the 3 dBA definition of a potentially significant change in noise levels, the applicable noise standards governing the project site have to be considered. Although a change in noise of 3 dBA or greater is considered substantial, it is not significant unless the total noise (background plus project) exceeds the City's noise standards. A significant impact regarding peak noise levels would occur if a project were to generate noise levels, measured in dBA L_{max} or dBA L_{eq}, that exceed the standards contained in the City's Municipal Code.

The maximum sound level radiated by any Use of Facility, when measured at the boundary line of the Property on which the sound is generated, Shall not be obnoxious by reason of its intensity, pitch or dynamic characteristics as determined by the City, and Shall not exceed 65 dBA.

Vibration Standards

The City's Municipal Code requires vibration from all activities to not generate ground vibration by equipment other than motor vehicles, trains, or by temporary construction or demolition, which is perceptible without instruments by the average person at or beyond any lot line of the lot containing the activities. No quantified vibration levels were established by the City for vibration standards. As such, policies and guidelines from the California Department of Transportation (Caltrans) and the Federal Transit Administration (FTA) are utilized to assess impacts due to ground-borne vibration. Ground-borne vibration impacts are evaluated based on (a) potential building damage, (b) potential human annoyance, and (c) potential effect on vibration-sensitive equipment. Caltrans and the FTA have adopted guidelines and recommendations to limit ground-borne vibration based on the age and/or condition of the structures located in close proximity to construction activity. Caltrans and FTA studies show vibration velocity levels greater than 0.04 in/sec PPV are distinctly perceptible to humans and become strongly perceptible when they reach 0.10 in/sec PPV.

Based on the FTA *Transit Noise and Vibration Impact Assessment* (2006) and depending on the building category of the nearest buildings adjacent to the project site, the potential vibration damage criteria vary.

The FTA included ground-borne vibration and noise impact criteria guidance in its *Transit Noise and Vibration Impact Assessment* (2006), as shown in Table D.

The criteria presented in Table D account for variations in project type as well as the frequency of events, which differ widely among transit projects. Although the criteria are provided for community response to ground-borne vibration from rail rapid transit systems, they also provide useful guidelines for human response to exposure to vibration in general. Table E lists the vibration damage criteria for various structural categories. These are identified by the FTA as criteria that should be used during the environmental impact assessment phase to identify problem locations that must be addressed during final design (FTA 2006).

Table D (criteria in terms of VdB) and Table E (criteria in terms of in/sec and VdB) are used to evaluate the effects of vibration on human response and structural damage. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 102 VdB (0.5 in/sec) is considered safe and would not result in any vibration damage (FTA 2006). For a non-engineered timber and masonry building, the vibration damage criterion is 94 VdB (0.2 in/sec).

Thresholds of Significance

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community where it is located. There are three CEQA Checklist questions for significance associated with noise and vibration impacts:

- Will the project result in:
    - Exposure of persons to or generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
    - Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?
    - 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, or within the vicinity of a private airstrip, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Table D: Ground-Borne Vibration and Noise Impact Criteria

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 µin/sec)			Ground-Borne Noise Impact Levels (dB re 20 µPA)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where low ambient vibration is essential for interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]	–[5]	–[5]	–[5]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Source: *Transit Noise and Vibration Impact Assessment* (FTA 2006).

[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day.

[2] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.

[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research requires detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

[5] Vibration-sensitive equipment is used in buildings where sufficient noise attenuation is provided; additionally, such equipment is not sensitive to either airborne or ground-borne noise.

µin/sec = microinches per second
µPA = micropascals
dB = decibels
dBA = A-weighted decibels
FTA = Federal Transit Administration
HVAC = heating, ventilation, and air-conditioning
VdB = vibration velocity decibels

Table E: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate Lv[1] (VdB)
Reinforced concrete, steel, or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: *Transit Noise and Vibration Impact Assessment* (FTA 2006).

[1] RMS VdB re 1 µin/sec.

µin/sec = microinches per second
FTA = Federal Transit Administration
in/sec = inches per second
Lv = 20 log10 (V/V_{ref}) is the vibration velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

IMPACTS AND MITIGATION MEASURES

Noise and vibration levels on and in the vicinity of the project site would change as a result of the proposed project. Potential noise and vibration impacts associated with the project include noises created from construction and during the operation phase of the project.

LESS THAN SIGNIFICANT IMPACTS

Less than significant noise and vibration impacts include those related to vibration, airports, short-term off-site construction traffic, and long-term off-site traffic.

Off-Site Traffic Noise Impact

Short-Term Off-Site Construction Traffic. Construction crew commutes and the transport of construction equipment and material to the project site would incrementally increase noise levels on access roads leading to the site. There would be a relatively high single-event noise exposure potential at a maximum of 81 dBA L_{max} at 50 feet (ft) (see Table K, which is provided later) from passing project construction vehicles, causing possible short-term intermittent annoyances. However, the effect in longer-term ambient noise levels would be less than 1 dBA when averaged over a period of time over 1 hour or 8 hours, which is the more appropriate measure for roadway noise. Therefore, short-term construction-related impacts associated with worker commute and construction equipment transport and soil import to the project site would result in a less than significant impact on noise-sensitive receptors along the access routes.

Long-Term Off-Site Traffic Noise. The FHWA Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used to evaluate future traffic-related noise conditions in the vicinity of the project site. Traffic volumes projected in the traffic study (LSA 2017) were used to assess the potential traffic noise impacts along the street segments in the project vicinity. Tables F, G, and H provide the traffic noise levels for the Existing Without and With Project, Opening Year (2018) Without and With Project, and Year 2040 Without and With Project traffic noise scenarios, respectively. These noise levels represent the worst-case scenario, which assumes no shielding is provided between the traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and model printouts are provided in Appendix A.

Table F: Existing Traffic Noise Levels Without and With Project

Roadway Segment	Existing Without Project (Baseline)					Existing With Project						
	ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	ADT	Change in ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase over Baseline CNEL (dBA) 50 feet from Centerline of Outermost Lane
Reche Canyon Rd. south of Park Canyon Rd.	18,100	53	111	238	68.9	19,900	1,800	56	118	253	69.3	0.4
Reche Canyon Rd. between Park Canyon Rd. and E. Shadid Dr.	18,100	53	111	238	68.9	19,100	1,000	54	115	247	69.1	0.2
Reche Canyon Rd. between E. Shadid Dr. and Crystal Ridge Ln.	18,200	53	111	239	68.9	20,200	2,000	56	119	256	69.4	0.5
Reche Canyon Rd. between Crystal Ridge Ln. and E. Washington St.	23,800	63	133	285	70.1	25,700	1,900	66	140	300	70.4	0.3
Park Canyon Rd. west of Reche Canyon Rd.	100	< 50	< 50	< 50	42.6	950	850	< 50	< 50	< 50	52.4	9.8
E. Shadid Dr. east of Reche Canyon Rd.	90	< 50	< 50	< 50	42.1	90	0	< 50	< 50	< 50	42.1	0.0
Crystal Ridge Ln. west of Reche Canyon Rd.	60	< 50	< 50	< 50	40.4	60	0	< 50	< 50	< 50	40.4	0.0
Crystal Ridge Ln. east of Reche Canyon Rd.	550	< 50	< 50	< 50	51.0	580	30	< 50	< 50	< 50	51.2	0.2
E. Washington St. west of Reche Canyon Rd.	19,900	< 50	100	209	67.1	21,200	1,300	< 50	104	218	67.4	0.3
E. Washington St. east of Reche Canyon Rd.	25,600	58	117	247	68.2	27,500	1,900	61	122	259	68.5	0.3

Source: LSA Associates, Inc. (February 2017).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels

Table G: Opening Year (2018) Traffic Noise Levels Without and With Project

Roadway Segment	Opening Year (2018) Without Project					Opening Year (2018) With Project						
	ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	ADT	Change in ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase over Baseline CNEL (dBA) 50 feet from Centerline of Outermost Lane
Reche Canyon Rd. south of Park Canyon Rd.	21,700	59	125	268	69.7	22,600	900	61	128	276	69.8	0.1
Reche Canyon Rd. between Park Canyon Rd. and E. Shadid Dr.	21,700	59	125	268	69.7	21,700	0	59	125	268	69.7	0.0
Reche Canyon Rd. between E. Shadid Dr. and Crystal Ridge Ln.	21,800	59	125	269	69.7	22,800	1,000	61	129	277	69.9	0.2
Reche Canyon Rd. between Crystal Ridge Ln. and E. Washington St.	28,500	70	150	322	70.9	29,200	700	71	152	327	71.0	0.1
Park Canyon Rd. west of Reche Canyon Rd.	100	< 50	< 50	< 50	42.6	950	850	< 50	< 50	< 50	52.4	9.8
E. Shadid Dr. east of Reche Canyon Rd.	100	< 50	< 50	< 50	42.6	100	0	< 50	< 50	< 50	42.6	0.0
Crystal Ridge Ln. west of Reche Canyon Rd.	70	< 50	< 50	< 50	41.0	70	0	< 50	< 50	< 50	41.0	0.0
Crystal Ridge Ln. east of Reche Canyon Rd.	660	< 50	< 50	< 50	51.8	660	0	< 50	< 50	< 50	51.8	0.0
E. Washington St. west of Reche Canyon Rd.	23,800	56	111	236	67.9	24,100	300	56	112	238	67.9	0.0
E. Washington St. east of Reche Canyon Rd.	30,700	64	131	279	69.0	31,200	500	65	132	282	69.1	0.1

Source: LSA Associates, Inc. (February 2017).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels

Table H: 2040 Traffic Noise Levels Without and With Project

	2040 Without Project					2040 With Project						
Roadway Segment	ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	ADT	Change in ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase over Baseline CNEL (dBA) 50 feet from Centerline of Outermost Lane
Reche Canyon Rd. south of Park Canyon Rd.	27,800	69	147	317	70.7	28,600	800	70	150	323	70.9	0.2
Reche Canyon Rd. between Park Canyon Rd. and E. Shadid Dr.	27,800	69	147	317	70.7	27,800	0	69	147	317	70.7	0.0
Reche Canyon Rd. between E. Shadid Dr. and Crystal Ridge Ln.	28,000	70	148	318	70.8	29,000	1,000	71	152	326	70.9	0.1
Reche Canyon Rd. between Crystal Ridge Ln. and E. Washington St.	36,600	83	177	380	71.9	37,300	700	84	179	385	72.0	0.1
Park Canyon Rd. west of Reche Canyon Rd.	160	< 50	< 50	< 50	44.6	990	830	< 50	< 50	< 50	52.5	7.9
E. Shadid Dr. east of Reche Canyon Rd.	260	< 50	< 50	< 50	46.7	260	0	< 50	< 50	< 50	46.7	0.0
Crystal Ridge Ln. west of Reche Canyon Rd.	110	< 50	< 50	< 50	43.0	110	0	< 50	< 50	< 50	43.0	0.0
Crystal Ridge Ln. east of Reche Canyon Rd.	1,100	< 50	< 50	< 50	54.0	1,100	0	< 50	< 50	< 50	54.0	0.0
E. Washington St. west of Reche Canyon Rd.	30,400	64	130	277	68.9	30,700	300	64	131	279	69.0	0.1
E. Washington St. east of Reche Canyon Rd.	39,400	75	154	329	70.1	39,800	400	75	155	331	70.1	0.0

Source: LSA Associates, Inc. (February 2017).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels

Existing traffic volumes on roadway segments surrounding the project site are generally high (e.g., Reche Canyon Drive, 18,100 to 23,800 average daily traffic [ADT]) and would continue to grow in the future due to area growth (LSA 2017). Future traffic noise levels along Reche Canyon Drive in the project vicinity would not be significantly affected by project-related traffic with either of the two following scenarios:

- Changes in the traffic noise levels associated with implementation of the project are less than 3 dBA, or
- The resulting traffic noise levels are lower than the City's exterior noise standards at sensitive uses where an outdoor living area exists. Front yards and driveways are not considered sensitive outdoor use areas.

As a rule, it takes an increase of doubling the traffic volumes in order to raise the traffic noise level by 3 dBA. The proposed project would result in mostly less than 1 dBA increases in traffic noise. As stated, changes in noise level of 3 dBA or less are not perceptible to the human ear in an outdoor environment.

Future Opening Year (2018) and 2040 traffic noise level increases due to the proposed project would be 0.5 dBA or less along all roadway segments in the project vicinity, except along Park Canyon Road west of Reche Canyon Road, where project-related traffic noise level increases would be up to 9.8 dBA. However, that is primarily due to the extremely low existing traffic volumes along Park Canyon Road, and the future overall traffic noise levels would have 70, 65, and 60 dBA CNEL noise contours all confined to within the roadway right-of-way along Park Canyon Road. Therefore, the proposed project would not result in any measurable existing or future noise level increases, and the project impacts are considered less than significant.

Short-Term Construction Vibration Impacts

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may not be discernable. Without the effects associated with the shaking of a building, there are less adverse reactions.

Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect of these vibrations on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and the construction characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels.

Ground-borne vibration from construction activities rarely reaches the levels that damage structures. Caltrans and the FTA have published standard vibration velocities for construction equipment operations. Table I lists the vibration source amplitudes for construction equipment.

Table I: Vibration Source Levels for Construction Equipment

Equipment	Reference PPV (in/sec) / Lv[1] (VdB)	
	PPV at 25 ft	L_v at 25 ft
Vibratory Roller	0.210	94
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment* (FTA 2006).
[1] RMS VdB re 1 µin/sec.
µin/sec = microinches per second
ft = feet
FTA = Federal Transit Administration
in/sec = inches per second
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

FTA guidelines show that a vibration level of up to 102 VdB (equivalent to 0.5 in/sec PPV) (FTA 2006) is considered safe and would not result in any construction vibration damage. For a nonengineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec PPV). The RMS values for building damage thresholds referenced in Table I are from the *Transit Noise and Vibration Impact Assessment* (FTA 2006).

The criteria presented in Table I account for variations in project type, as well as the frequency of events, which differ widely among transit projects. Although the criteria examine ground-borne vibration from rail rapid transit systems, they also provide useful guidelines for human response to exposure to vibration in general.

Table I lists the vibration source amplitudes for construction equipment. It is seen that none of the construction equipment expected to be used on the project site would result in a vibration level that would reach the structural damage thresholds for residential structures from transient (construction) sources.

Vibration levels from standard construction equipment are shown below for various pieces of construction equipment that are expected to be used on the project site:

- Large dozers, front end loaders, grader, backhoe (87 VdB at 25 ft)
- Loaded trucks (86 VdB at 25 ft)
- Jackhammers, forklift (79 VdB at 25 ft)

Based on the following formula for vibration transmission,

$$LvdB\ (D) = LvdB\ (25\ ft) - 30\ Log\ (D/25)$$

a vibration level at 50 ft is 9 VdB lower than the vibration level at 25 ft. Vibration at 100 ft from the source is 18 VdB lower than the vibration level at 25 ft.

Table J lists the projected vibration levels from the various construction equipment expected to be used on the project site at 100 ft from the sensitive uses in the project vicinity. For typical construction activity, the equipment with the highest vibration generation potential is the vibratory roller, which would generate 94 VdB (or 0.2 in/sec PPV) at 25 ft.

Existing properties adjacent to the project site include single family residences to the east and west of the project site. The closest buildings/structures in the project vicinity are residential buildings at least 100 ft from the project construction area, and none of the construction equipment (e.g., bulldozers, trucks, and jackhammers) or on-site activity during project construction would result in a vibration level greater than 0.12 in/sec at these nearest buildings which would potentially cause building damage (Table I).

The vibration levels at the nearest off-site residential structures from on-site construction equipment or activity would not exceed the FTA 94 VdB (or 0.2 in/sec PPV) threshold. No significant construction vibration impacts would occur; therefore, no mitigation measures are required.

Long-Term Operational Vibration Impacts

Operations of the proposed project would not involve any vibration sources that would cause exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels. The proposed project is a commercial development and as such, would not generate high ground-borne vibration, and would not result in any significant ground-borne vibration impacts to land uses adjacent to the project site. Vehicles with rubber tires on roadway segments surrounding the project site would not generate any significant ground-borne vibration that would exceed the 65 VdB perception threshold for such uses. No significant ground-borne vibration impacts would occur; therefore, no mitigation is required.

Table D shows that for residences or buildings where people sleep, the vibration threshold is 72 VdB for frequent events and 80 VdB for infrequent events. Due to the nature of the proposed on-site use (i.e., commercial), operational vibration on the project site would not result in any of the nearest off-site sensitive buildings exceeding the 80 VdB (approximately 0.0 in/sec, or PPV) vibration level threshold for residential uses. Therefore, no mitigation measures would be required.

SIGNIFICANT IMPACTS AND MITIGATION MEASURES

On-Site Operational Noise Impact

As noise spreads from a source, it loses energy. So the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single-point source of noise (e.g., an idling truck) to the noise-sensitive receptor of concern. Noise associated with operation of the proposed industrial/warehouse uses would potentially affect noise-sensitive uses in the project vicinity. Such sources include loading/unloading operations and parking lot vehicle movement noise. These activities are potential point sources of noise that could affect noise-sensitive receptors adjacent to the proposed warehouse uses (e.g., existing residences adjacent to the project site).

Table J: Summary of Construction Equipment and Activity Vibration

Equipment/Activity	Vibration Level (VdB)			
	At 25 ft	Distance Attenuation	Intervening Buildings/ Sound Walls[1]	Maximum Vibration Level
Residences adjacent to the site, 100 ft				
Large dozers[2], front end loaders, grader, backhoe	87	18	0	69
Loaded trucks	86	18	0	68
Jackhammers, forklift	79	18	0	61

Source: Compiled by LSA Associates, Inc. (2017).
Note: The FTA-recommended threshold is 0.2 in/sec or approximately 94 VdB at the receiving property structure or building.
[1] Intervening buildings/sound walls put weight on the transmission path and provide a damping effect on vibration.
[2] Large Dozer represents the construction equipment with the highest vibration potential that would be used on site. Other equipment would result in at least 1 VdB lower in vibration compared to that of dozer.
ft = feet FTA = Federal Transit Administration
in/sec = inches per second VdB = vibration velocity decibels

The proposed project would potentially result in stationary source noise impacts from loading/ unloading activities and parking lot activities associated with on-site uses.

Heating, Ventilation, and Air Conditioning Operations. The proposed commercial uses would utilize HVAC equipment for the on-site stores. Based on the LSA's past experience, the noise levels generated by the HVAC would result in approximately 70 dBA at a distance of 1 meter, or 3.28 ft. This would be equal to 51 dBA or lower at a distance of 30 ft.

The HVAC system would be most likely located on the roof of these commercial buildings and would be located at least 30 ft from the nearest property line to the east or west.,. At a distance of 30 ft, noise associated with the HVAC would be 51 dBA.

The City Noise Standards for stationary sources are provided in Section18.42.040 of the City of Colton Municipal Code. The exterior noise levels when measured at the boundary line of the property on which the sound is generated should not exceed 65 dBA at any time of the day (City of Colton Municipal Code, 2016). The projected 51 dBA noise from HVAC would not exceed the City's exterior noise standard of 65 dBA at the Project's boundary adjacent to the nearest residences to the east or west. Therefore, no significant noise impacts would occur, and no mitigation measures would be required for the HVACon the roof of these proposed commercial buildings.

Truck Delivery and Loading/Unloading. Delivery trucks for the on-site commercial uses would result in a maximum noise level similar to noise readings from loading and unloading activities for other commercial use projects that generate a noise level of 75 dBA L_{max} at 50 ft based on measurements conducted by LSA Associates, Inc. in past years.

On-site commercial-use loading areas adjacent to residences to the east or west are located on the east side of the proposed commercial building and are more than 200 ft from the nearest residences east of Reche Canyon Road. Delivery trucks would park at the loading areas to unload goods. Multiple deliveries may occur throughout the day for on-site commercial uses. The 200 ft distance would have a 12 dBA noise reduction compared to the noise level measured at 50 ft from the noise source. The outdoor living areas associated with these nearest residences on the other side of Reche Canyon Road would receive at least 12 dBA in noise reduction. The loading/unloading noise associated with the on-site commercial uses would be reduced to 63 dBA L_{max} (i.e., 75 – 12 = 63) or lower at the nearest outdoor living area (i.e., backyards) east of the project site. Although a typical truck unloading process takes an average of 15 to 20 minutes, this maximum noise level occurs in a much shorter period of time (i.e., in a few minutes). In addition, traffic noise associated with Reche Canyon Road would mask most of the loading/unloading noise in this area. This range of noise levels is below the City's maximum exterior noise standard of 75 dBA L_{max}. Residences located to the west of the project site would be shielded by the proposed on-site commercial buildings from the loading/unloading activities and would be exposed to even lower on-site loading/unloading activity noise. Therefore, noise associated with the loading and unloading activities at the on-site commercial uses would not result in noise levels exceeding the typical standards at the nearest off-site outdoor living area. No mitigation is required.

Parking Lot Activity. Representative parking activities (e.g., employees conversing or doors slamming) on the project site would generate approximately 60 to 70 dBA L_{max} at 50 ft. This level of noise is intermittent in nature and lower than that of the truck delivery and loading/unloading activities. All of the on-site parking areas are provided on level surfaces. Parking areas on the surface level are more than 100 ft from the nearest off-site outdoor living areas, which would experience a 6 dBA reduction in noise due to the distance compared to the level measured at a 50 ft distance).Therefore, noise from the on-site parking areas would be reduced to 66 dBA L_{max} or lower at the nearest off-site outdoor living areas to the east of the project site. Therefore, noise from the on-site parking areas are not anticipated to be a significant issue to the noise-sensitive uses east of the project site. Residences to the west of the project site would receive noise shielding from the proposed on-site commercial buildings and would not be exposed to any significant parking lot activity noise. Because this noise would be intermittent in nature and would rarely occur in the evening during off-hour periods for the on-site commercial uses employees, no significant noise impacts would occur and no mitigation measures are required. Because parking lot activity would occur intermittently throughout the day, and each time would last less than 1 minute, noise associated with these parking lot activities when averaged over a 24-hour period and weighted for evening and nighttime quieter ambient noise levels would not contribute significantly to the CNEL level in the project area. The CNEL levels associated with these parking lot activities would not exceed the City's 65 dBA CNEL exterior noise standard for off-site noise-sensitive uses; therefore, no mitigation is required.

Construction Noise Impact

Noise levels from grading and other construction activities for the proposed project may range up to 84 dBA L_{max} at the closest noise sensitive receptors (residential uses) to the east or west of the project site for very limited times when construction occurs near the adjacent project boundary. Construction

noise impacts of the proposed project would be potentially adverse. Therefore, mitigation measures would be required.

On-site short-term construction noise impact is mostly related to noise generated during excavation, grading, and construction. Construction is performed 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 generated and, consequently, the noise levels along the project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table K lists construction noise levels (L_{max}) included in the Federal Highway Administration (FHWA) *Highway Construction Noise Handbook* (2006) based on a distance of 50 ft between the equipment and a noise receptor.

Typical noise levels at 50 ft from an active construction area range up to 90 dBA L_{max} during the noisiest construction phases. The site preparation phase, which includes grading and paving, tends to generate the highest noise levels because earthmoving equipment is the noisiest construction equipment.

Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, and front loaders. Earthmoving and compacting equipment include compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 to 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings.

Construction of the proposed project is expected to require the use of scrapers, bulldozers, a motor grader, and water and pickup trucks. Noise associated with the use of construction equipment is estimated to reach between 79 and 89 dBA L_{max} at a distance of 50 ft from the active construction area for the grading phase. As seen in Table K, the maximum noise level generated by each scraper is assumed to be approximately 84 dBA L_{max} at 50 ft from the scraper in operation. Each bulldozer would also generate approximately 82 dBA L_{max} at 50 ft. The maximum noise level generated by the sound sources with equal strength increases the noise level by 3 dBA. Each piece of construction equipment operates as an individual point source. The worst-case composite noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 ft from an active construction area.

The closest sensitive receptors to the project's construction area include existing residences approximately 100 ft to the east or west of the project site. At this distance, the nearest receptor locations would be exposed to construction noise levels of up to 84 dBA L_{max} without any noise shielding at the residences to the east or west. Vehicular traffic on Reche Canyon Road would mask the majority of the construction noise from the project site. Construction of the proposed project would occur only within permitted hours in compliance with the City's requirements identified in the City of Colton Municipal Code. Compliance with the construction hours for project construction would ensure that project construction would not result in any significant noise impacts. No additional mitigation measures are required.

Table K: RCNM Default Noise Emission Reference Levels and Usage Factors

Equipment Description	Impact Device?	Acoustical Usage Factor	Spec. 721.560 L_{max} at 50 ft (dBA, slow)	Actual Measured L_{max} at 50 ft (dBA, slow)	Number of Actual Data Samples (Count)
All other Equipment > 5 HP	No	50	85	N/A	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	N/A	0
Blasting	Yes	N/A	94	N/A	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	N/A	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (< 25 kVA, VMS Signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	N/A	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydraulic Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	N/A	0
Impact Derive	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarifier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/Chipping Gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (single nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Sheers (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trench Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	N/A	0
Tractor	No	40	84	N/A	0
Vacuum Excavator (Vac-Truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19

Table K: RCNM Default Noise Emission Reference Levels and Usage Factors

Equipment Description	Impact Device?	Acoustical Usage Factor	Spec. 721.560 L_{max} at 50 ft (dBA, slow)	Actual Measured L_{max} at 50 ft (dBA, slow)	Number of Actual Data Samples (Count)
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

Source: *Highway Construction Noise Handbook* (FHWA 2006).
County = County of San Bernardino
dBA = A-weighted decibels
FHWA = Federal Highway Administration
ft = feet
ft-lb/blow = foot-pounds per blow
HP = horsepower
kVA = kilovolt-ampere
L_{max} = maximum instantaneous noise level
N/A = Not Applicable
RCNM = Roadway Construction Noise Model
VMS = variable-message sign

On-Site Traffic Noise Impact

The proposed on-site commercial uses would not be exposed to significant traffic noise from Reche Canyon Road. Therefore, no mitigation measures would be required.

STANDARD CONDITIONS AND/OR MITIGATION MEASURES

Construction Noise

The following measures can be implemented to reduce potential construction noise impacts on nearby sensitive receptors:

1. During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
2. The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site to the south and southwest.
3. The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
4. During all project site construction, the construction contractor shall adhere to the City of Fontana standards, which include limiting construction activities to the hours between 7:00 a.m. and 6:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturdays. No construction activities are permitted outside of these hours or on Sundays and national holidays.

Construction Vibration

No mitigation measures would be required.

On-Site Traffic Noise

The following mitigation measures are required:

Off-Site Traffic Noise

No mitigation is required.

On-Site Operational Noise

No mitigation measures would be required.

On-Site Operational Vibration

No mitigation measures would be required.

Airport Noise Impact

No mitigation measures would be required.

Level of Significance after Mitigation

No significant noise or vibration impacts from short-term construction or long-term operations of the proposed project will result after implementation of the mitigation measures listed above.

CUMULATIVE IMPACTS

On-site operations activities of the proposed project would create point sources of noise and vibration but would not contribute to off-site cumulative noise and vibration impacts from other planned and future projects that would be above noise and vibration standards. Project-related traffic would contribute to cumulative traffic noise impacts in the vicinity of the project site, but would not result in significant traffic noise impacts. This would be considered an insignificant impact.

REFERENCES

American Council of Engineering Companies (ACEC). *2016 California Environmental Quality Act (CEQA) Guidelines*, California Code of Regulations, Title 14, Chapter 3, State of California, Sections 15000–15387, as amended December 1, 2015.

City of Fontana. 1993. Municipal Code, Code of Ordinance. Website: https://www.fontana.org/index.aspx?nid=90, accessed August 2016.

———. 2003. General Plan, Noise Element. Website: https://www.fontana.org/DocumentCenter/Home/View/4303, accessed August 2016.

———. 2016. Traffic Count Data for Segments. Website: http://www.fontana.org/DocumentCenter/View/8538, accessed August 2016.

County of San Bernardino. 2007. County of San Bernardino 2007 Development Code. Website: http://www.sbcounty.gov/uploads/lus/developmentcode/DCWebsite.pdf, accessed August 2016.

Harris, Cyril M., editor. 1991. *Handbook of Acoustical Measurements and Noise Control*.

Federal Highway Administration (FHWA). 2006. *Highway Construction Noise Handbook*. FHWA-HEP-06-015, DOT-VNTSC-FHWA-06-02, NTIS No. PB2006-109012.

Federal Transit Administration (FTA). 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf, accessed August 2016.

Office of Noise Control, California Department of Health. 1976. Land Use Compatibility for Exterior Community Noise.

Pre-application Project Description (File Index No. PRE-000-028)

APN's 0284-211-70, 71, 72 and 1178-371-27

The Applicant, Mr. Fahim Tanios, is requesting consideration of the following commercial project to be developed on approximately 2.9 acres located near the intersection of Shadid Drive and Reche Canyon Road.

The subject site is located in Planning Area 9 as identified in the Reche Canyon Specific Plan (RCSP).

Phase I:

Development of Convenience Store, consist of 3,650 Sq. Ft. of Sales area and storage Back Room as

6-Fuel Dispensers and 3,574 Sq. Ft. Overhead Canopy

1,750 Sq. Ft. Express Carwash

Phase II:

Development of 9,800 Sq. Ft. Retail Building (Neighborhood Commercial Services)

Entire Center will include all required Parking Stalls (Regular & ADA), Drive Isles, Landscape and Horse Trail System along Reche Canyon Road to include Horse Tie-Up as Rest & Shelter and Water Supply.

Proposed Architectural Theme will be Western Architecture to blend with the existing nature and historical values of the canyon.

PERMIT NO. **PRE-000-028**
Permit Type: **Pre-Application**

PROJECT	TRACT NO.	LOT NO.	APPLICATION DATE	ISSUED DATE	ISSUED BY	PERMIT STATUS
Council District 5			1/25/2016		MS	**Open**

PROJECT ADDRESS
Rechi Canyon And Shadid

ASSESSORS PARCEL NO. **0284-211-70** GEO CODE

OWNER
Eskander, Adel & Tahani Rev Tr 10/22

MAILING ADDRESS
19210 Chestridge Cir
Walnut, CA 91789

PHONE NO. FAX NO.

APPLICANT
Tanios, Fihim
Owner In Escrow

MAILING ADDRESS
,

PHONE NO. (909) 228-2921 FAX NO.

CONTRACTOR/PROFESSIONAL

MAILING ADDRESS

PHONE NO. FAX NO.
EMAIL ADDRESS:

License No. Type: Expires:

TENANT

MAILING ADDRESS

PHONE NO. FAX NO.

DESCRIPTION
Pre-Application to change a zone from Estate Density to Commercial on property 1.8 acres in size

VALUATIONS

OCCUPANCY

TOTAL VALUATION $0.00

Construction Type	UOM	# of Units	Value	Construction Type	UOM	# of Units	Value

FEE DETAIL

QTY	UOM	DESC	AMT DUE	AMT PAID	QTY	UOM	DESC	AMT DUE	AMT PAID
1		Pre-App Review	$300.00	$300.00					
Totals for: 3120			**$300.00**	**$300.00**					

Total Fees: **$300.00** **Total Amount Paid:** **$300.00** **Balance Due:** **$0.00**

RECEIPTS DETAIL

Receipt #	Trans. Date	Name	Payment Type	Payment Type #	Amount
31159	1/25/2016	Fashim Tanios	Check	1013	$300.00

Fah S. Tan
Applicant's Signature:

1/25/16
Date:

Request for Pre-Application Review

CITY OF COLTON - Development Services Department

Purpose: Pre-Application Review Meeting provides a prospective applicant for land use entitlements with feedback from the various City departments on conceptual plans, prior to the submittal of a formal application with detailed plans, consistent with the duties of the Design Review Committee (DRC) stated on CMC Section 18.58.030B.5. The Pre-Application Review Meeting is optional and purely informational. No action will be taken on the request.

Process: Upon submittal of a Request for Pre-Application Review Meeting with fee, the request is scheduled as an informational item at a meeting of the Design Review Committee (DRC) held within four to six weeks of the submittal date.

Submittal Requirements: The items listed on the Development Application Packet (DAP) checklist are not required at this time but may be necessary to provide adequate feedback depending on the project type. The following three items are required, at a minimum, for all Requests for Pre-Application Review.

- ☐ **Eight (8) sets of plans.** Eight (8) copies, folded to 8-1/2" x 11" size. 24" x 36" size is preferred. Must include separate 'existing site plan' and 'proposed site plan' (may be combined if no/minimal changes to site are proposed) and other optional plans listed below if applicable.
- ☐ **One (1) set of reduced plans.** Reduced to 8-1/2" by 11" size paper, if sets are on larger sheets.
- ☐ **Fee deposit.** Minimum deposit of $ 300 (charged by ½ hour).

The following additional optional items are necessary to assist in the review, if appropriate for the proposal:

- ☑ **Operations statement.** Description of proposed operation (hours of operation, number of employee/occupants/students (per shift), duration for temporary/seasonal uses, timeline for phasing, etc.)
- ☑ **Tenant list/ parking analysis.** *For sites with multiple tenants/uses with shared parking.*
- ☐ **Floor Plan, Roof Plan, Elevations.** Existing and/or Proposed. Eight (8) copies included in set.
- ☐ **Preliminary Grading, Fencing, Landscaping, Lighting Plan.** Eight (8) copies included in set.
- ☐ **Colorized elevation.** Two (2) colorized copies of elevation sheets, sized 11" x 17".
- ☐ MAPS show change.
- ☐ _____

APN 0284-211-70, 71 & 72
Property Address (if none, provide APN)

Vacant Lots
Existing (Previous) Business/Use at Site

Description of Proposal (attach additional information, as needed): See attached letter

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Contact Information

Fahim Tanios	President	(909) 228-2921
Print Contact Name	Title (if company)	Phone Number
Mina Fanar, Inc.		(909) 422-0616
Company Name		FAX Number
1518 Cascant CT	Redlands CA	92373
Mailing Address	City, State	Zip Code
		fahimtanios@hotmail.co
		E-mail Address

By signing below, I hereby acknowledge that I understand that the Pre-Application Review Meeting does not relieve me or an applicant for the proposal from submitting formal applications to the City with more detailed information, and that the City reserves the right to ask for additional information necessary to make a decision.

Fahim S. Tanios
Signature

1/25/16
Date

City of Colton Development Services Department, 659 N. La Cadena Drive (Civic Center Annex across from City Hall), Colton, CA 92324, Open: 8:00 a.m. to 4:00 p.m., Monday through Thursday; (909) 370-5079; planning@ci.colton.ca.us

To: City of Colton- Development Services Committee
From: Fahim Tanios
Re: Proposed Zone Change

January 25, 2016

To Whom It May Concern:

I would like to request a zone change, from residential to commercial, for the three lots located at: APN #0284-211-70, APN #0284-211-71, and APN #0284-211-72. My proposed project would create a gas station, car wash, convenient store, and other retail stores on the properties.

These changes would serve the local community and the daily-commuters that pass through Reche Canyon, it would aesthetically enhance the area, and would eventually help increase revenue for the City of Colton. As an experienced business-owner, who owns similar lucrative business in the area, I am confident in the value that this project will bring to the City.

I have also attached the proposed site plan

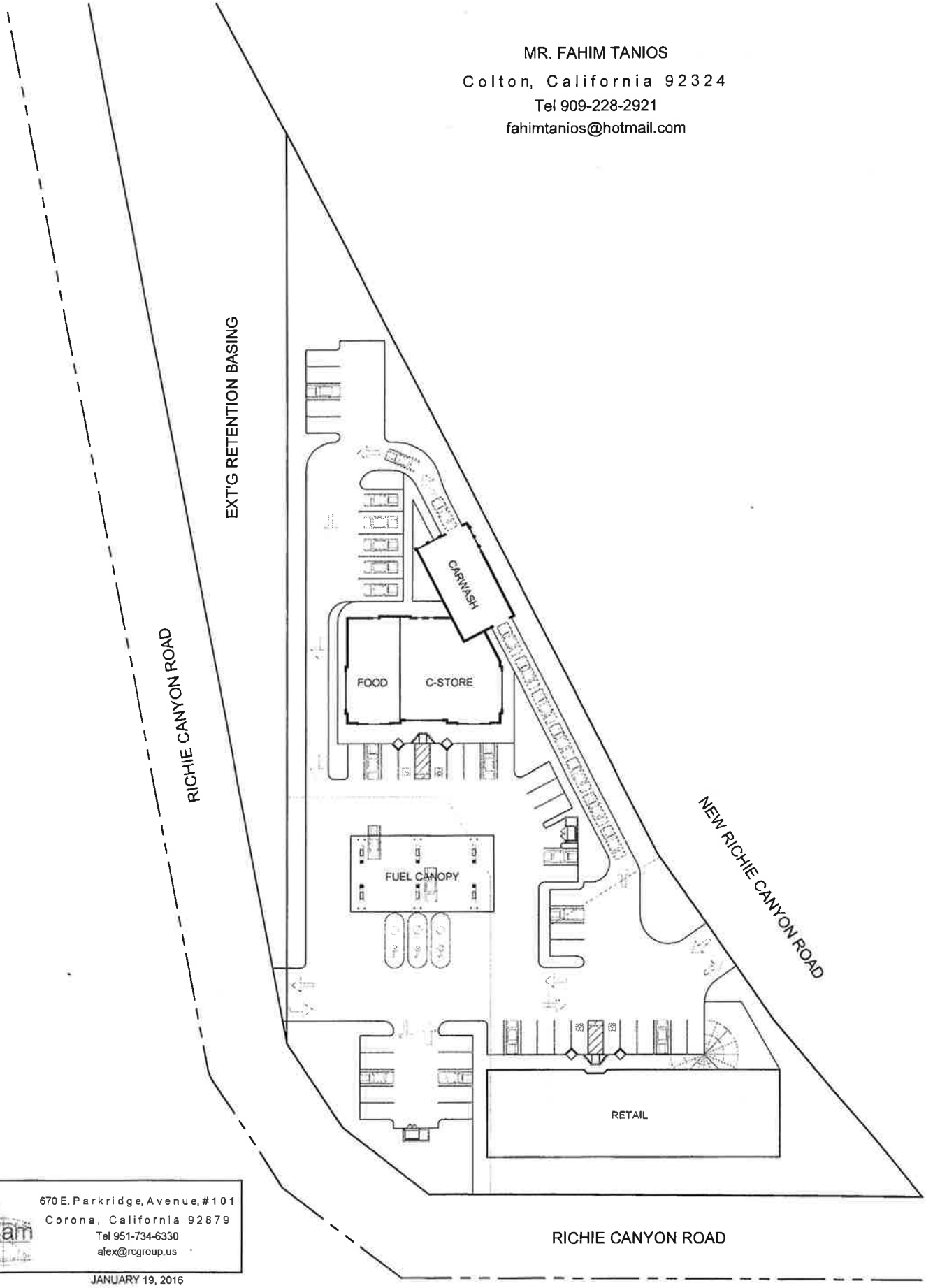
Should you have any questions, or need any additional information, I may be reached at (909) 228-2921 or via email at fahimtanios@hotmail.com.

I look forward to hearing from you and doing business with the City of Colton.

Sincerely,

Fahim Tanios

MR. FAHIM TANIOS
Colton, California 92324
Tel 909-228-2921
fahimtanios@hotmail.com



RamCam
670 E. Parkridge, Avenue, #101
Corona, California 92879
Tel 951-734-6330
alex@rcgroup.us

JANUARY 19, 2016
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Click any parcel for parcel details.
N
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Ruler
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© 2016 Microsoft Corporation
Pictometry Bird's Eye © 2016 Pictometry International Corp
Image courtesy of 3DI

February 29, 2016

Mr. Fehim Tanios
Propety located at the southwest intersection of Reche Canyon Road and Shadid Dr.
Colton, CA 92324

Re: Pre-Application Review (File Index No. PRE-000-028)
APN: 0284-211-70, 71 and 72

Dear Mr. Tanios:

The application for a pre-application has been reviewed to change the zone from Estate Residential to Commercial land use on property located within the Reche Canyon Specific Plan (RCSP). The Reche Canyon Specific Plan breaks down the region into 12 planning areas. The subject site is located in Planning Area 9, comprised of approximately 323 acres in area. The Reche Canyon Specific Plan describes Planning Area 9 as follows: "*Planning Area Nine is the portion of Reche Canyon Road south of the County Island, with the exception of Planning Area Eight. Excluding the mobile home park and the commercial area, the predominant land use in this area will reflect the current Estate Density character of development. Some Low Density development will be permitted in the side canyons. Primary access to development in this area will be directly from Reche Canyon Road.*" The following comments are provided for the pre-application review:

- The Specific Plan provides a "Commerical" description which states the following: Commercial: *This land use classification will permit continued operation of the small commercial cluster along Reche Canyon Road near the mobile home park, and possible expansion of commercial uses across Reche Canyon Road along the proposed new alignment.* The land between the present Reche Canyon Road and the proposed new alignment east of the hill at the mouth of the canyon could be redesigned from Estate Density to Commercial to help finance the realignment of Reche Canyon Road. Commerical uses will be limited to neighborhood serving businesses such as small restaurants, gas, food and sundries, and other services typically serving a neighborhood rather than a whole community.

CIVIC CENTER
650 N. La Cadena Drive
Colton, CA 92324
(909) 370-5099

- Major features of the Specific Plan: . . . *divided into 12 planning areas based on terrain, ownership and jurisdiction boundaries. These planning areas will be usefull in developing precise land use and design standards tailored to special sub-areas* . . .
- The pre-application process is a cursory review of your request. The Development Services Department and other City Departments provide recommendations to the Planning Commission and City Council. The final decision on a Specific Plan Amendment will be with the City Council.
- The process to start formal review of this request will include several steps which may include several different steps occurring simultaneously as it relates to the following areas:
    - Zone Change Amendment to the Reche Canyon Specific Plan
    - Subsequent or supplemental EIR will be required to the Reche Canyon EIR
    - Neighborhood meetings after Zone Change application is filed.
    - Development of a Precise Plan for the proposed commercial project. At this time there are no specific requirements for a precise plan. Therefore, the Development Services Department will work with you to develop a precise plan.
- At this time, staff has no recommendation to either support or oppose the amendment to the RCSP Land Use designation from Estate Residential to Commercial. We will, however, consider the Specific Plan language regarding Planning Area 9 in our analysis.
- A Development Permit Application will be required if you chose to move forward.
- A Checklist of items plus additional items will be necessary to process your request.
- The City Fee Schedule is also provided with fees for a Zone Change to the Specific Plan.
- The selection of an Environmental Consultant must be chosen from the Pre-Qualified Environmental Consultants list approved by the City Council in 2015. Once a consultant is selected the following general process is required:
    - Review of the scope of work
    - Contract between the City and Consultant is prepared
    - Contract must be approved by the City Council
    - After the amount is provided to prepare the CEQA document, full deposit of the amount to prepare the CEQA document must be provided before work can begin.

Should you decide to file the proposed Specific Plan Amendment application, we make every effort in addressing all the City Zoning Code and Specific Plan requirements for an area. We also take into consideration issues/comments/complaints heard from the surrounding neighborhood.

If you have any questions or would like to meet, I will be available to meet and assist you and your team.

Sincerely,

Mario Suarez, AICP, CNU-A
Senior Planner

Attachments
Development Application
Checklist for a DAP
Fee Schedule

Development Application Process (DAP) Submittal Checklist

CITY OF COLTON - Development Services Department (Updated March 2015)

The following information is required in order to submit a DAP to be reviewed by the Administrative Review Committee (ARC) and/or the Planning Commission (PC). Prior to submitting an application, please contact the planning staff at the Development Services Department to check off which checklist items are required for your proposal and which are not applicable.

- ☑ **Development Application Packet [DAP] (required of all applications).** Proof of ownership (copy of a recorded **Grant Deed**) required if property owner is different than that shown on County Assessor records.
- ☑ **Fee (required of all applications).** *Please see fee schedule. There may be additional fees, including but not limited to fees related to environmental review for certain projects and reimbursement agreements.*
- ☑ **Sets of project plans (required of all applications).** Eight (8) full-sized (24" x 36") copies, folded to 8-1/2" x 11" size, with the information noted on Page 2 of this checklist. *Check with the planner if you would like to propose a different size.* Please note that additional copies (as well as digital versions) may be required before confirming a DRC or PC meeting date.
- ☐ **Tentative map sheets (if applicable).** Twenty-two (22) full-sized (24" x 36") copies, folded to 8-1/2" x 11"
- ☑ **Reduced copy of project plans (all applications).** One (1) black & white copy of a full set of project plans (and tentative maps) that are reduced to 8-1/2" by 11" size paper.
- ☑ **Colorized elevation (if applicable).** Two (2) colorized copies of elevation sheets, sized 11" x 17".
- ☑ **Sample board (if applicable).** One (1) board or sheet, maximum size 8-1/2" x 14", providing samples (or otherwise showing the color and material (texture)) of items shown on elevations and/or other plans, keyed (1,2,3, etc) to those plans.
- ☑ **Operations statement (if applicable).** Description of proposed operation (hours of operation, number of employee/occupants/students (per shift), duration for temporary/seasonal uses, timeline for phasing, etc.)
- ☐ **Tenant list/ parking analysis (if applicable).** *For sites with multiple tenants/uses with shared parking.*
- ☐ **Preliminary Title Report (if applicable).** And any other documents (easements, agreements) identified in the title report required to make the application complete.
- ☑ **Preliminary Water Management Quality Plan (if applicable).** Two (2) copies. 660'
- ☑ **Mailing list (if applicable)** *For applications with public hearings (conditional use permits, variances, tentative tract maps, zone changes, and general/ specific plan amendments).*
  - ☑ A map (maximum size 11" x 17") showing a radius measured three hundred (300) feet from the exterior boundaries of the subject lot(s) that make up the project site and providing a key (1,2,3,etc) for each property located within the ~~three hundred (300)~~ foot radius.
  - ☐ **Ownership/Situs addresses:** list for the properties keyed on the map. The information on the list shall match the latest ownership rolls of the respective County Assessor's Office. The list shall be in label format so it may be copied to make labels, with the key identification to the map, assessor's parcel number, owner's name, mailing address provided for each property. Tenants
  - ☑ Three (3) sets of self-adhesive gummed mailing labels of the mailing list.
  - ☑ Letter of certification signed by the preparer of the map and ownership list.

Development Application Process (DAP) Submittal Checklist

CITY OF COLTON - Development Services Department (Updated March 2015)

☑ **Existing "as-built" Site Plan (required of all applications)** *For applications with no new construction or where feasible, this plan may be combined with the proposed site plan. Please consult with the planner.*

- North arrow and scale. (*This scale of this plan may be different than the proposed site plan to provide space for information on one sheet*).
- Provide the same information provided on the proposed site plan as it exists in actual field conditions within the subject property. Location and distance to the edge of project site of the closest fire hydrant.
- In addition, provide information on parts of abutting lots for at least 25 feet from any shared property line or across right-of-ways (alleys or streets), such as existing buildings, easements, fencing, paved areas, unpaved areas, drive approaches, and trees. *Information for a greater distance may be required depending on the scale of the project. Please consult with planner.*

☑ **Proposed Site Plan (required of all applications)**

- North arrow and scale (engineer scale of one inch equals 20-feet recommended).
- Dimensions of the lot(s), easements, and adjacent rights-of-ways (street, alley).
- Building line and roofline footprint and dimensions, with door openings labeled.
- Setbacks between buildings and between lot lines and buildings.
- Outlines and dimensions of paved areas (walkways and driveways, label surface material) and unpaved (planting, unimproved) areas.
- Location, height, and material of accessory structures, such as walls, fences, gates, light standards, trash enclosure, etc.
- Location of utility poles, ground-mounted mechanical equipment, electric service panel, transformer pad.
- Off-street parking and loading areas and outdoor display or storage areas (if applicable).
- Pedestrian, vehicular, and utility service access with points of ingress/egress indicated.
- Location of improvements within public right-of-way, such as curb, gutter, sidewalk, drive approaches, street trees, fire hydrants, and equipment adjacent to the site. Label distance from curbface to adjacent lot lines.
- Project summary with lot size, building size(s), parking required/provided, and landscaping square footage.

☐ **Floor Plan (if applicable).** *For applications with no new construction, the floor plan information may be provided on the site plan without providing a separate floor plan sheet. Please consult with the planner.*

- Label overall footprint dimensions to match the site plan.
- Show existing and/or proposed individual rooms, walls/partitions, openings (doors, windows).
- Indicate the use of each room (i.e. bedroom, storage, office).

☑ **Building Elevations (if applicable).**

- Scale of drawings.
- Label direction of elevation (i.e. north, south, east, west).
- Overall and incremental building height (e.g. base, ceiling, roofline behind parapet, parapet).
- Dimensions of windows, doors, trims, eaves, architectural features.
- Label the exterior color and material of each element, keyed (1,2,3,etc) to a sample board.

☐ **Roof Plan (if applicable)** *information may be shown on site plan. Consult with planner.*
☑ **Fencing Plan (if applicable)** *information may be shown on site plan and/or elevations. Consult with planner.*
☑ **Sign Plan (if applicable)** *information may be shown on site plan and/or elevations. Consult with planner.*
☑ **Lighting Plan (if applicable)** *may be combined with site plan and/or elevation. Consult with planner.*
☑ **Preliminary Landscape Plan and/or Hardscape Plan (if applicable)**
☑ **Preliminary Grading/Drainage/Topography Plan (if applicable)**
☑ **CEQA Determination/Filing/Fee** *Consult with planner.* subsequent EIR

City of Colton Development Services Department, 659 N. La Cadena Drive (at the Civic Center Annex across from City Hall), Colton, CA 92324, (909) 370-5079; Open: 8:00 a.m. to 4:00 p.m., Monday through Thursday

Development Application Process (DAP) Form

CITY OF COLTON - Development Services Department

DO NOT WRITE HERE FOR OFFICE USE ONLY File #: _____ Fee Paid: $ _____ Receipt #: _____ Staff: _____ Date: _____ APN: _____

INSTRUCTIONS: Please print or type. If the form does not provide enough space for an answer, you may attach additional sheets. If you feel a question is not applicable, write "N/A" for not applicable.

Entitlements Requested:

- ☐ Architectural/ Site Plan Review
- ☐ Conditional Use Permit
- ☐ General Plan Amendment
- ☐ Lot Merger
- ☐ Lot Line Adjustment
- ☐ Parcel Map
- ☐ Sign Design Review
- ☐ Tentative Map
- ☐ Variance – Major
- ☐ Variance - Minor
- ☐ Zone Change
- ☐ Other _____

_____
Property Address(es) (If known)

_____
Assessor's Parcel Number(s)

_____
Existing (Previous) Land Use(s)

_____
Proposed Land Use(s)

Applicant's Name: _____

Brief Description of Proposal (general description to be completed by the applicant):
DO NOT WRITE 'SEE ATTACHED'

_____

_____

Property Owner's Certification (if property owner's name does not match County Assessor records, attach a copy of the **Grant Deed** as proof of ownership)

I hereby certify that I am the record owner(s) of the property stated above. By signing below, I further authorize the submittal of this application.

_____ _____
Signature Date

_____ _____ (____)_____
Print Name Title (if company) Phone Number

_____ (____)_____
Company Name FAX Number

_____ _____
Mailing Address City, State Zip Code E-mail Address

City of Colton Development Services Department, 659 N. La Cadena Drive (at the Civic Center Annex across from City Hall), Colton, CA 92324, (909) 370-5079; Open: 8:00 a.m. to 4:00 p.m., Monday through Thursday

Development Application Process (DAP) Form

CITY OF COLTON - Development Services Department

_____

Property Address (If none, Assessor's Parcel No.)

Does the use involve one of the following (for any answers "yes", describe the activity in the space below:

Changes to the exterior faces of buildings? □ Yes □ No
Does the site have water service? □ Yes □ No
Does the site have sewer service? □ Yes □ No
Sloped or hillside either within the subject property or adjacent? □ Yes □ No
Alcohol, including beer & wine? □ Yes □ No [If yes, ABC License Type _____ (see Alcohol CUP Questionnaire)]
Assembly uses, including cultural institutions or religious assembly such as churches? □ Yes □ No
Food/drink preparation, handling or storage? □ Yes □ No [If 'Yes', then County Health Permit required]
Entertainment activities, whether primary or ancillary to a main use? □ Yes □ No
Storage, service, sale, display or use (delivery services) involving automobiles, trucks, or other vehicles as part of the activity? □ Yes □ No
School, educational, or training activities? □ Yes □ No
Outdoor storage or activities outside enclosed buildings? □ Yes □ No
Project completed in phases (not completed all at one time)? □ Yes □ No
Do all buildings on the site have fire sprinklers? □ Yes □ No

Detailed project description (Attach additional sheets if more space is needed.)

If residential, include the number of units, unit sizes, range of sale prices or rents, type of household sizes, amenities to be provided, landscaping, etc. If non-residential, include type of activities, hours of operation, employees per shift, estimated occupancy, loading facilities, truck and equipment type, and daily truck trips, etc.

Applicant's Certification

I hereby certify that I am the applicant for this application and that the preceding statements are true.

_____ _____
Signature Date

_____ _____ (____)_____
Print Contact Name Title (if company) Phone Number

_____ (____)_____
Company Name FAX Number

_____ _____
Mailing Address City, State Zip Code E-mail Address

Development Application Process (DAP) Form

CITY OF COLTON - Development Services Department

Number of lots: Existing ____ Proposed _____ Lot Size(s): _____

Number of employees: _____ Zoning: _____ Building Size(s): _____

Estimated time schedule for project completion (occupancy) after project approval: _____

Other permits and/or public approvals needed, including those required by Federal, State, and Regional agencies, or prior or current public approvals for the site:

_____

_____

Attach any deed and/or easement restrictions.

Other Contacts:

Designer/Architect:

_____ _____ (____)_____
Print Contact Name Title (if company) Phone Number

_____ (____)_____
Company Name FAX Number

_____ _____
Mailing Address City, State Zip Code E-mail Address

Engineer:

_____ _____ (____)_____
Print Contact Name Title (if company) Phone Number

_____ (____)_____
Company Name FAX Number

_____ _____
Mailing Address City, State Zip Code E-mail Address

Coordinator:

_____ _____ (____)_____
Print Contact Name Title (if company) Phone Number

_____ (____)_____
Company Name FAX Number

_____ _____
Mailing Address City, State Zip Code E-mail Address

File #: _____

CITY OF COLTON - Development Services Department

CITY OF COLTON
WATER AND SEWER USE DETERMINATION APPLICATION

THIS FORM MUST BE FILED BY THE OWNER OR LEGAL AGENT OF THE OWNER.
(NOTE: Single Family Residential Project applicants are not required to file this form).

INDIVIDUAL'S NAME: _____

BUSINESS NAME: _____

BUSINESS ADDRESS: _____

PHONE NUMBER: _____

CONSTRUCTION OFFICE NAME (if applicable): _____

CONSTRUCTION OFFICE ADDRESS: _____

CONTACT PERSON: _____ **PHONE NUMBER:** _____

ALTERNATE CONTACT: _____ **PHONE NUMBER:** _____

BEST TIME TO CALL: _____

STATEMENT OF INTENDED USE: (i.e., Industrial Park, Medical Office)

_____

_____

_____	_____	_____
PRINT NAME	**SIGNATURE**	**DATE**

This form will be kept on file in the office of Public Works.
If ownership changes, the City must be notified within 30 days.

FOR CITY USE ONLY:

	BACKFLOW	**PRE-TREAT**	**OTHER (EXPLAIN)**
PROPOSED:	_____	_____	_____
AS BUILT:	_____	_____	_____

CITY OF COLTON COMMUNITY DEVELOPMENT DEPARTMENT

LETTER OF AUTHORIZATION

TO: CITY OF COLTON COMMUNITY DEVELOPMENT DEPARTMENT

FROM: (NAME) _____

(ADDRESS) _____

(TEL. NO.) ___(____)_____

RE: APPLICATION NUMBER (S) _____

ASSESSOR PARCEL NO.(S) _____

_____

THIS LETTER IS TO NOTIFY YOU THAT I (WE), AS LEGAL OWNER(S) OF THE PROPERTY DESCRIBED IN EXHIBIT "B" ATTACHED HEREBY AUTHORIZE:

(NAME) _____

(ADDRESS) _____

(TEL. NO.) ___(____)_____

TO FILE AND REPRESENT MY (OUR) INTEREST IN THE ABOVE REFERENCED APPLICATION(S)

SIGNATURE(S) OF LEGAL OWNER(S): DATE

_____ _____

_____ _____

_____ _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS

_____ DAY OF _____, 20___.

_____.

NOTARY PUBLIC

Planning Division Fee Schedule

CITY OF COLTON – DEVELOPMENT SERVICES DEPARTMENT

Request	Fee
Addressing (including change of address)	$ 44
Administrative Review (permits approved by Staff/Director)	$ 144
Annexation Processing (City fee only)	At cost (min. $7,000 deposit)
Appeal - Planning Commission decision to City Council, or Design Review Committee or Planning Director's decision to Planning Commission	$ 400 or original application fee, whichever is less
Architectural and Site Plan Review - Minimum - Structure less than 500 s.f. - Structure 500 s.f. to 14,999 s.f. - Structure 15,000 s.f. to 100,000 s.f. - Structure Over 100,000 s.f. - Manufactured/Mobile Home Review	 $ 256 $ 475 $ 1,200 $ 1,860 $ 2,665 $ 440 per plan type
Building Demolition Review	$ 255
Business Occupancy Permit -Waiver ("Clean & Show"/Business Within a Business)	$ 230 $ 20
Code Amendment (Zoning text or other Municipal Code)	At cost (min. $7,000 deposit)
Code Interpretation - Director - Design Review Committee or Planning Commission	 $ 75 (Letter: $200) $ 400
Conditional Use Permit	$ 3,000
Copies – paper	$ .25/page
Copies – CD/DVD (audio, video or text)	$ 17/disc
Development Agreement	At cost (min. $7,000 deposit)
Environmental Assessment (Initial Study)	$ 1,400 (At cost + 15% administrative fee if prepared by consultant)
Environmental Document (EIR/ND/MND) Contract will be required Full cost deposit required	At cost (+15% administrative fee if prepared by consultant)
Fence Permit (Non-DRC)	$ 20

City of Colton – Development Services Department - *659 N. La Cadena Drive (Civic Center Annex across from City Hall), Colton, CA 92324, (909) 370-5079; Open: 8 a.m. to 4 p.m., Monday through Thursday; planning@ci.colton.ca.us*
FEES ESTABLISHED: January 2013, Resolution No. R-05-13

Request	Fee
General Plan Amendment	At cost (min. $7,000 deposit)
General Plan Map (color, 24" x 36")	$106
Historic Preservation - Certificate of Appropriateness (Minor) - Certificate of Appropriateness (Major) - Certificate of Hardship - Special Review of Potential Historic Resource - Historic Preservation Amendment (e.g. Landmark Designation)	 $ 35 $ 190 $ 100 $ n/c $ 1,200
Home Occupancy Permit (home-based businesses)	$ 20
Landscape & Irrigation Plan Review	$335
Legal Review (if needed in addition to routine review of staff reports, resolutions, conditions and standard agreements)	At cost (deposit)
Lot Line Adjustment	$ 289
Lot Merger	$ 370
Maps - Computer Generated; special order through GIS Program	$ 25 + cost
Modification of Entitlement (Minor) Modification of Entitlement – No Public Hearing (DRC or PC) Modification of Entitlement – With Public Hearing	$ 130 $ 460 $ 675
Pre-Application Review (distribution to DRC members for comment and meeting with applicant) Application Inquiry (Planning – email response)	$ 300 deposit (charged by ½ hour) $ n/c
Public Notice (newspaper publication)	$ 120 or publication cost, whichever is higher
Postage	Based on current rates
Sign Design Review (Freeway-oriented and Electronic)	$ 290
Uniform Sign Program Review	$ 237
Sign Review - Permanent - Temporary	 $125 $ n/c

Request	Fee
Specific Plan Amendment	At cost (deposit) 7,500 ea
Tentative Subdivision (Vesting or Non-Vesting Map) - Tentative Parcel Map - 5 to 29 lots - 30 to 99 lots - 100+ lots or PUD	 $ 1,150 $ 2,000 $ 2,500 $ 3,000
Time Extension of Entitlement (DRC or PC)	$ 366
Variance - Major - Minor	 $ 1,200 $ 400
Zone Change	At cost (deposit) 7,500 ea.
Zoning Confirmation Letter	$35
Zoning Map (Color 24" x 36")	$106

Fees Revised 2-19-13

PERMIT NO.	PRE-000-036
Permit Type:	Pre-Application

PROJECT	TRACT NO.	LOT NO.	APPLICATION DATE	ISSUED DATE	ISSUED BY	PERMIT STATUS
Council District 6			7/25/2016		MS	Open

PROJECT ADDRESS
2501 S Reche Canyon Rd

ASSESSORS PARCEL NO. **0284-211-70-0000** GEO CODE

OWNER
Eskander, Adel & Tahani Rev Tr 10-22
Eskander, Adel & Tahani

MAILING ADDRESS
,

PHONE NO. FAX NO.

APPLICANT
Transtech
Principal

MAILING ADDRESS
413 W Mackay Drive
San Bernardino, CA 92408

PHONE NO. (909) 384-7464 FAX NO.

CONTRACTOR/PROFESSIONAL

MAILING ADDRESS

PHONE NO. FAX NO.
EMAIL ADDRESS:

License No. Type: Expires:

TENANT

MAILING ADDRESS

PHONE NO. FAX NO.

DESCRIPTION
Pre-Application for a neighborhood commercial development in Reche Canyon

VALUATIONS

OCCUPANCY

Construction Type	UOM	# of Units	Value

TOTAL VALUATION $0.00

Construction Type	UOM	# of Units	Value

FEE DETAIL

QTY	UOM	DESC	AMT DUE	AMT PAID
1		Pre-App Review	$400.00	$300.00
Totals for: 3120			$400.00	$300.00

QTY	UOM	DESC	AMT DUE	AMT PAID

Total Fees: $400.00 **Total Amount Paid:** $300.00 **Balance Due:** $100.00

RECEIPTS DETAIL

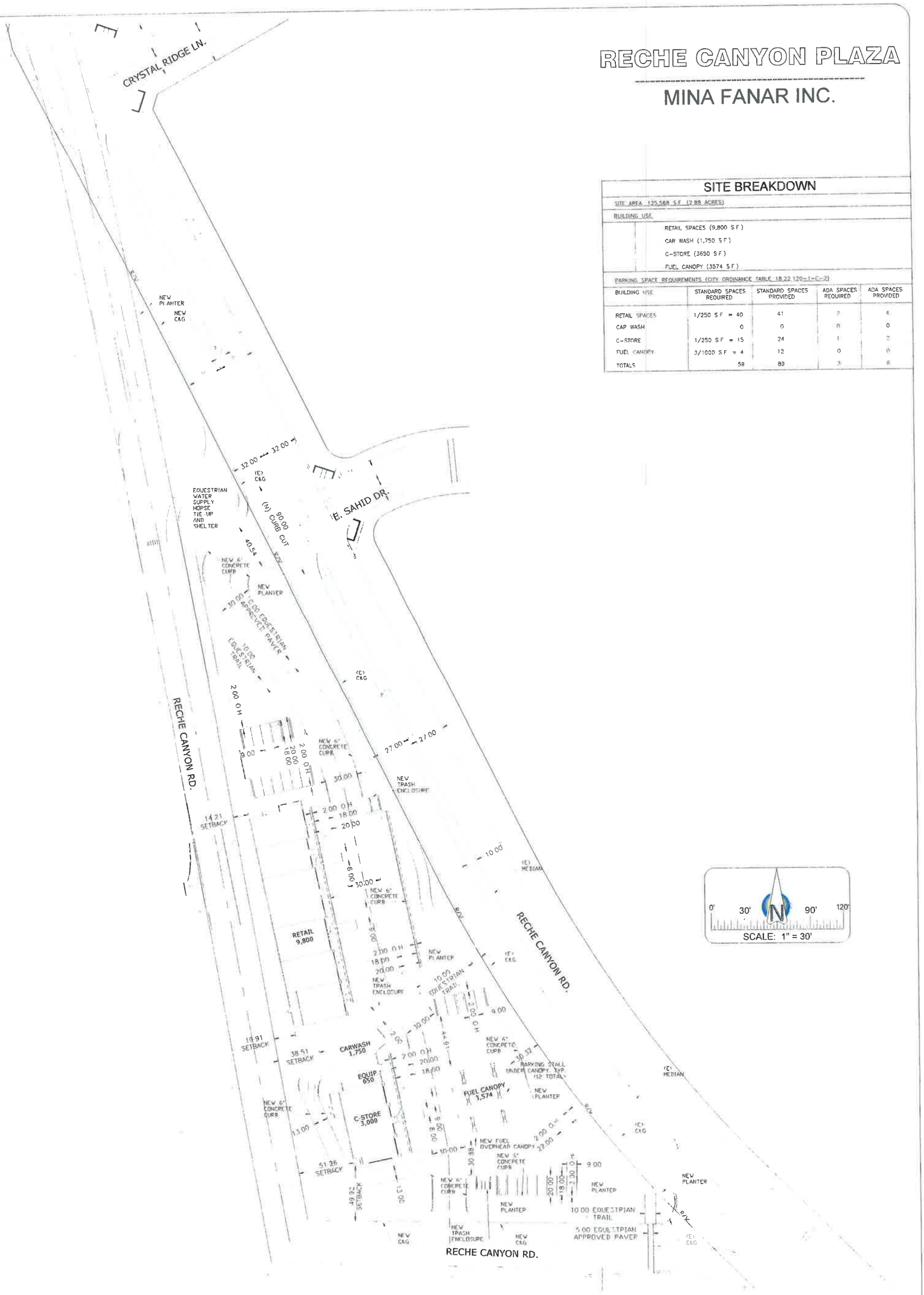
Receipt #	Trans. Date	Name	Payment Type	Payment Type #	Amount
32248	7/25/2016	Fahim S. Tanios	Check	350	$300.00

Applicant's Signature: _____ Date: 7/25/2016

RECHE CANYON PLAZA

MINA FANAR INC.

SITE BREAKDOWN				
SITE AREA 125,568 S.F. (2.88 ACRES)				
BUILDING USE				
RETAIL SPACES (9,800 S.F.) CAR WASH (1,750 S.F.) C-STORE (3650 S.F.) FUEL CANOPY (3574 S.F.)				
PARKING SPACE REQUIREMENTS (CITY ORDINANCE TABLE 18.22.120-1-C-2)				
BUILDING USE	STANDARD SPACES REQUIRED	STANDARD SPACES PROVIDED	ADA SPACES REQUIRED	ADA SPACES PROVIDED
RETAIL SPACES	1/250 S.F. = 40	41	2	4
CAR WASH	0	0	0	0
C-STORE	1/250 S.F. = 15	24	1	2
FUEL CANOPY	3/1000 S.F. = 4	12	0	0
TOTALS	59	89	3	6



RECHE CANYON RD.

MARK	REVISIONS	APPR.	DATE
DESIGNED BY JA/AM	DRAWN BY AC	CHECKED BY RSS	

SEAL-DESIGN ENGINEER

All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of RamCam group, and are intended to be used in connection with this specific project. They shall not be loaned, copied or used for any purpose whatsoever without the written consent of RamCam group. All rights reserved.

RAMCAM ENGINEERING GROUP, INC
470 E. FARMHOUSE AVE. SUITE 101
CORONA, CA 92879
951.734.6530
RAMCAM@RAMCAMGROUP.COM

RECHE CANYON PLAZA
MINA FANAR INC
C/O RAMCAM ENGINEERING GROUP INC.

CITY OF COLTON

SHEET 1
1 OF 1
PLAN NUMBER

RAMCAM Engineering Group, Inc.
Civil Engineering and Land Development Planning
575 E. Parkridge Ave., Suite #101
Corona, CA 92879-5608
Tel: (951) 734-6330

Copyright © RAMCAM 2016

Operational Statement/Project Description

(File Index No. PRE-000-028)

APN's 0284-211-70, 71, 72 and 1178-371-27

The Applicant, Mr. Fahim Tanios, is requesting consideration of the following commercial project to be developed on approximately 2.9 acres located near the intersection of Shadid Drive and Reche Canyon Road.

Project Description

The subject site is located in Planning Area 9 as identified in the Reche Canyon Specific Plan (RCSP).

Phase I:

Development of Convenience Store, consist of 3,650 Sq. Ft. of sales area and storage back room.

- 6-Fuel Dispensers and 3,574 Sq. Ft. Overhead Canopy
- 1,750 Sq. Ft. Express Carwash

The hours of operation for the gas station and C-store are proposed to be 24 hr. There will up to 4 employees on any given 'shift'.

Phase II:

Development of 9,800 Sq. Ft. Retail Building (Neighborhood Commercial Services).

The number of proposed businesses contained in this retail space may range from 3 to 7 individual businesses. There has been no pre-leasing of the proposed retail space, however preliminary indications are that there will be a strong interest from local business owners to occupy this area of the canyon and provide services to the surrounding neighborhood, e.g. small restaurants, gas, food and sundries and other permitted services. (*citation – pg. 37 RCSP*)

Entire Center will include all required Parking Stalls (Regular & ADA), Drive Isles, Landscape and 'Equestrian-style' Trail System along Reche Canyon Road to include Horse Tie-Up as Rest & Shelter and Water Supply.

Proposed Architectural Theme will be 'west coast' Craftsman and Western Architecture to blend with the existing nature and historical values of the canyon.

The size and scale of the proposed development will strive to create a balance between rural and suburban trends found throughout the upper reaches of canyon. In addition, traffic calming influences in site design features will be evident.

- Number of employees within the retail shops are undetermined at this time.

- Hours of operation would typically be 7 AM to 7 PM. There may be a circumstance where a business or operation may wish to remain open into the mid-evening hours, however there are no plans set in place at this time. The owner would like the city to be flexible and work within acceptable and reasonable time limits for hours of operation.

Project Justification

The project application has frequented the Reche Canyon area for many years. He is involved with local faith-based organizations in with the community and some of long time residence. He is an experienced business operator and developer of gas stations/retail development throughout the Inland Empire.

The Reche Canyon Specific Plan (RCSP) contemplates the need for neighborhood retail businesses to help service the local community. Although the primary location for these services is suggested to be at Hunts Lane and Barton Road, references to the existing mobile home park and the retail area currently occupied by "the hitching post "would suggest that providing services to the Canyon are both contemplated and essential. There has been no recent development of retail services in the canyon for decades. This is obvious by the court conditions in the lack of attention to the hitching post into areas surrounding. The introduction to new developments with a quality in a canyon presence that can be enjoyed by both the residence and others is highly desirable.

With respect to the financial aspect of considering development of a small neighborhood center at the proposed location, current conditions demonstrate that there is a high volume of traffic moving through the canyon during peak hours (a.m. and p.m.) and intermittently throughout the weekdays and the weekend. This has been recognized as an opportunity to take advantage of disposable income coming from outside of the community and capturing that income from sales tax and in a small way introducing jobs to the local economy. The secondary aspect of the financial benefits would be the increase in valuation transitioning from private undeveloped residential property (zoned for no more than three homes) to a multi-use retail center.

The presence of a local neighborhood center within the canyon itself will also potentially reduce trips outside of the canyon for certain goods and services.

MONUMENT SIGN

GAS PRICE SIGN

PARCEL 3

OLD RECHE CANYON ROAD

RECHE CANYON ROAD

SHADID DRIVE

PARCEL 1

MONUMENT SIGN

RETAIL 9,800

PARCEL 2

LOT "E"

TRAIL

'RUSTIC' THEMED SEATING AREA

OLD RECHE CANYON ROAD

'NATURE' THEMED SEATING AREA

'HITCHING POST' THEMED PICNIC AREA

CONCEPTUAL LANDSCAPE PLAN

RECHE CANYON PLAZA

CITY OF COLTON

NORTH

0 40' 80' 160'

DATE: 11/1/16
PROJECT #: 161051

COMMUNITY WORKS DESIGN GROUP

4649 Brockton Ave.
Riverside, CA 92506
(951) 369-0700
Fax (951) 369-4039
http://www.comworksdg.com

APPENDIX

F

Proposed Commercial Development
RECHE CANYON RD/CRYSTAL RIDGE LN
COLTON, CA 92324

Inquiry Number: 6672166.5
September 21, 2021

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2017. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2017	Cole Information Services	-	X	X	-
2014	Cole Information Services	-	X	X	-
2009	Cole Information Services	-	X	X	-
2008	Haines Company, Inc.	-	X	X	-
2004	Cole Information Services	-	X	X	-
2003	Haines & Co Publishers	-	X	X	-
2002	SBC PACIFIC BELL	-	X	X	-
1999	Cole Information Services	-	X	X	-
1996	GTE	-	-	-	-
1995	GTE Directories	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1994	Cole Information Services	-	X	X	-
1991	GTE California Incorporated	-	X	X	-
1990	GTE California Incorporated	-	-	-	-
1985	GTE	-	-	-	-
1981	General Telephone Company of California	-	-	-	-
1980	GTE	-	-	-	-
1975	Pacific Telephone Co	-	-	-	-
1970	General Telephone Company of California	-	X	X	-
1965	GTE	-	-	-	-
1964	Luskey Brothers & Co	-	-	-	-
1961	Luskey Brothers& Co Publishers	-	-	-	-
1960	Luskey Brothers & Co Publishers	-	-	-	-
1956	General Telephone Company Publishers	-	-	-	-
1955	Luskey Brothers Co Publishers	-	-	-	-
1951	Los Angeles Directory Co Publishers	-	-	-	-
1950	The Pacific Telephone and Telegraph Co	-	-	-	-
1949	San Bernardino Directory Co. Publishers	-	-	-	-
1946	Los Angeles Directory Company Publishers	-	-	-	-
1945	Southern Califronia Telephone Company	-	-	-	-
1942	San Bernardino Directory Co Publisher	-	-	-	-
1941	Associated Telephone Company Limited	-	-	-	-
1940	Los Angeles Directory Co.	-	-	-	-
1938	Los Angeles Directory Co.	-	-	-	-
1936	San Bernardino Directory Co Publisher	-	-	-	-
1934	Los Angeles Directory Co.	-	-	-	-
1931	Los Angeles Directory Co.	-	-	-	-
1930	San Bernardino Directory Co Publisher	-	-	-	-
1926	Los Angeles Directory Co.	-	-	-	-
1923	Los Angeles Directory Company	-	-	-	-
1922	R.L. Polk & Co Publishers	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

RECHE CANYON RD/CRYSTAL RIDGE LN
COLTON, CA 92324

FINDINGS DETAIL

Target Property research detail.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

RECHE CANYON RD

2571 RECHE CANYON RD

Year	Uses	Source
2014	JAIME DELGADO	Cole Information Services

2594 RECHE CANYON RD

Year	Uses	Source
2017	ANDRES HERNANDEZ	Cole Information Services
2014	JAVIER DELGADILLO	Cole Information Services
2009	JOSHUA KLENSKE	Cole Information Services
2008	KLENSKE Joshua	Haines Company, Inc.
2003	TREBIZO Thomas	Haines & Co Publishers
1999	OCCUPANT UNKNOWN	Cole Information Services
	JOSHUA KLENSKE	Cole Information Services

2651 RECHE CANYON RD

Year	Uses	Source
2017	UHAUL	Cole Information Services
	HITCHIN POST MKT	Cole Information Services
2014	UHAUL	Cole Information Services
	HITCHIN POST MKT	Cole Information Services
2009	U HAUL CO	Cole Information Services
	DA ISLAND TOUCH	Cole Information Services
	HITCHIN POST	Cole Information Services
2008	HITCHIN POST MKT	Haines Company, Inc.
	U HAUL CO	Haines Company, Inc.
2004	HITCHING POST	Cole Information Services
	LANE BURTON	Cole Information Services
	DEBBIE STLOUIS	Cole Information Services
	ROBERT MOORE	Cole Information Services

FINDINGS

Year	Uses	Source
2003	HITCHIN POST MKT	Haines & Co Publishers
2002	U HAULCO	SBC PACIFIC BELL
	HITCHIN POST MKT	SBC PACIFIC BELL

12376 RECHE CANYON RD

Year	Uses	Source
2017	ALBERT DELREAL	Cole Information Services
2014	OCCUPANT UNKNOWN	Cole Information Services
2009	ANDJELA KOVALEV	Cole Information Services
2008	XXXX	Haines Company, Inc.
2004	SAMANTHA DELP	Cole Information Services
2003	TREFZ Gary	Haines & Co Publishers
1999	ANDJELA KOVALEV	Cole Information Services
1970	Watts Gerald O	General Telephone Company of California

12384 RECHE CANYON RD

Year	Uses	Source
1999	OCCUPANT UNKNOWN	Cole Information Services

12400 RECHE CANYON RD

Year	Uses	Source
2017	BRIAN LANGFORD	Cole Information Services
2014	BRIAN LANGFORD	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2008	DONNELLY Mick	Haines Company, Inc.
	DONNELLY Frances J	Haines Company, Inc.
2004	DONALD DONNELLY	Cole Information Services
2003	DONNELLY Mick	Haines & Co Publishers
	DONNELLY Frances J	Haines & Co Publishers
	DONNELLY Donald J	Haines & Co Publishers
2002	Donnelly Mick	SBC PACIFIC BELL
1991	TRASH & TREASURES antiqs	GTE California Incorporated

FINDINGS

12420 RECHE CANYON RD

Year	Uses	Source
1970	Mc Beath Jas	General Telephone Company of California

12422 RECHE CANYON RD

Year	Uses	Source
2017	STEVE JACOBS	Cole Information Services
2014	STEVE JACOBS	Cole Information Services
2009	STEVE JACOBS	Cole Information Services
2008	JACOBS Catherine	Haines Company, Inc.
2004	STEVE JACOBS	Cole Information Services
2003	JACOBS Catherine	Haines & Co Publishers
1999	STEVE JACOBS	Cole Information Services
1970	Gommel Ernest Wm Jr	General Telephone Company of California

12424 RECHE CANYON RD

Year	Uses	Source
2017	ROBERT MASSEY	Cole Information Services
2014	ROBERT MASSEY	Cole Information Services
2009	ROBERT MASSEY	Cole Information Services
2008	XXXX	Haines Company, Inc.
2004	ROSS MASSEY	Cole Information Services
2003	MASSEY Ross	Haines & Co Publishers
	MASSEY Beverly	Haines & Co Publishers
2002	Massey Ross	SBC PACIFIC BELL
	Massey Beverly	SBC PACIFIC BELL
1999	ROBERT MASSEY	Cole Information Services
	ROSS MASSEY	Cole Information Services
1994	MASSEY, ROSS E	Cole Information Services
1991	Virgin Carl W	GTE California Incorporated
1970	Massey Millard	General Telephone Company of California

12427 RECHE CANYON RD

Year	Uses	Source
2017	MATTHEW MCGEE	Cole Information Services

FINDINGS

Year	Uses	Source
2014	MATTHEW MCGEE	Cole Information Services
2009	BRENDA MCGEE	Cole Information Services
2008	MCGEE Brenda	Haines Company, Inc.
2004	BRENDA MCGEE	Cole Information Services
2003	MCGEE Brenda	Haines & Co Publishers
1999	OCCUPANT UNKNOWN	Cole Information Services
	BRENDA MCGEE	Cole Information Services

12430 RECHE CANYON RD

Year	Uses	Source
2017	KIMBERLY SNOW	Cole Information Services
	JOSIE MERIN	Cole Information Services
2014	VIRIDIANA ADAME	Cole Information Services
	JOSIE MERIN	Cole Information Services
2009	JOSIE MERIN	Cole Information Services
	VIRIDIANA ADAME	Cole Information Services
2008	MERIN Juan	Haines Company, Inc.
2004	GABRIEL GARCIA	Cole Information Services
2003	MERIN Juan	Haines & Co Publishers
	SATOSKI Robin	Haines & Co Publishers
2002	RECHE CANYON RD	SBC PACIFIC BELL
	Satoski Robin	SBC PACIFIC BELL
1999	JOSIE MERIN	Cole Information Services
	VIRIDIANA ADAME	Cole Information Services
1994	LEE, E H	Cole Information Services
1970	Lee E Hamilton	General Telephone Company of California

12446 RECHE CANYON RD

Year	Uses	Source
2017	BOBBY RONSPIEZ	Cole Information Services
2008	MASSEY Robert	Haines Company, Inc.
2004	ROBERTA MASSEY	Cole Information Services
2003	MASSEY Roberta	Haines & Co Publishers
2002	Massey Roberta	SBC PACIFIC BELL

FINDINGS

Year	Uses	Source
1999	ROBERTA MASSEY	Cole Information Services
1994	MASSEY, ROBERTA	Cole Information Services
1970	Massey Ross E	General Telephone Company of California

12448 RECHE CANYON RD

Year	Uses	Source
2009	OCCUPANT UNKNOWN	Cole Information Services
2004	OCCUPANT UNKNOWN	Cole Information Services

12450 RECHE CANYON RD

Year	Uses	Source
2003	STOUT Marveen	Haines & Co Publishers
1999	HITCHIN POST MARKET	Cole Information Services
1994	HITCHIN POST MARKET	Cole Information Services
1991	Hitchin Post Mkt	GTE California Incorporated
1970	Hitchin Post Mkt	General Telephone Company of California

12470 RECHE CANYON RD

Year	Uses	Source
2014	JOHN MEEKS	Cole Information Services
2009	CANYON COTTAGE RESTAURANT	Cole Information Services

12472 RECHE CANYON RD

Year	Uses	Source
2004	JERRY MCDOWELL	Cole Information Services
	LARRY DURBIN	Cole Information Services
2003	BYK Jon	Haines & Co Publishers
	PARTIDA Marcus	Haines & Co Publishers
1999	OCCUPANT UNKNOWN	Cole Information Services
1994	CUNNINGHAM, LESLIE M	Cole Information Services
1970	AAA SAN BERNARDIN& HEARING AID CENTER	General Telephone Company of California
	Res	General Telephone Company of California
	Aernethy S H	General Telephone Company of California
	Adams John A	General Telephone Company of California

FINDINGS

Year	*Uses*	*Source*
1970	Adams Lloyd	General Telephone Company of California
	Adams Velma	General Telephone Company of California
	Apostol Jas	General Telephone Company of California
	Austin Gerald F	General Telephone Company of California
	Balley D W	General Telephone Company of California
	Barbarick Alene	General Telephone Company of California
	Barbarick Tom	General Telephone Company of California
	Barnicoat Walter L	General Telephone Company of California
	Berryman Merrill	General Telephone Company of California
	Betty Edw E	General Telephone Company of California
	Blaser E Frank	General Telephone Company of California
	Blazevich Nicholas	General Telephone Company of California
	Brandhorst Christel	General Telephone Company of California
	Bringle Doris	General Telephone Company of California
	Burkiand Arthur R	General Telephone Company of California
	Burlingame Walter E	General Telephone Company of California
	Chambers Wayne W	General Telephone Company of California
	Chodow ski Edw M	General Telephone Company of California
	Clendenon Kirby	General Telephone Company of California
	Combs Alfred	General Telephone Company of California
	Craw ford Mary B	General Telephone Company of California
	Crooke Edgar L	General Telephone Company of California
	Cunningham Gerald W	General Telephone Company of California
	De Roule Josephine	General Telephone Company of California
	Detlor F C	General Telephone Company of California
	Eisenlard C J	General Telephone Company of California
	Fanning E G	General Telephone Company of California
	Fearing R A	General Telephone Company of California
	Foley M M	General Telephone Company of California
	Frame Allen	General Telephone Company of California
	Frank Walter P	General Telephone Company of California
	Franklin Hanrey H	General Telephone Company of California

FINDINGS

Year	*Uses*	*Source*
1970	Funkhouser Elmer W	General Telephone Company of California
	Gambrell Joel C	General Telephone Company of California
	Gillette Harold A	General Telephone Company of California
	Gwynn Bert A	General Telephone Company of California
	Hall Albert	General Telephone Company of California
	Halt Horace A MD	General Telephone Company of California
	Harp Lynn C	General Telephone Company of California
	Harris B E	General Telephone Company of California
	Harrison Evelyn B	General Telephone Company of California
	Hodge Victor N	General Telephone Company of California
	Holbrook Lynn B	General Telephone Company of California
	Holbrook Madeline	General Telephone Company of California
	Hudson Calvin C	General Telephone Company of California
	Hudson Gerald	General Telephone Company of California
	Johannsen Wm A	General Telephone Company of California
	Josephson W P	General Telephone Company of California
	Kent E A	General Telephone Company of California
	LACHMAN M AAA San Bernardino Hearing Aid Center	General Telephone Company of California
	Res	General Telephone Company of California
	Lages Sally	General Telephone Company of California
	Larson Edw H	General Telephone Company of California
	Laughlin Harley	General Telephone Company of California
	Lesher H H	General Telephone Company of California
	Maddox Wesley G	General Telephone Company of California
	Mahlman F F	General Telephone Company of California
	Mark W F	General Telephone Company of California
	Martin D	General Telephone Company of California
	Mattson Leonard P	General Telephone Company of California
	Mc Kegan Martha	General Telephone Company of California
	Mc Nabb Cl	General Telephone Company of California
	Merrill Wm	General Telephone Company of California
	Mieras Catherine R	General Telephone Company of California

FINDINGS

Year	Uses	Source
1970	Moore John	General Telephone Company of California
	Moreland Jas W MD	General Telephone Company of California
	Nadeau Jos A	General Telephone Company of California
	Nemnich Luc Ille Mrs	General Telephone Company of California
	Noblitt Leonard W	General Telephone Company of California
	Palmer Geraldine Mrs	General Telephone Company of California
	Pangborn Leonard o	General Telephone Company of California
	Paza John	General Telephone Company of California
	Phelan Marjorie	General Telephone Company of California
	Pickens Chas A	General Telephone Company of California
	Pillow Delia M	General Telephone Company of California
	Pillow Jas F	General Telephone Company of California
	Preston Paul W	General Telephone Company of California
	Proctor A R	General Telephone Company of California
	Rampley Hubert E	General Telephone Company of California
	Remington Earl A	General Telephone Company of California
	Rogers Walter Otis	General Telephone Company of California
	Royce M P	General Telephone Company of California
	Russell Vaughn G	General Telephone Company of California
	Sager Fern H	General Telephone Company of California
	Saint Clair Paul	General Telephone Company of California
	Sander Raymond H	General Telephone Company of California
	Satterly Fred	General Telephone Company of California
	Schlosser De Wayne	General Telephone Company of California
	Shumw ay Rodney J	General Telephone Company of California
	Simison Robt G	General Telephone Company of California
	Smith Sterling F	General Telephone Company of California
	Stuard W A Jr	General Telephone Company of California
	Tallent U G	General Telephone Company of California
	Taylor Chris Wl	General Telephone Company of California
	Thomas Roy	General Telephone Company of California
	Thurman Wm L	General Telephone Company of California

FINDINGS

Year	Uses	Source
1970	Tidwell A P	General Telephone Company of California
	Tucker Margaret W	General Telephone Company of California
	Underwood M	General Telephone Company of California
	Van Voorhis M J	General Telephone Company of California
	Watts Dennis A	General Telephone Company of California
	Webster Jack	General Telephone Company of California
	White Dolph A	General Telephone Company of California
	Williams Louis L	General Telephone Company of California
	Wilson Thos M	General Telephone Company of California
	Young Archie	General Telephone Company of California

12474 RECHE CANYON RD

Year	Uses	Source
2003	XXXX	Haines & Co Publishers

12477 RECHE CANYON RD

Year	Uses	Source
1999	OCCUPANT UNKNOWN	Cole Information Services

12480 RECHE CANYON RD

Year	Uses	Source
2017	RICHARD BANASIAK	Cole Information Services
2014	DAVID NAVARRO	Cole Information Services
2009	DAVID NAVARRO	Cole Information Services
2008	NAVARRO David A	Haines Company, Inc.
2004	DAVID NAVARRO	Cole Information Services
2003	NAVARRO David A	Haines & Co Publishers
2002	Navarro David A	SBC PACIFIC BELL
1999	DAVID NAVARRO	Cole Information Services
1994	NAVARRO, DAVID A	Cole Information Services

12487 RECHE CANYON RD

Year	Uses	Source
2017	LACRUZ DE	Cole Information Services
2014	LACRUZ DE	Cole Information Services

FINDINGS

Year	Uses	Source
2009	OCCUPANT UNKNOWN	Cole Information Services
2008	DE La Cruz Michael	Haines Company, Inc.
2004	MICHAEL DELACRUZ	Cole Information Services
2003	DELACRUZ Michael	Haines & Co Publishers
1999	OCCUPANT UNKNOWN	Cole Information Services
1994	PIERCE, K	Cole Information Services

12490 RECHE CANYON RD

Year	Uses	Source
2017	MICHAEL VANAKEN	Cole Information Services
2014	MICHAEL VANAKEN	Cole Information Services
2009	MAJELLA VANAKEN	Cole Information Services
2008	VANAKEN Majella	Haines Company, Inc.
2004	MAJELLA VANAKEN	Cole Information Services
2003	VANAKEN Majella	Haines & Co Publishers
1999	OCCUPANT UNKNOWN	Cole Information Services
	MAJELLA VANAKEN	Cole Information Services

SHADID DR

3007 SHADID DR

Year	Uses	Source
2017	JORDAN HALL	Cole Information Services
2014	SHIRLEY HALL	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2008	HALL Shirley	Haines Company, Inc.
2004	MICHAEL HALL	Cole Information Services
2003	HALL Michael	Haines & Co Publishers

3008 SHADID DR

Year	Uses	Source
2017	RICHARD KARR	Cole Information Services
2014	RICHARD KARR	Cole Information Services
2009	RICHARD KARR	Cole Information Services
2008	KARR Richard	Haines Company, Inc.

FINDINGS

Year	Uses	Source
2004	RICHARD KARR	Cole Information Services
2003	KARR Richard	Haines & Co Publishers
2002	Karr Richard	SBC PACIFIC BELL
1999	RICHARD KARR	Cole Information Services

3009 SHADID DR

Year	Uses	Source
2014	DAVID ROY	Cole Information Services
2009	DAVID ROY	Cole Information Services
2008	ROY Michael	Haines Company, Inc.
2004	MICHAEL ROY	Cole Information Services
	ACCURATE MEDI TRANS SERVICE	Cole Information Services
1999	DAVID ROY	Cole Information Services

3010 SHADID DR

Year	Uses	Source
2017	GUILLEN VERONICA	Cole Information Services
2014	DELGADILLO RAMIRO	Cole Information Services
2009	RAMIRO DELGADILLO	Cole Information Services
2008	RAMIREZ Fernando	Haines Company, Inc.
	MORA Domilila	Haines Company, Inc.
	QUINONEZ LAWN SERVICE	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
2003	ROTAN Edward	Haines & Co Publishers
1999	RAMIRO DELGADILLO	Cole Information Services
1994	ROTAN, EDWARD E	Cole Information Services
1991	Rotan Edward E	GTE California Incorporated

3011 SHADID DR

Year	Uses	Source
2014	WILLIAMS CLAY	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2008	PITTS Forrest	Haines Company, Inc.
2003	WILLIAMS Donald M	Haines & Co Publishers

FINDINGS

Year	Uses	Source
2003	WILLIAMS Donald M	Haines & Co Publishers
2002	Williams Donald M	SBC PACIFIC BELL
	Williams Donald M	SBC PACIFIC BELL
1994	WILLIAMS, DONALD M	Cole Information Services
1991	Williams Donald M	GTE California Incorporated

3012 SHADID DR

Year	Uses	Source
2017	RENE VAZQUEZ	Cole Information Services
2014	JOSE VASQUEZ	Cole Information Services
2009	MOBILE NURSERY	Cole Information Services
	JOSE VASQUEZ	Cole Information Services
2008	VAZQUEZ Jose	Haines Company, Inc.
2004	BRUCE RUMINSKI	Cole Information Services
2003	VAZOUEZ Jose	Haines & Co Publishers
	RUMINSKI Bruce	Haines & Co Publishers
	RUMINSKI Bruce	Haines & Co Publishers
1999	JOSE VASQUEZ	Cole Information Services
1991	Ruminski Bruce	GTE California Incorporated

3013 SHADID DR

Year	Uses	Source
2017	MICHAEL LUDWIG	Cole Information Services
2014	MICHAEL LUDWIG	Cole Information Services
2009	MICHAEL LUDWIG	Cole Information Services
2004	MICHAEL LUDWIG	Cole Information Services
1999	MICHAEL LUDWIG	Cole Information Services
1994	COFFIN, LARRY C	Cole Information Services

3014 SHADID DR

Year	Uses	Source
2014	JULIE TELLEZ	Cole Information Services
2009	LARRY HARDING	Cole Information Services
2008	XXXX	Haines Company, Inc.

FINDINGS

Year	Uses	Source
1999	LARRY HARDING	Cole Information Services
1991	Jabbour Antoine G	GTE California Incorporated

3015 SHADID DR

Year	Uses	Source
2017	JAN MACK	Cole Information Services
2014	JAN MACK	Cole Information Services
2009	JAN MACK	Cole Information Services
2004	JAN MACK	Cole Information Services
	TWILA SHEPHERD	Cole Information Services
1999	JAN MACK	Cole Information Services

3016 SHADID DR

Year	Uses	Source
2017	EDUARDO DELACRUZ	Cole Information Services
2014	SIMPLICIA ADAJAR	Cole Information Services
2009	SIMPLICIA ADAJAR	Cole Information Services
2004	GREGORY ADAJAR	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	SIMPLICIA ADAJAR	Cole Information Services

3017 SHADID DR

Year	Uses	Source
2017	MICHAEL MOYERS	Cole Information Services
2014	MICHAEL MOYERS	Cole Information Services
2009	MICHAEL MOYERS	Cole Information Services
2004	MICHAEL MOYERS	Cole Information Services
1999	MICHAEL MOYERS	Cole Information Services

3018 SHADID DR

Year	Uses	Source
2017	JENNIFER WRIGHT	Cole Information Services
2014	KEVIN VIERA	Cole Information Services
2009	JENNIFER LIFFITON	Cole Information Services
2004	JENNIFER WRIGHT	Cole Information Services

FINDINGS

Year	Uses	Source
1999	JENNIFER LIFFITON	Cole Information Services

3019 SHADID DR

Year	Uses	Source
2014	LEONARDO RAMIREZ	Cole Information Services
2009	RAMIRO RAMIREZ	Cole Information Services
2004	OCCUPANT UNKNOWN	Cole Information Services
1999	RAMIRO RAMIREZ	Cole Information Services

3020 SHADID DR

Year	Uses	Source
2017	MARCOS DRAGONETTI	Cole Information Services
2014	LIDIA MATURAN	Cole Information Services
2009	LIDIA MATURAN	Cole Information Services
	MARDEL TRUCKING	Cole Information Services
2004	CHRISTIAN YANKOFSKY	Cole Information Services
	MARDEL TRUCKING CO	Cole Information Services
1999	LIDIA MATURAN	Cole Information Services

3021 SHADID DR

Year	Uses	Source
2017	ROSEMARY SHADID	Cole Information Services
2014	ROSEMARY SHADID	Cole Information Services
2009	PAUL SHADID	Cole Information Services
2004	PAUL SHADID	Cole Information Services
1999	PAUL SHADID	Cole Information Services

3022 SHADID DR

Year	Uses	Source
2017	ERIK GARWICK	Cole Information Services
2014	ERIK GARWICK	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services

3024 SHADID DR

Year	Uses	Source
2017	PRICILLA GUTIERREZ	Cole Information Services

FINDINGS

Year	Uses	Source
2014	SYLVIA CARLAN	Cole Information Services
2009	JOE GUTIERREZ	Cole Information Services
2004	PURE GUTIERREZ	Cole Information Services
	MCC IMMIGRATION SERVICES	Cole Information Services
1999	JOE GUTIERREZ	Cole Information Services

3026 SHADID DR

Year	Uses	Source
2017	MICHAEL DIMMITT	Cole Information Services
2014	MICHAEL DIMMITT	Cole Information Services
2009	MICHAEL DIMMITT	Cole Information Services
2004	OCCUPANT UNKNOWN	Cole Information Services
1999	MICHAEL DIMMITT	Cole Information Services

FINDINGS

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
12376 RECHE CANYON RD	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12376 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12384 RECHE CANYON RD	2017, 2014, 2009, 2008, 2004, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12400 RECHE CANYON RD	2008, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12400 RECHE CANYON RD	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12420 RECHE CANYON RD	2017, 2014, 2009, 2008, 2004, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12422 RECHE CANYON RD	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12422 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12424 RECHE CANYON RD	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12424 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12427 RECHE CANYON RD	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12427 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12430 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12430 RECHE CANYON RD	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
12446 RECHE CANYON RD	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12446 RECHE CANYON RD	2014, 2009, 2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12448 RECHE CANYON RD	2017, 2014, 2008, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12450 RECHE CANYON RD	2017, 2014, 2009, 2008, 2004, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12450 RECHE CANYON RD	2017, 2014, 2009, 2008, 2004, 2002, 1999, 1996, 1995, 1994, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12470 RECHE CANYON RD	2017, 2008, 2004, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12472 RECHE CANYON RD	2017, 2014, 2009, 2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12472 RECHE CANYON RD	2017, 2014, 2009, 2008, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12474 RECHE CANYON RD	2017, 2014, 2009, 2008, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12477 RECHE CANYON RD	2017, 2014, 2009, 2008, 2004, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12480 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12480 RECHE CANYON RD	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12487 RECHE CANYON RD	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12487 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12490 RECHE CANYON RD	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
12490 RECHE CANYON RD	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
2571 RECHE CANYON RD	2017, 2009, 2008, 2004, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
2594 RECHE CANYON RD	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
2594 RECHE CANYON RD	2008, 2004, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
2651 RECHE CANYON RD	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
2651 RECHE CANYON RD	2008, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3007 SHADID DR	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3007 SHADID DR	2008, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3008 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3008 SHADID DR	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3009 SHADID DR	2017, 2014, 2009, 2004, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3009 SHADID DR	2017, 2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3010 SHADID DR	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3010 SHADID DR	2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3011 SHADID DR	2017, 2014, 2009, 2004, 1999, 1996, 1995, 1994, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3011 SHADID DR	2017, 2008, 2004, 2003, 2002, 1999, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3012 SHADID DR	2017, 2014, 2009, 2004, 2002, 1999, 1996, 1995, 1994, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922

FINDINGS

Address Researched	Address Not Identified in Research Source
3012 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3013 SHADID DR	2008, 2003, 2002, 1996, 1995, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3014 SHADID DR	2017, 2008, 2004, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3014 SHADID DR	2017, 2014, 2009, 2004, 2003, 2002, 1999, 1996, 1995, 1994, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3015 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3016 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3017 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3018 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3019 SHADID DR	2017, 2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3020 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3021 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3022 SHADID DR	2008, 2004, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3024 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922
3026 SHADID DR	2008, 2003, 2002, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
RECHE CANYON RD/CRYSTAL RIDGE LN	2017, 2014, 2009, 2008, 2004, 2003, 2002, 1999, 1996, 1995, 1994, 1991, 1990, 1985, 1981, 1980, 1975, 1970, 1965, 1964, 1961, 1960, 1956, 1955, 1951, 1950, 1949, 1946, 1945, 1942, 1941, 1940, 1938, 1936, 1934, 1931, 1930, 1926, 1923, 1922

APPENDIX

G

Proposed Commercial Development

RECHE CANYON RD/CRYSTAL RIDGE LN

COLTON, CA 92324

Inquiry Number: 6672166.3

September 21, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/21/21

Site Name:

Proposed Commercial Develop
RECHE CANYON RD/CRYSTA
COLTON, CA 92324
EDR Inquiry # 6672166.3

Client Name:

Salem Engineering Group
4729 West Jacquelyn Ave
Fresno, CA 93722
Contact: Reily Rivera

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Salem Engineering Group were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

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Certification # 468E-43E3-9E69

PO # NA

Project 3-421-0940

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Sanborn® Library search results

Certification #: 468E-43E3-9E69

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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APPENDIX

H

Proposed Commercial Development
RECHE CANYON RD/CRYSTAL RIDGE LN
COLTON, CA 92324

Inquiry Number: 6672166.2s
September 21, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Physical Setting Source Map	A-11
Physical Setting Source Map Findings	A-13
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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

RECHE CANYON RD/CRYSTAL RIDGE LN
COLTON, CA 92324

COORDINATES

Latitude (North):	34.0266740 - 34° 1' 36.02''
Longitude (West):	117.2791310 - 117° 16' 44.87''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	474230.3
UTM Y (Meters):	3764954.2
Elevation:	1241 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5620416 SAN BERNARDINO SOUTH, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
RECHE CANYON RD/CRYSTAL RIDGE LN
COLTON, CA 92324

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	GOMMEL E W JR & BARB	12450 RECHE CNYN DR	EDR Hist Auto	Lower	42, 0.008, SW
A2	HITCHIN POST	12450 RECHE CANYON R	SWEEPS UST, HIST UST	Lower	42, 0.008, SW
B3	AT&T CALIFORNIA - LB	2641 RECHE CANYON RD	San Bern. Co. Permit, CERS	Higher	147, 0.028, SE
4	JUAN MERIN	12430 RECHE CANYON R	RCRA NonGen / NLR	Higher	202, 0.038, South
B5	HITCHIN POST	2651 RECHE CANYON RD	CERS HAZ WASTE, CERS TANKS, San Bern. Co. Permit,...	Higher	212, 0.040, SE
B6	HITCHIN POST	2651 RECHE CANYON RD	UST	Higher	212, 0.040, SE
B7	HITCHIN POST	2651 RECHE CANYON RD	RCRA NonGen / NLR	Higher	212, 0.040, SE
8	ACCURATE MEDI TRANS	3009 SHADID DR	EDR Hist Auto	Higher	352, 0.067, NNE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS Engineering Controls Sites List
US INST CONTROLS Institutional Controls Sites List

Federal ERNS list

ERNS Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF Solid Waste Information System

State and tribal leaking storage tank lists

LUST Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST Leaking Underground Storage Tanks on Indian Land
CPS-SLIC Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST Underground Storage Tank Listing
AST Aboveground Petroleum Storage Tank Facilities
INDIAN UST Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP Voluntary Cleanup Program Properties
INDIAN VCP Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT Waste Management Unit Database
SWRCY Recycler Database
HAULERS Registered Waste Tire Haulers Listing
INDIAN ODI Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 Torres Martinez Reservation Illegal Dump Site Locations
ODI Open Dump Inventory

IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register
PFAS	PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

CA FID UST	Facility Inventory Database

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System
CERS	CERS
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)
HWTS	Hazardous Waste Tracking System
MINES MRDS	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

EDR Hist Cleaner..... EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF..... Recovered Government Archive Solid Waste Facilities List
RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HITCHIN POST	2651 RECHE CANYON RD	SE 0 - 1/8 (0.040 mi.)	B6	33
Database: UST, Date of Government Version: 06/03/2021				
Facility Id: FA0003818				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 04/19/2021 has revealed that there

is 1 CERS HAZ WASTE site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HITCHIN POST	***2651 RECHE CANYON RD***	***SE 0 - 1/8 (0.040 mi.)***	***B5***	***16***

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HITCHIN POST	***12450 RECHE CANYON R***	***SW 0 - 1/8 (0.008 mi.)***	***A2***	***9***
Status: A				
Tank Status: A				
Comp Number: 1019				

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 is 1 HIST UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HITCHIN POST	***12450 RECHE CANYON R***	***SW 0 - 1/8 (0.008 mi.)***	***A2***	***9***
Facility Id: 00000001019				

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 04/19/2021 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HITCHIN POST	***2651 RECHE CANYON RD***	***SE 0 - 1/8 (0.040 mi.)***	***B5***	***16***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/22/2021 has revealed that

there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JUAN MERIN EPA ID:: CAC003020345	12430 RECHE CANYON R	S 0 - 1/8 (0.038 mi.)	4	14
HITCHIN POST EPA ID:: CAL000430679	2651 RECHE CANYON RD	SE 0 - 1/8 (0.040 mi.)	B7	33

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 05/19/2021 has revealed that there are 2 San Bern. Co. Permit sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AT&T CALIFORNIA - LB Facility Status: ACTIVE Facility Id: FA0018450	***2641 RECHE CANYON RD***	***SE 0 - 1/8 (0.028 mi.)***	***B3***	***11***
HITCHIN POST Facility Status: ACTIVE Facility Id: FA0003818	***2651 RECHE CANYON RD***	***SE 0 - 1/8 (0.040 mi.)***	***B5***	***16***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 2 EDR Hist Auto sites within approximately 0.125 miles of the target property.

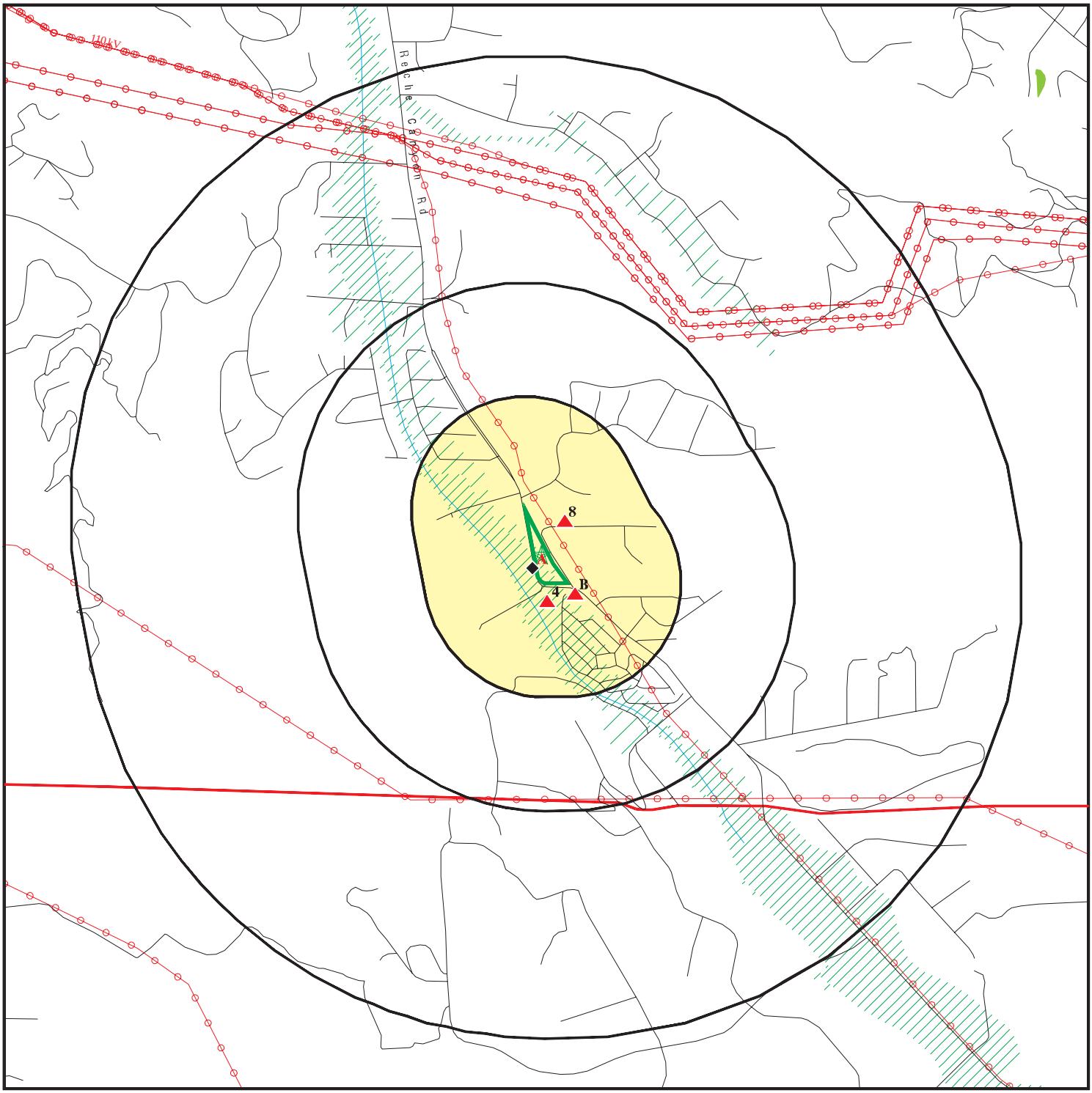
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ACCURATE MEDI TRANS	3009 SHADID DR	NNE 0 - 1/8 (0.067 mi.)	8	36

Lower Elevation	Address	Direction / Distance	Map ID	Page
GOMMEL E W JR & BARB	12450 RECHE CNYN DR	SW 0 - 1/8 (0.008 mi.)	A1	9

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6672166.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA
County Boundary
Power transmission lines
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory
State Wetlands

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Proposed Commercial Development	CLIENT:	Salem Engineering Group
ADDRESS:	RECHE CANYON RD/CRYSTAL RIDGE LN COLTON CA 92324	CONTACT:	Reily Rivera
LAT/LONG:	34.026674 / 117.279131	INQUIRY #:	6672166.2s
		DATE:	September 21, 2021 5:47 pm

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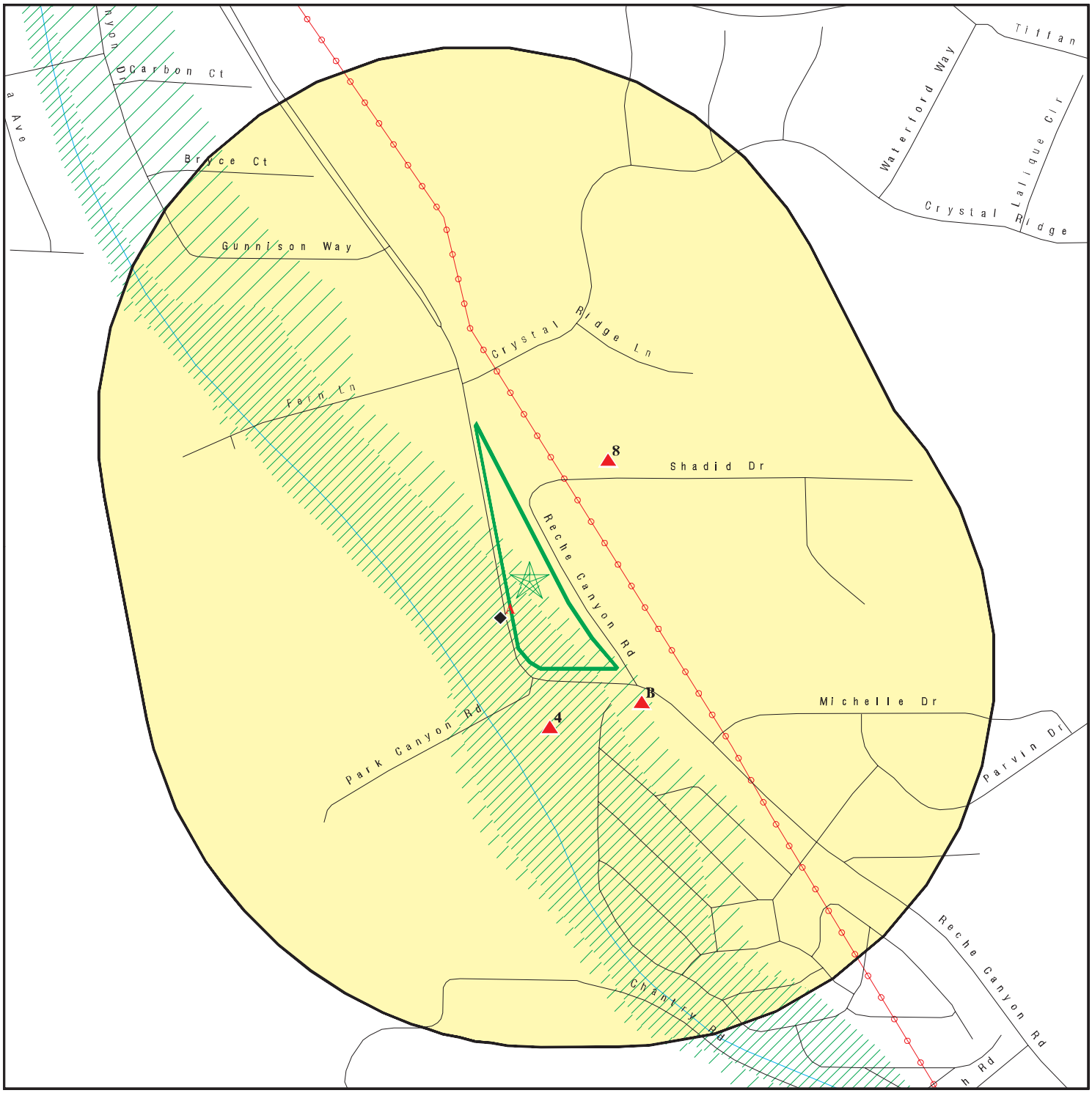
DETAIL MAP - 6672166.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Proposed Commercial Development	CLIENT:	Salem Engineering Group
ADDRESS:	RECHE CANYON RD/CRYSTAL RIDGE LN COLTON CA 92324	CONTACT:	Reily Rivera
		INQUIRY #:	6672166.2s
LAT/LONG:	34.026674 / 117.279131	DATE:	September 21, 2021 5:52 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	0	NR	NR	NR	1
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		1	0	NR	NR	NR	1
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		1	0	NR	NR	NR	1
HIST UST	0.250		1	0	NR	NR	NR	1
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		1	0	NR	NR	NR	1
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		2	0	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
San Bern. Co. Permit	0.250		2	0	NR	NR	NR	2
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		2	NR	NR	NR	NR	2
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	11	0	0	0	0	11

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
SW
< 1/8
0.008 mi.
42 ft.

GOMMEL E W JR & BARBARA MRS E
12450 RECHE CNYN DR
COLTON, CA 92324

Site 1 of 2 in cluster A

EDR Hist Auto **1020388119**
N/A

Relative:
Lower

Actual:
1238 ft.

EDR Hist Auto

Year:	Name:	Type:
1969	GOMMEL E W JR & BARBARA MRS E	Grocery Stores
1970	GOMMEL E W JR & BARBARA MRS E	Grocery Stores
1971	GOMMEL E W JR & BARBARA MRS E	Grocery Stores
1972	GOMMEL E W JR & BARBARA MRS E	Grocery Stores
1973	GOMMEL E W JR & BARBARA MRS E	Grocery Stores
1974	GOMMEL E W JR & BARBARA	Grocery Stores
1975	GOMMELL E W JR & BARBARA	Grocery Stores
1976	GOMMEL E W JR & BARBARA	Grocery Stores
1977	HITCHING-LUCERNE PARTNERSHIP	Grocery Stores
1978	HITCHING-LUCERNE PARTNERSHIP	Grocery Stores
1979	HITCHIN-LUCERNE PARTNERSHIP	Grocery Stores

A2
SW
< 1/8
0.008 mi.
42 ft.

HITCHIN POST
12450 RECHE CANYON ROAD
COLTON, CA 92324

Site 2 of 2 in cluster A

SWEEPS UST **U001574679**
HIST UST **N/A**

Relative:
Lower

Actual:
1238 ft.

SWEEPS UST:

Name:	HITCHIN POST
Address:	12450 RECHE CANYON RD
City:	COLTON
Status:	Active
Comp Number:	1019
Number:	9
Board Of Equalization:	44-019785
Referral Date:	07-28-92
Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	1
SWRCB Tank Id:	36-000-001019-000001
Tank Status:	A
Capacity:	3000
Active Date:	07-01-85
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Name:	HITCHIN POST
Address:	12450 RECHE CANYON RD
City:	COLTON
Status:	Active
Comp Number:	1019
Number:	9
Board Of Equalization:	44-019785
Referral Date:	07-28-92
Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	2
SWRCB Tank Id:	36-000-001019-000002

HITCHIN POST (Continued) **U001574679**

Tank Status: A
Capacity: 3000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Name: HITCHIN POST
Address: 12450 RECHE CANYON RD
City: COLTON
Status: Active
Comp Number: 1019
Number: 9
Board Of Equalization: 44-019785
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-001019-000003
Tank Status: A
Capacity: 3000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

Name: HITCHIN POST
Address: 12450 RECHE CANYON RD
City: COLTON
Status: Active
Comp Number: 1019
Number: 9
Board Of Equalization: 44-019785
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 4
SWRCB Tank Id: 36-000-001019-000004
Tank Status: A
Capacity: 3000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

HIST UST:
Name: HITCHIN POST
Address: 12450 RECHE CANYON ROAD
City,State,Zip: COLTON, CA 92324
File Number: 0002A0F7
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002A0F7.pdf
Region: STATE
Facility ID: 00000001019
Facility Type: Gas Station

HITCHIN POST (Continued) **U001574679**

Other Type:	Not reported
Contact Name:	KEN STOUT
Telephone:	7148257923
Owner Name:	KEN STOUT
Owner Address:	12450 RECHE CANYON ROAD
Owner City,St,Zip:	COLTON, CA 92324
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	3/16"
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	3/16"
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	3/16"
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	3/16"
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

B3 **AT&T CALIFORNIA - LB208** **San Bern. Co. Permit** **S124443623**
SE **2641 RECHE CANYON RD** **CERS** **N/A**
< 1/8 **COLTON, CA 92324**
0.028 mi.
147 ft. **Site 1 of 4 in cluster B**

Relative:
Higher

Actual:
1258 ft.

San Bern. Co. Permit:

Name:	AT&T CALIFORNIA - LB208
Address:	2641 RECHE CANYON RD
City,State,Zip:	COLTON, CA 92324
Region:	SAN BERNARDINO
Facility ID:	FA0018450

AT&T CALIFORNIA - LB208 (Continued) **S124443623**

Owner: Pacific Bell Telephone Company dba AT&T California
Permit Number: PT0039866
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 01/31/2021

CERS:
Name: AT&T CALIFORNIA - LB208
Address: 2641 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Site ID: 551966
CERS ID: 10818874
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-04-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Pacific Bell Telephone Company dba AT&T California
Entity Title: Not reported
Affiliation Address: 308 S. Akard St., 17th Floor
Affiliation City: Dallas
Affiliation State: TX
Affiliation Country: United States
Affiliation Zip: 75202
Affiliation Phone: (214) 464-1712

Affiliation Type Desc: Parent Corporation
Entity Name: Pacific Bell Telephone Company dba AT&T California
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Document Preparer
Entity Name: Peter Burnell, Sigma Consultants, Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: Jeremy McGrue

AT&T CALIFORNIA - LB208 (Continued) **S124443623**

Entity Title:	National EPCRA Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	308 S. Akard St., 17th Floor
Affiliation City:	Dallas
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75202
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	AT&T California
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(800) 566-9347
Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401
Affiliation Type Desc:	Environmental Contact
Entity Name:	AT&T EH&S Hotline - Option #1
Entity Title:	Not reported
Affiliation Address:	308 S. Akard St., 17th Floor
Affiliation City:	Dallas
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75202
Affiliation Phone:	Not reported

4
South
< 1/8
0.038 mi.
202 ft.

JUAN MERIN
12430 RECHE CANYON RD
COLTON, CA 92324

RCRA NonGen / NLR

1025840740
CAC003020345

Relative:
Higher

Actual:
1249 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		2019-06-19 00:00:00.0
Handler Name:	JUAN MERIN	
Handler Address:		12430 RECHE CANYON RD
Handler City,State,Zip:		COLTON, CA 92324
EPA ID:		CAC003020345
Contact Name:		JUAN MERIN
Contact Address:		12430 RECHE CANYON RD
Contact City,State,Zip:		COLTON, CA 92324
Contact Telephone:		951-310-0820
Contact Fax:		Not reported
Contact Email:		KC@AQHIINC.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		12430 RECHE CANYON RD
Mailing City,State,Zip:		COLTON, CA 92324
Owner Name:		JUAN MERIN
Owner Type:		Other
Operator Name:		JUAN MERIN
Operator Type:		Other
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		Yes
Universal Waste Destination Facility:		Yes
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

JUAN MERIN (Continued) **1025840740**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2019-06-27 14:20:11.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	JUAN MERIN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	12430 RECHE CANYON RD
Owner/Operator City,State,Zip:	COLTON, CA 92324
Owner/Operator Telephone:	951-310-0820
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JUAN MERIN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	12430 RECHE CANYON RD
Owner/Operator City,State,Zip:	COLTON, CA 92324
Owner/Operator Telephone:	951-310-0820
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

JUAN MERIN (Continued) **1025840740**

Historic Generators:
Receive Date: 2019-06-19 00:00:00.0
Handler Name: JUAN MERIN
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 56299
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

B5 **HITCHIN POST** **CERS HAZ WASTE** **S105482039**
SE **2651 RECHE CANYON RD** **CERS TANKS** **N/A**
< 1/8 **COLTON, CA 92324** **San Bern. Co. Permit**
0.040 mi. **CERS**
212 ft. **Site 2 of 4 in cluster B** **HWTS**

Relative: Higher
Actual: 1260 ft.

CERS HAZ WASTE:
Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Site ID: 36593
CERS ID: 10040383
CERS Description: Hazardous Waste Generator

CERS TANKS:
Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Site ID: 36593
CERS ID: 10040383
CERS Description: Underground Storage Tank

San Bern. Co. Permit:
Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Region: SAN BERNARDINO
Facility ID: FA0003818
Owner: D&B Brothers
Permit Number: PT0030443

HITCHIN POST (Continued) **S105482039**

Permit Category: WASTE INCIDENTAL UST OPERATION ONLY -PER YEAR
Facility Status: ACTIVE
Expiration Date: 08/31/2021

Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Region: SAN BERNARDINO
Facility ID: FA0003818
Owner: D&B Brothers
Permit Number: PT0002549
Permit Category: HAZMAT HANDLER, UST ONLY - PER YEAR
Facility Status: ACTIVE
Expiration Date: 08/31/2021

Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Region: SAN BERNARDINO
Facility ID: FA0003818
Owner: D&B Brothers
Permit Number: PT0011772
Permit Category: REGULAR UST ANNUAL INSPECTION (PER TANK)
Facility Status: ACTIVE
Expiration Date: 08/31/2021

Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Region: SAN BERNARDINO
Facility ID: FA0003818
Owner: D&B Brothers
Permit Number: PT0011773
Permit Category: REGULAR UST ANNUAL INSPECTION (PER TANK)
Facility Status: ACTIVE
Expiration Date: 08/31/2021

CERS:
Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
City,State,Zip: COLTON, CA 92324
Site ID: 36593
CERS ID: 10040383
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 06-17-2016
Citation: 23 CCR 16 2630(d), 2643(f), 2644.1(a)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2630(d), 2643(f), 2644.1(a)(2)
Violation Description: Failure to demonstrate to the CUPA that the equipment and methods used to monitor the UST system are certified by an independent third-party as complying with the standards set forth in 23 CCR 2643(f).
Violation Notes: Returned to compliance on 06/02/2017. 09/26/2017: FACILITY PULLED PERMIT ON 06/02/17 AND INSPECTION WAS WITNESSED BY SHANE BARBAO

HITCHIN POST (Continued) **S105482039**

09/01/17. OBSERVED ALL VR208 SENSORS AFFIXED PERMANENTLY TO ALL TANK TOP SUMP WALLS WITH A BOLT/SCREW. PERMANENTLY AFFIXING VR208 SENSOR TO THE SUMP WALLS WITH THE USE OF A BOLT/SCREW IS NOT APPROVED/ACCEPTED BY THIS DEPARTMENT. SUBMIT PLANS FOR REPAIR OF THE SUMP WALL CAUSED BY PERMANENTLY AFFIXING LIQUID SENSORS USING BOLTS/SCREWS AND PROVIDE APPROVED/ACCEPTABLE MECHANISM IN MAINTAINING SENSORS IN PROPER POSITION/LOCATION. OBTAIN REPAIR/MODIFICATION PERMIT ADDRESSING THE PREVIOUSLY NOTED DEFICIENCIES FROM THIS DEPARTMENT WITHIN 30 DAYS.

Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 04-01-2014
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to submit, obtain approval, or maintain a complete/accurate response plan.
Violation Notes: Returned to compliance on 02/09/2015. Upload this information in CERS
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-22-2018
Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description: Failure to maintain records of repairs, lining, and upgrades on site, or off site if approved by the UPA, for the life of the UST.
Violation Notes: Returned to compliance on 10/15/2018. OBSERVATION: CERS INFORMATION IS EITHER INACCURATE OR INCOMPLETE -Underground Storage Tanks: Submitted: 2/2/18: Reviewed. Rejected. See violation 303 Tank 1 G Vapor Recovery Primary Containment: change from none to fiberglass Tank 2 Monitoring Plan Mechanical Line Leak Detector: manufacturer of FX1V is Veeder Root not Red Jacket COMPLIANCE: WITHIN 30 DAYS UPDATE CERS
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-17-2019
Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description: Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes: OBSERVATION: Failure to label one steel 55 gallon drum. Cashier states it is SB989 test water from last inspection. Failure to dispose of a full drum within accumulation time. COMPLIANCE: Label the drum and dispose within 30 days. Provide copy of disposal receipt with signed copy of Certificate of Compliance within 30 days.
Violation Division: San Bernardino County Fire Department

HITCHIN POST (Continued) **S105482039**

Violation Program: HW
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 04-01-2014
Citation: 23 CCR 16 2638 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2638
Violation Description: Failure to test leak detection equipment as required every 12 months (VPH, sensor, LLD, ATG, etc.) and/or submit monitoring system certification to the CUPA within 30 days of completion of the test
Violation Notes: Returned to compliance on 05/29/2015. Monitoring Certification was due 3/8/2014. Monitoring Certification is required within 365 days.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-25-2017
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 09/08/2017. CHANGE OF OWNERSHIP HAS OCCURRED CLOSE OUT VIOLATIONS PER ADRIAN SAGUAN CFO LETTER DATED 5/18/2016 SUBMITTED IS NOT CURRENT AND NEEDS TO BE UPDATED. CFO LETTER MUST BE REVIEWED AND UPDATED ANNUALLY WHEN USED AS PART OF THE MECHANISM OF FINANCIAL RESPONSIBILITY FOR UST SYSTEM. UPDATE CFO LETTER AND SUBMIT ON LINE IN CERS WITHIN 30 DAYS.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-27-2016
Citation: 23 CCR 16 2715 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715
Violation Description: Failure to comply with one or more of the designated operator monthly inspection requirements: failed to inspect the monthly alarm history report; attach a copy of the alarm history; failed to inspect for the presence of liquid or debris in the spill container/spill bucket and under dispenser containment; failed to inspect the under dispenser containment to ensure that monitoring equipment is placed in the proper position; failure to inspect for liquid or debris in the containment sump where an alarm occurred or for which there is no record of a service visit; or failure to check that all testing and maintenance has been completed and documented.
Violation Notes: Returned to compliance on 06/17/2016. NOVEMBER UST DESIGNATED OPERATOR INSPECTION REPORT FAILS TO DOCUMENT THE OCCURRENCE OF A SYSTEM COLD START AND REPLACEMENT OF CPU BOARD. SUBMIT A SIGNED STATEMENT WITHIN 30 DAYS TO THIS DEPARTMENT INDICATING WHY THE PREVIOUSLY MENTIONED OCCURRENCE WAS OMITTED FROM THE MONTHLY INSPECTION REPORT AND WHAT ACTIONS WILL BE TAKEN TO PREVENT IT FROM RECURRING. REVIEW OF THE UST D.O. MONTHLY REPORT INDICATE REVISIONS MADE TO INCLUDE THE PREVIOUSLY MENTIONED OMISSION. VIOLATION WAS OBSERVED TO BE CORRECTED AT TIME OF

HITCHIN POST (Continued) **S105482039**

INSPECTION ON 6/17/2016. 8/18/2016 AS
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-17-2019
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 05/17/2019. clarification that last submittal corrected incorrect ID OBSERVATION: Review of the DTSC website for EPA ID number CAL000247865 Indicated that This ID Number was not found in this system. COMPLIANCE: Reactive or Obtain DTSC number. Provide fax or copy of reactivation within 30 days. Correct in CERS.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 04-01-2014
Citation: HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description: Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes: Returned to compliance on 02/09/2015. Upload documentation to CERS
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 04-01-2014
Citation: HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
Violation Description: UST Program - Administration/Documentation - General
Violation Notes: Returned to compliance on 02/09/2015. Failure to submit a signed Designated UST Operator Statement (23 CCR 2715(a)) Upload documentation to CERS
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-25-2017
Citation: 23 CCR 16 2630(d), 2643(f), 2644.1(a)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2630(d), 2643(f), 2644.1(a)(2)
Violation Description: Failure to demonstrate to the CUPA that the equipment and methods used to monitor the UST system are certified by an independent third-party as complying with the standards set forth in 23 CCR 2643(f).

HITCHIN POST (Continued) **S105482039**

Violation Notes:	Returned to compliance on 06/02/2017. 09/26/17: FACILITY PULLED A PERMIT WITH THIS DEPARTMENT AND INSPECTION WAS CONDUCTED ON 09/01/17 WITNESSED BY SHANE BARBAO OBSERVED ALL VR208 SENSORS AFFIXED PERMANENTLY TO ALL TANK TOP SUMP WALLS WITH A BOLT/SCREW. PERMANENTLY AFFIXING VR208 SENSOR TO THE SUMP WALLS WITH THE USE OF A BOLT/SCREW IS NOT APPROVED/ACCEPTED BY THIS DEPARTMENT. SUBMIT PLANS FOR REPAIR OF THE SUMP WALL CAUSED BY PERMANENTLY AFFIXING LIQUID SENSORS USING BOLTS/SCREWS AND PROVIDE APPROVED/ACCEPTABLE MECHANISM IN MAINTAINING SENSORS IN PROPER POSITION/LOCATION. OBTAIN REPAIR/MODIFICATION PERMIT ADDRESSING THE PREVIOUSLY NOTED DEFICIENCIES FROM THIS DEPARTMENT WITHIN 30 DAYS. VIOLATION #0375 IS A REPEATED VIOLATION NOTED ON THE PREVIOUS INSPECTION REPORT DATED 6/17/2016 AND IS NOW A CLASS 1 VIOLATION.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	36593
Site Name:	HITCHIN POST
Violation Date:	05-25-2017
Citation:	HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description:	Hazardous Waste Generator Program - Administration/Documentation - General
Violation Notes:	Returned to compliance on 09/26/2017. Failure to retain Hazardous Waste Manifests for at least 3 years (CCR 66262.40(a)) CHANGE OF OWNERSHIP HAS OCCURRED. CLOSE OUT VIOLATION PER ADRIAN SAGUAN. Failure to retain Hazardous Waste Manifests for at least 3 years (CCR 66262.40(a)) 09/28/17: NEW OWNER TOOK OVER BUSINESS IN JULY. VIOLATION WAS ISSUED TO PREVIOUS OWNER, THEREFORE CLOSE OUT VIOLATION PER ASAGUAN Failure to retain Hazardous Waste Manifests for at least 3 years (CCR 66262.40(a)) NO HAZARDOUS WASTE MANIFESTS ON SITE FOR THE DISPOSAL OF HAZARDOUS WASTE. IMMEDIATELY OBTAIN HAZARDOUS WASTE MANIFEST FOR THE LAST 3 YEARS AND SUBMIT COPIES TO THIS DEPARTMENT FOR REVIEW.
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS
Site ID:	36593
Site Name:	HITCHIN POST
Violation Date:	05-29-2015
Citation:	Un-Specified
Violation Description:	UST Program - Administration/Documentation - For use of Local Ordinance only
Violation Notes:	Returned to compliance on 05/18/2016. Failure to submit a signed Designated UST Operator Statement (23 CCR 2715(a)) CERS WAS UPDATED ON 5/18/2016 WHICH INCLUDED THE UST DESIGNATED OPERATOR STATEMENT. 5/20/2016 AS OBSERVATION: FACILITY CHANGED DESIGNATED OPERATORS. THE DESIGNATED OPERATOR STATEMENT HAS NOT BEEN UPDATED AND SUBMITTED TO CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM. (CERS). COMPLIANCE REQUIREMENT: UPDATE THE DESIGNATED OPERATOR STATEMENT AND SUBMIT TO THE CERS.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS

HITCHIN POST (Continued) **S105482039**

Site ID:	36593
Site Name:	HITCHIN POST
Violation Date:	05-17-2019
Citation:	HSC 6.5 25123.3(h)(1) - California Health and Safety Code, Chapter 6.5, Section(s) 25123.3(h)(1)
Violation Description:	Failure to send hazardous waste offsite for treatment, storage, or disposal within 180 days (or 270 days if waste is transported over 200 miles) for a generator who generates less than 1000 kilogram per month if all of the following conditions are met: (1) The quantity of hazardous waste accumulated onsite never exceeds 6,000 kilograms. (2) The generator complies with the requirements of 40 Code of Federal Regulations section 262.34(d), (e) and (f). (3) The generator does not hold acutely hazardous waste or extremely hazardous waste in an amount greater than one kilogram for more than 90 days.
Violation Notes:	OBSERVATION: Failure to label one steel 55 gallon drum. Cashier states it is SB989 test water from last inspection. Failure to dispose of a full drum within accumulation time. COMPLIANCE: Label the drum and dispose within 30 days. Provide copy of disposal receipt with signed copy of Certificate of Compliance within 30 days.
Violation Division:	San Bernardino County Fire Department
Violation Program:	HW
Violation Source:	CERS

Site ID:	36593
Site Name:	HITCHIN POST
Violation Date:	05-29-2015
Citation:	23 CCR 16 2632, 2634, 2636, 2666 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632, 2634, 2636, 2666
Violation Description:	Failure of the leak detection equipment to have an audible and visual alarm as required.
Violation Notes:	Returned to compliance on 08/18/2015. OBSERVATION: THE AUDIBLE/VISUAL ALARMS WERE NOT FUNCTIONING AT THE VEEDER ROOT MONITOR WHEN THE MONITORING EQUIPMENT WERE TESTED IN LIQUID. COMPLIANCE REQUIREMENT: WITHIN 30 DAYS, REPAIR THE VEEDER ROOT MONITOR AND SCHEDULE AN INSPECTION WITH THIS DEPARTMENT TO VERIFY COMPLIANCE.
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS

Site ID:	36593
Site Name:	HITCHIN POST
Violation Date:	04-01-2014
Citation:	HSC 6.7 25286(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25286(a)
Violation Description:	Failure to prepare, maintain, and submit accurate CUPA UST Operating Permit Application for Facility information and/or Tank information.
Violation Notes:	Returned to compliance on 02/09/2015. As of January 1, 2013, this information must be uploaded to CERS
Violation Division:	San Bernardino County Fire Department
Violation Program:	UST
Violation Source:	CERS

Site ID:	36593
Site Name:	HITCHIN POST
Violation Date:	05-27-2016
Citation:	HSC 6.7 29291(b) - California Health and Safety Code, Chapter 6.7, Section(s) 29291(b)

HITCHIN POST (Continued) **S105482039**

Violation Description: Failure of the UST system to be designed and constructed with a monitoring system capable of detecting the entry of the hazardous substance stored in the primary containment into the secondary containment.
Violation Notes: Returned to compliance on 06/17/2016. THE UST MONITORING SYSTEM WAS COLD STARTED WITH THE REPLACEMENT OF A "USED" CPU BOARD ON OCTOBER 30, 2015, WITHOUT NOTIFICATIONS MADE TO THIS DEPARTMENT, PER UST TECHNICIAN JOHN REILLY. PER UST TECHNICIAN JOHN REILLY, HE INFORMED UST OPERATORS THAT A "COLD START" PERMIT WAS REQUIRED FOR THE WORK COMPLETED. FAILING TO NOTIFY THIS DEPARTMENT OF A SYSTEM COLD START, REPLACEMENT OF THE MONITOR CPU WITH A "USED" CPU, AND COMPLETING WORK ON THE UST SYSTEM WITHOUT PERMIT/DEPARTMENT APPROVAL ARE NOT ACCEPTABLE PRACTICES. SUBMIT PLANS FOR UST COLD START WITH REPLACEMENT OF CPU TO THIS DEPARTMENT WITHIN 7 DAYS. PERMIT IS SUBJECT TO DOUBLE FEES. COLD START PERMIT OBTAINED AND JOB CARD WAS FINALED ON 6/17/2016. 8/18/2016 AS
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-25-2017
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 09/08/2017. CHANGE OF OWNERSHIP HAS OCCURRED, CLEAR VIOLATIONS PER ADRIAN SAGUAN. ANNUAL REVIEW AND CERTIFICATION OF THE HAZARDOUS MATERIALS BUSINESS PLAN HAS NOT BEEN COMPLETED. IMMEDIATELY REVIEW/CERTIFY HAZARDOUS MATERIALS BUSINESS PLAN ON LINE IN CERS WITHIN 30 DAYS.
Violation Division: San Bernardino County Fire Department
Violation Program: HMRRP
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-27-2016
Citation: HSC 6.7 25299 - California Health and Safety Code, Chapter 6.7, Section(s) 25299
Violation Description: Failure to comply with one or more of the operating permit conditions.
Violation Notes: Returned to compliance on 06/17/2016. THE UST MONITORING SYSTEM WAS COLD STARTED WITH THE REPLACEMENT OF A "USED" CPU BOARD ON OCTOBER 30, 2015, WITHOUT NOTIFICATIONS MADE TO THIS DEPARTMENT, PER UST TECHNICIAN JOHN REILLY. PER UST TECHNICIAN JOHN REILLY, HE INFORMED UST OPERATORS THAT A "COLD START" PERMIT WAS REQUIRED FOR THE WORK COMPLETED. FAILING TO NOTIFY THIS DEPARTMENT OF A SYSTEM COLD START, REPLACEMENT OF THE MONITOR CPU WITH A "USED" CPU, AND COMPLETING WORK ON THE UST SYSTEM WITHOUT PERMIT/DEPARTMENT APPROVAL ARE NOT ACCEPTABLE PRACTICES. SUBMIT PLANS FOR UST COLD START WITH REPLACEMENT OF CPU TO THIS DEPARTMENT WITHIN 7 DAYS. PERMIT IS SUBJECT TO DOUBLE FEES. COLD START PERMIT OBTAINED AND JOB CARD WAS FINALED ON 6/17/2016. 8/18/2016 AS
Violation Division: San Bernardino County Fire Department
Violation Program: UST

HITCHIN POST (Continued) **S105482039**

Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-25-2017
Citation: HSC 6.7 25292.1(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25292.1(a)
Violation Description: Failure to operate the UST system to prevent unauthorized releases including leaks, spills, and/or overfills.
Violation Notes: Returned to compliance on 06/02/2017. 09/26/17: CLOSE OUT VIOLATION, FACILITY PULL PERMIT 06/02/17 AND INSPECTION WAS CONDUCTED ON 09/01/17 BY SHANE BARBAO ACTIVE FUEL LEAK WAS OBSERVED INSIDE DISPENSER #3/4. IMMEDIATELY REPAIR FUEL LEAK INSIDE DISPENSER #3/4 AND SUBMIT DOCUMENTATION OF REPAIR TO THIS DEPARTMENT WITHIN 7 DAYS. FAILURE TO COMPLY WILL RESULT IN FURTHER ENFORCEMENT.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-27-2016
Citation: Un-Specified
Violation Description: UST Program - Administration/Documentation - For use of Local Ordinance only
Violation Notes: Returned to compliance on 06/17/2016. Failure to obtain a UST construction permit and plan approval (CHSC 25270.4.5(a)) Failure to obtain a UST construction permit and plan approval (SBCC 23.0603(a)) THE UST MONITORING SYSTEM WAS COLD STARTED WITH THE REPLACEMENT OF A "USED" CPU BOARD ON OCTOBER 30, 2015, WITHOUT NOTIFICATIONS MADE TO THIS DEPARTMENT, PER UST TECHNICIAN JOHN REILLY. PER UST TECHNICIAN JOHN REILLY, HE INFORMED UST OPERATORS THAT A "COLD START" PERMIT WAS REQUIRED FOR THE WORK COMPLETED. FAILING TO NOTIFY THIS DEPARTMENT OF A SYSTEM COLD START, REPLACEMENT OF THE MONITOR CPU WITH A "USED" CPU, AND COMPLETING WORK ON THE UST SYSTEM WITHOUT PERMIT/DEPARTMENT APPROVAL ARE NOT ACCEPTABLE PRACTICES. SUBMIT PLANS FOR UST COLD START WITH REPLACEMENT OF CPU TO THIS DEPARTMENT WITHIN 7 DAYS. PERMIT IS SUBJECT TO DOUBLE FEES. COLD START PERMIT OBTAINED AND JOB CARD WAS FINALED ON 6/17/2016. 8/18/2016 AS
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 04-01-2014
Citation: 23 CCR 16 2637 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637
Violation Description: Failure to comply with one or more of the following: conduct secondary containment testing, within six months of installation and every 36 months thereafter, conducted in accordance with proper practices, protocols, or test methods.
Violation Notes: Returned to compliance on 05/29/2015. Three year test was due 10/22/13. Schedule within 7 days to avoid enforcement. Complete witnessed test within 30 days.
Violation Division: San Bernardino County Fire Department
Violation Program: UST

HITCHIN POST (Continued) **S105482039**

Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-25-2017
Citation: HSC 6.7 Multiple - California Health and Safety Code, Chapter 6.7, Section(s) Multiple
Violation Description: UST Program - Administration/Documentation - General - Must include violation description, proper statute and regulation citation in the "comment" section.
Violation Notes: Returned to compliance on 09/08/2017. Failure to correct past UST violations within 30 days of receiving a UST inspection report (23 CCR 2712(f)) CHANGE OF OWNERSHIP HAS OCCURRED, CLOSE OUT VIOLATION PER ADRIAN SAGUAN. Failure to correct past UST violations within 30 days of receiving a UST inspection report (23CCR 2712(f)) 09/08/17-FACILITY SUBMITTED IN CERS ON 09/08/17 VIOLATION #0375 IS A REPEATED VIOLATION NOTED ON THE PREVIOUS INSPECTION REPORT DATED 6/17/2016 AND IS NOW A CLASS 1 VIOLATION.
Violation Division: San Bernardino County Fire Department
Violation Program: UST
Violation Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Violation Date: 05-25-2017
Citation: HSC 6.5 Multiple - California Health and Safety Code, Chapter 6.5, Section(s) Multiple
Violation Description: Hazardous Waste Generator Program - Operations/Maintenance - General
Violation Notes: Returned to compliance on 05/25/2017. Failure to label hazardous waste containers (CCR 66262.34(f)(3)) NO HAZARDOUS WASTE LABELS WERE AVAILABLE FOR WASTE ACCUMULATION CONTAINERS. CORRECTED AT TIME OF INSPECTION.
Violation Division: San Bernardino County Fire Department
Violation Program: HW
Violation Source: CERS

Evaluation:
Eval General Type: Other/Unknown
Eval Date: 03-21-2014
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: PER DIRECTION OF JOSE MAY, DRIVE BY FACILITY TO ISSUE 7 DAY NOTICE OF VIOLATION FOR UNLAWFULLY CEASING OPERATION OF UST. ARRIVED ON SITE AND OBSERVED UST'S ARE IN OPERATIONAL.
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-01-2014
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: mont cert hitch post
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

HITCHIN POST (Continued) **S105482039**

Eval General Type: Other/Unknown
Eval Date: 05-11-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: ISSUED 7 DAY NOV FOR OUTSTANDING VIOLATIONS NOT CORRECTED.
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-17-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: HITCHIN POST AND CERS PROCESSING
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-17-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: HITCHIN POST CERS REFLECTS INVENTORY
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-17-2019
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: HITCHIN POST 3 YEAR OPE - IN PROGRESS
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-17-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: HITCHIN POST HW
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-22-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: UST Mont Cert with SB989 with K. Rahman 9.0
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: Yes

HITCHIN POST (Continued) **S105482039**

Eval Type: Routine done by local agency
Eval Notes: HAZARDOUS MATERIALS INSPECTION - UST ONLY
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: HAZARDOUS WASTE GENERATOR INSPECTION.
Eval Division: San Bernardino County Fire Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: UST ANNUAL INSPECTION WITH MONITORING SYSTEM CERTICATION.
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-27-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: HAZARDOUS MATERIALS HANDLER INSPECTION - UST ONLY
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-27-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: ANNUAL UST INSPECTION WITH MONITORING SYSTEM CERTIFICATION.
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-28-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-28-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department

HITCHIN POST (Continued) **S105482039**

Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-28-2020
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-29-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: UST HANDLER INSPECTION
Eval Division: San Bernardino County Fire Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-29-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: SB989 TESTS
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-29-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: UST MONITORING CERTIFICATION
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 06-17-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: UST RE-INSPECTION WITH PLAN CHECK FINAL INSPECTION FOR PERMIT LOG#053116-02/SR0110917.
Eval Division: San Bernardino County Fire Department
Eval Program: UST
Eval Source: CERS

Enforcement Action:
Site ID: 36593
Site Name: HITCHIN POST
Site Address: 2651 RECHE CANYON RD
Site City: COLTON
Site Zip: 92324
Enf Action Date: 04-01-2014
Enf Action Type: Notice of Violation (Unified Program)

HITCHIN POST (Continued) **S105482039**

Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Site Address: 2651 RECHE CANYON RD
Site City: COLTON
Site Zip: 92324
Enf Action Date: 05-25-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Site Address: 2651 RECHE CANYON RD
Site City: COLTON
Site Zip: 92324
Enf Action Date: 05-25-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Site Address: 2651 RECHE CANYON RD
Site City: COLTON
Site Zip: 92324
Enf Action Date: 05-25-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 36593
Site Name: HITCHIN POST
Site Address: 2651 RECHE CANYON RD
Site City: COLTON
Site Zip: 92324
Enf Action Date: 05-27-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: San Bernardino County Fire Department
Enf Action Program: UST
Enf Action Source: CERS

HITCHIN POST (Continued) **S105482039**

Site ID:	36593
Site Name:	HITCHIN POST
Site Address:	2651 RECHE CANYON RD
Site City:	COLTON
Site Zip:	92324
Enf Action Date:	05-29-2015
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	San Bernardino County Fire Department
Enf Action Program:	UST
Enf Action Source:	CERS

Site ID:	36593
Site Name:	HITCHIN POST
Site Address:	2651 RECHE CANYON RD
Site City:	COLTON
Site Zip:	92324
Enf Action Date:	06-17-2016
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	San Bernardino County Fire Department
Enf Action Program:	UST
Enf Action Source:	CERS

Coordinates:

Site ID:	36593
Facility Name:	HITCHIN POST
Env Int Type Code:	HWG
Program ID:	10040383
Coord Name:	Not reported
Ref Point Type Desc:	Unknown
Latitude:	34.025238
Longitude:	-117.277763

Affiliation:

Affiliation Type Desc:	Environmental Contact
Entity Name:	Fadi Ballat
Entity Title:	Not reported
Affiliation Address:	2651 RECHE CANYON RD
Affiliation City:	COLTON
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92324
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Fadi Ballat
Entity Title:	Owner
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

HITCHIN POST (Continued) **S105482039**

Affiliation Type Desc:	UST Tank Operator
Entity Name:	D&B Brothers Inc.
Entity Title:	Not reported
Affiliation Address:	2651 Reche Canyon Rd.
Affiliation City:	Colton
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92324
Affiliation Phone:	(760) 963-4694

Affiliation Type Desc:	Operator
Entity Name:	D&B Brothers Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 963-4694

Affiliation Type Desc:	CUPA District
Entity Name:	San Bernardino County Fire
Entity Title:	Not reported
Affiliation Address:	620 South E Street
Affiliation City:	San Bernardino
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92415-0153
Affiliation Phone:	(909) 386-8401

Affiliation Type Desc:	Document Preparer
Entity Name:	Dawn Harkey
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	D&B Brothers
Entity Title:	Not reported
Affiliation Address:	2651 RECHE CANYON RD
Affiliation City:	COLTON
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92324
Affiliation Phone:	(760) 963-4694

Affiliation Type Desc:	Parent Corporation
Entity Name:	APPLE VALLEY MOBIL
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported

HITCHIN POST (Continued) **S105482039**

Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 2651 Reche Canyon Rd.
Affiliation City: Colton
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92324
Affiliation Phone: Not reported

Affiliation Type Desc: UST Property Owner Name
Entity Name: D&B Brothers Inc.
Entity Title: Not reported
Affiliation Address: 2651 Reche Canyon Rd.
Affiliation City: Colton
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92324
Affiliation Phone: (760) 963-4694

Affiliation Type Desc: UST Tank Owner
Entity Name: D&B Brothers
Entity Title: Not reported
Affiliation Address: 2651 Reche Canyon Rd.
Affiliation City: Colton
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92324
Affiliation Phone: (760) 963-4694

HWTS:
Name: HITCHIN POST
Address: 2651 RECHE CANYON RD
Address 2: Not reported
City,State,Zip: COLTON, CA 92324
EPA ID: CAL000430679
Inactive Date: 06/30/2020
Create Date: 09/14/2017
Last Act Date: 01/04/2021
Mailing Name: Not reported
Mailing Address: 2651 RECHE CANYON RD
Mailing Address 2: Not reported
Mailing City,State,Zip: COLTON, CA 92324
Owner Name: FADI BALLAT
Owner Address: 2651 RECHE CANYON RD
Owner Address 2: Not reported
Owner City,State,Zip: COLTON, CA 92324
Contact Name: FADI BALLAT
Contact Address: 2651 RECHE CANYON RD
Contact Address 2: Not reported
City,State,Zip: COLTON, CA 92324

NAICS:

HITCHIN POST (Continued) **S105482039**

EPA ID:	CAL000430679
Create Date:	2017-09-14 10:13:59.337
NAICS Code:	44719
NAICS Description:	Other Gasoline Stations
Issued EPA ID Date:	2017-09-14 10:13:59.33300
Inactive Date:	2020-06-30 00:00:00
Facility Name:	HITCHIN POST
Facility Address:	2651 RECHE CANYON RD
Facility Address 2:	Not reported
Facility City:	COLTON
Facility County:	Not reported
Facility State:	CA
Facility Zip:	92324

B6 **HITCHIN POST** **UST** **U004263779**
SE **2651 RECHE CANYON RD** **N/A**
< 1/8 **COLTON, CA 92324**
0.040 mi.
212 ft. **Site 3 of 4 in cluster B**

Relative: UST:
Higher

Name:	HITCHIN POST
Address:	2651 RECHE CANYON RD
City,State,Zip:	COLTON, CA 92324
Facility ID:	FA0003818
Permitting Agency:	San Bernardino County Fire Department
Latitude:	34.025242
Longitude:	-117.277779

Actual:
1260 ft.

B7 **HITCHIN POST** **RCRA NonGen / NLR** **1024862168**
SE **2651 RECHE CANYON RD** **CAL000430679**
< 1/8 **COLTON, CA 92324**
0.040 mi.
212 ft. **Site 4 of 4 in cluster B**

Relative: RCRA NonGen / NLR:
Higher

Date Form Received by Agency:		2017-09-14 00:00:00.0
Handler Name:	HITCHIN POST	
Handler Address:		2651 RECHE CANYON RD
Handler City,State,Zip:		COLTON, CA 92324
EPA ID:		CAL000430679
Contact Name:		FADI BALLAT
Contact Address:		2651 RECHE CANYON RD
Contact City,State,Zip:		COLTON, CA 92324
Contact Telephone:		760-963-4694
Contact Fax:		Not reported
Contact Email:		BALLATF@YAHOO.COM
Contact Title:		Not reported
EPA Region:		09
Land Type:		Not reported
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities

Actual:
1260 ft.

HITCHIN POST (Continued) **1024862168**

State District Owner:	Not reported
State District:	Not reported
Mailing Address:	2651 RECHE CANYON RD
Mailing City,State,Zip:	COLTON, CA 92324
Owner Name:	FADI BALLAT
Owner Type:	Other
Operator Name:	FADI BALLAT
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2018-09-07 19:36:36.0
Recognized Trader-Importer:	No

HITCHIN POST (Continued) **1024862168**

Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	FADI BALLAT
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	2651 RECHE CANYON RD
Owner/Operator City,State,Zip:	COLTON, CA 92324
Owner/Operator Telephone:	760-963-4694
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	FADI BALLAT
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	2651 RECHE CANYON RD
Owner/Operator City,State,Zip:	COLTON, CA 92324
Owner/Operator Telephone:	760-963-4694
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2017-09-14 00:00:00.0
Handler Name: HITCHIN POST	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	44719
NAICS Description:	OTHER GASOLINE STATIONS

Facility Has Received Notices of Violations:

Violations:	No Violations Found

HITCHIN POST (Continued) **1024862168**

Evaluation Action Summary:
Evaluations: No Evaluations Found

8
NNE
< 1/8
0.067 mi.
352 ft.

ACCURATE MEDI TRANS SERVICES **EDR Hist Auto** **1020370120**
3009 SHADID DR **N/A**
COLTON, CA 92324

Relative:
Higher

Actual:
1256 ft.

EDR Hist Auto

Year:	Name:	Type:
2003	ACCURATE MEDI TRANS SERVICES	Automotive Transmission Repair Shops
2004	ACCURATE MEDI TRANS SERVICES	Automotive Transmission Repair Shops
2005	ACCURATE MEDI TRANS SERVICES	Automotive Transmission Repair Shops
2006	ACCURATE MEDI TRANS SERVICES	Automotive Transmission Repair Shops

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/23/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
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: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 82

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/05/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/23/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/23/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/14/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 61

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/23/2021
Date Data Arrived at EDR: 04/23/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/22/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database 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: 04/23/2021
Date Data Arrived at EDR: 04/23/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/22/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an 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: 05/10/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 07/27/2021
Number of Days to Update: 77

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

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: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 05/20/2021
Date Data Arrived at EDR: 06/04/2021
Date Made Active in Reports: 08/30/2021
Number of Days to Update: 87
Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90
Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/23/2021
Date Data Arrived at EDR: 04/23/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/22/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

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: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 06/17/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 09/13/2021
Number of Days to Update: 88

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/10/2021
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 06/04/2021
Date Data Arrived at EDR: 06/04/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 84

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 11/23/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
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: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 77

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/23/2021
Date Data Arrived at EDR: 04/23/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/22/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

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

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 77

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/04/2021
Date Data Arrived at EDR: 06/04/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/07/2021
Date Made Active in Reports: 07/23/2021
Number of Days to Update: 77

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/14/2021
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
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

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 05/28/2021
Date Made Active in Reports: 08/20/2021
Number of Days to Update: 84

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 05/28/2021
Date Made Active in Reports: 08/20/2021
Number of Days to Update: 84

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/24/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 85

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/13/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 04/04/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/04/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/17/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/16/2021
Number of Days to Update: 87

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/19/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/07/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/14/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/05/2021
Number of Days to Update: 50

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/11/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 61

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/14/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/03/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 07/14/2021
Date Made Active in Reports: 07/16/2021
Number of Days to Update: 2

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/12/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/03/2021
Date Data Arrived at EDR: 05/25/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 78

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 05/27/2021
Date Made Active in Reports: 06/10/2021
Number of Days to Update: 14

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 06/15/2021
Date Data Arrived at EDR: 06/16/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 62

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/05/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 91

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/07/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2021
Date Data Arrived at EDR: 04/06/2021
Date Made Active in Reports: 06/25/2021
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/01/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 81

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/13/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/17/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 09/14/2021
Number of Days to Update: 89

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/13/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/19/2021
Date Made Active in Reports: 08/05/2021
Number of Days to Update: 78

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 05/28/2021
Date Made Active in Reports: 08/20/2021
Number of Days to Update: 84

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 05/26/2021
Date Made Active in Reports: 08/18/2021
Number of Days to Update: 84

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 78

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/17/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/16/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 04/14/2021
Date Data Arrived at EDR: 04/15/2021
Date Made Active in Reports: 07/06/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/13/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 74

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/04/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 07/27/2021
Number of Days to Update: 74

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/13/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 07/27/2021
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/13/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/05/2021
Date Data Arrived at EDR: 04/06/2021
Date Made Active in Reports: 06/23/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/01/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
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: 05/06/2021
Date Data Arrived at EDR: 05/28/2021
Date Made Active in Reports: 08/20/2021
Number of Days to Update: 84

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 07/27/2021
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/13/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 05/28/2021
Date Made Active in Reports: 08/20/2021
Number of Days to Update: 84

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 06/04/2021
Date Data Arrived at EDR: 06/04/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 84

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2021
Date Data Arrived at EDR: 03/16/2021
Date Made Active in Reports: 06/01/2021
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/25/2021
Number of Days to Update: 83

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/01/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
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: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
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: 09/14/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 06/07/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 81

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 05/19/2021
Date Data Arrived at EDR: 05/19/2021
Date Made Active in Reports: 08/12/2021
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/24/2021
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/03/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/25/2021
Number of Days to Update: 83
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55
Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29
Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3
Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2021
Date Data Arrived at EDR: 04/09/2021
Date Made Active in Reports: 04/20/2021
Number of Days to Update: 11
Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 03/17/2021
Date Data Arrived at EDR: 03/18/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 7

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 08/05/2021
Date Data Arrived at EDR: 08/06/2021
Date Made Active in Reports: 09/17/2021
Number of Days to Update: 42

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 06/15/2021
Date Data Arrived at EDR: 06/16/2021
Date Made Active in Reports: 07/02/2021
Number of Days to Update: 16

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/21/2021
Date Data Arrived at EDR: 04/22/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 81

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 12/17/2020
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 04/16/2021
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/12/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 75

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 04/09/2021
Date Data Arrived at EDR: 06/23/2021
Date Made Active in Reports: 09/17/2021
Number of Days to Update: 86

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/23/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 2

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/14/2021
Date Data Arrived at EDR: 04/15/2021
Date Made Active in Reports: 07/06/2021
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 04/22/2021
Date Data Arrived at EDR: 04/30/2021
Date Made Active in Reports: 07/19/2021
Number of Days to Update: 80

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 07/06/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 08/18/2021
Number of Days to Update: 6

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 09/07/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/12/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 75

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/06/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/08/2021
Date Data Arrived at EDR: 04/13/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 76

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/12/2021
Date Data Arrived at EDR: 04/13/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 76

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2021
Date Data Arrived at EDR: 02/18/2021
Date Made Active in Reports: 05/10/2021
Number of Days to Update: 81

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/06/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 02/04/2021
Date Data Arrived at EDR: 04/16/2021
Date Made Active in Reports: 04/21/2021
Number of Days to Update: 5

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 07/12/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 11

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 09/14/2021
Number of Days to Update: 89

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/02/2021
Date Data Arrived at EDR: 04/16/2021
Date Made Active in Reports: 07/06/2021
Number of Days to Update: 81

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/06/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 03/24/2021
Date Data Arrived at EDR: 04/07/2021
Date Made Active in Reports: 06/24/2021
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/13/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 73

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/09/2021
Next Scheduled EDR Contact: 11/28/2021
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/06/3021
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/23/2021
Date Data Arrived at EDR: 06/23/2021
Date Made Active in Reports: 06/24/2021
Number of Days to Update: 1

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 04/29/2021
Date Made Active in Reports: 07/15/2021
Number of Days to Update: 77

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 04/30/2021
Date Made Active in Reports: 07/19/2021
Number of Days to Update: 80

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/29/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/12/2021
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/29/2021
Date Data Arrived at EDR: 04/30/2021
Date Made Active in Reports: 07/19/2021
Number of Days to Update: 80

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/29/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 05/26/2021
Date Made Active in Reports: 06/01/2021
Number of Days to Update: 6

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 06/29/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 14

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 06/29/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 14
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 03/30/2021
Date Data Arrived at EDR: 04/01/2021
Date Made Active in Reports: 06/23/2021
Number of Days to Update: 83
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 03/30/2021
Date Data Arrived at EDR: 04/01/2021
Date Made Active in Reports: 06/25/2021
Number of Days to Update: 85
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 08/04/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 04/29/2021
Date Made Active in Reports: 05/03/2021
Number of Days to Update: 4
Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/19/2021
Date Data Arrived at EDR: 05/19/2021
Date Made Active in Reports: 06/07/2021
Number of Days to Update: 19
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 05/28/2021
Date Made Active in Reports: 08/20/2021
Number of Days to Update: 84

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/07/2021
Date Made Active in Reports: 07/23/2021
Number of Days to Update: 77

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/07/2021
Date Made Active in Reports: 07/23/2021
Number of Days to Update: 77

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/07/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 05/14/2021
Number of Days to Update: 3

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/10/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/24/2021
Date Data Arrived at EDR: 02/26/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 82

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/04/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/22/2021
Date Data Arrived at EDR: 06/23/2021
Date Made Active in Reports: 09/17/2021
Number of Days to Update: 86

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/12/2021
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/01/2021
Date Data Arrived at EDR: 04/01/2021
Date Made Active in Reports: 06/23/2021
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/17/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 78

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 05/26/2021
Date Made Active in Reports: 08/18/2021
Number of Days to Update: 84

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 82

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/14/2021
Date Data Arrived at EDR: 04/15/2021
Date Made Active in Reports: 07/06/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 04/26/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/29/2021
Date Data Arrived at EDR: 04/22/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 81
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
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: 08/04/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/29/2021
Date Data Arrived at EDR: 04/21/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 2
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/26/2021
Date Data Arrived at EDR: 06/04/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 84
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/26/2021
Date Data Arrived at EDR: 04/01/2021
Date Made Active in Reports: 06/23/2021
Number of Days to Update: 83
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/21/2021
Date Data Arrived at EDR: 04/22/2021
Date Made Active in Reports: 05/12/2021
Number of Days to Update: 20

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 03/24/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 07/28/2021
Number of Days to Update: 78

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/29/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/07/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PROPOSED COMMERCIAL DEVELOPMENT
RECHE CANYON RD/CRYSTAL RIDGE LN
COLTON, CA 92324

TARGET PROPERTY COORDINATES

Latitude (North):	34.026674 - 34° 1' 36.03''
Longitude (West):	117.279131 - 117° 16' 44.87''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	474230.3
UTM Y (Meters):	3764954.2
Elevation:	1241 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5620416 SAN BERNARDINO SOUTH, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

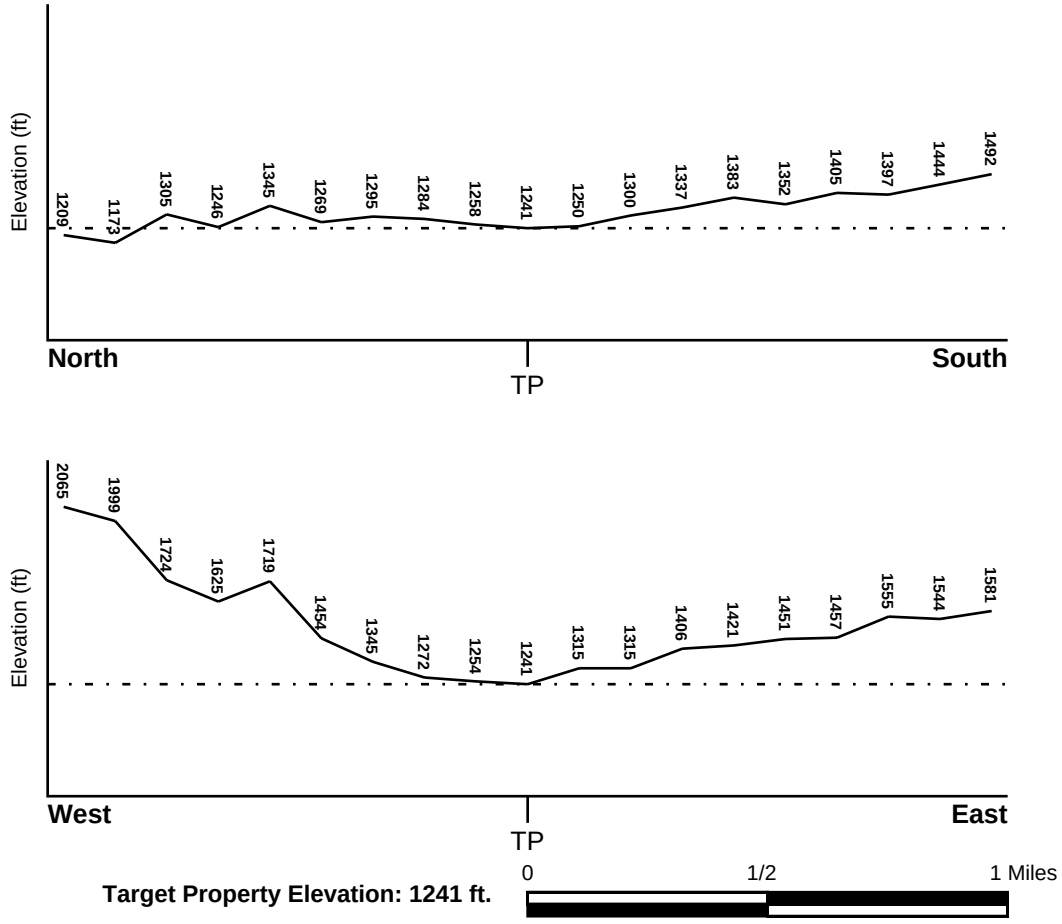
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 1241 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06071C8694H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06071C8691H	FEMA FIRM Flood data
06071C8692H	FEMA FIRM Flood data
06071C8693H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

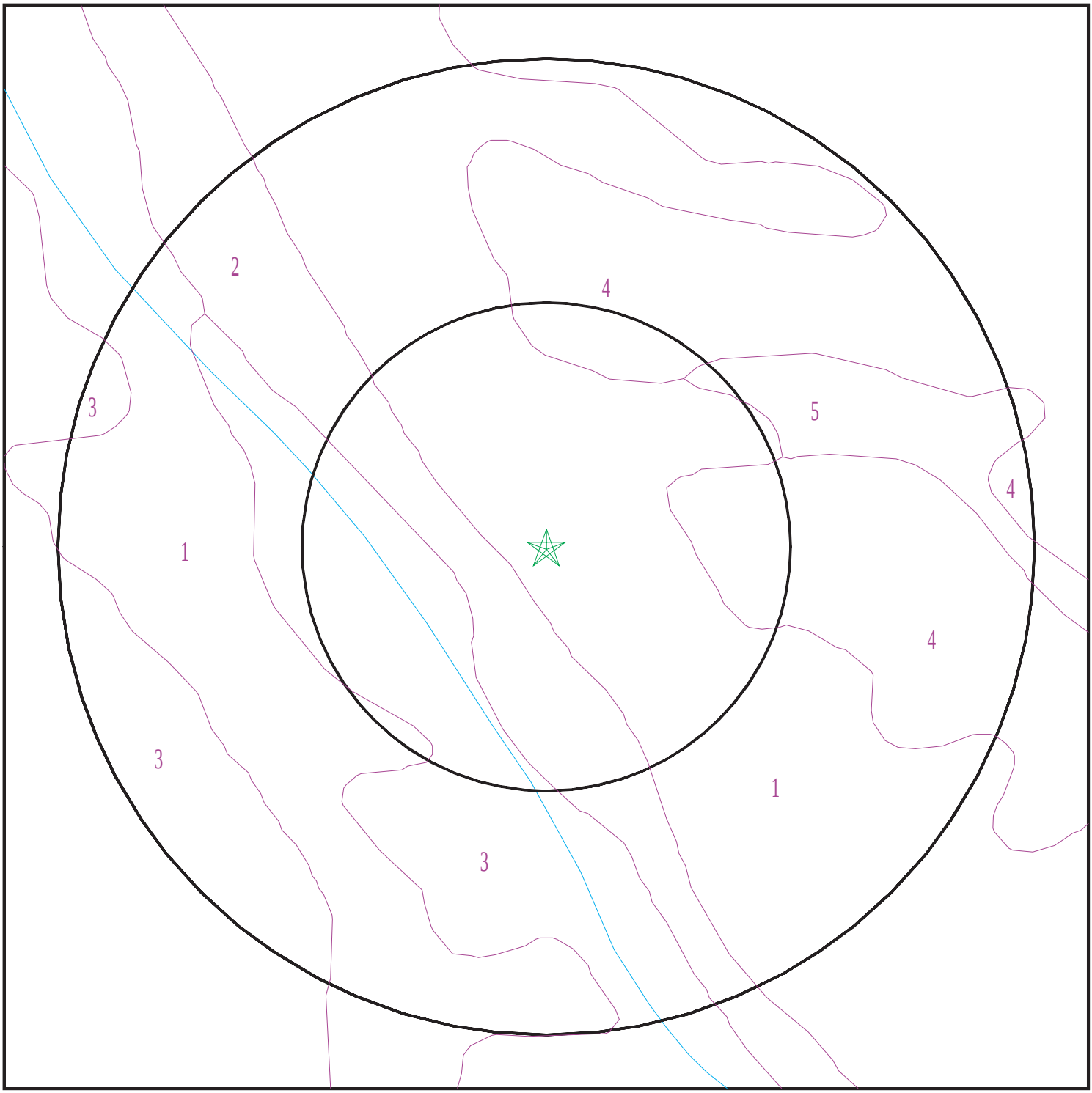
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6672166.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Proposed Commercial Development	CLIENT:	Salem Engineering Group
ADDRESS:	RECHE CANYON RD/CRYSTAL RIDGE LN COLTON CA 92324	CONTACT:	Reily Rivera
LAT/LONG:	34.026674 / 117.279131	INQUIRY #:	6672166.2s
		DATE:	September 21, 2021 5:53 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: SAN EMIGDIO

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9
2	7 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: TUJUNGA

Soil Surface Texture: gravelly loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 6.1
2	18 inches	59 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 6.1

Soil Map ID: 3

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	14 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	14 inches	18 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 4

Soil Component Name: SAN TIMOTEO

Soil Surface Texture: loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	24 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 4 Min: 1.4	Max: Min:
2	24 inches	27 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 4 Min: 1.4	Max: Min:

Soil Map ID: 5

Soil Component Name: SAN EMIGDIO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
6	USGS40000139957	1/2 - 1 Mile NNW
C9	USGS40000139969	1/2 - 1 Mile NNW
C11	USGS40000139972	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

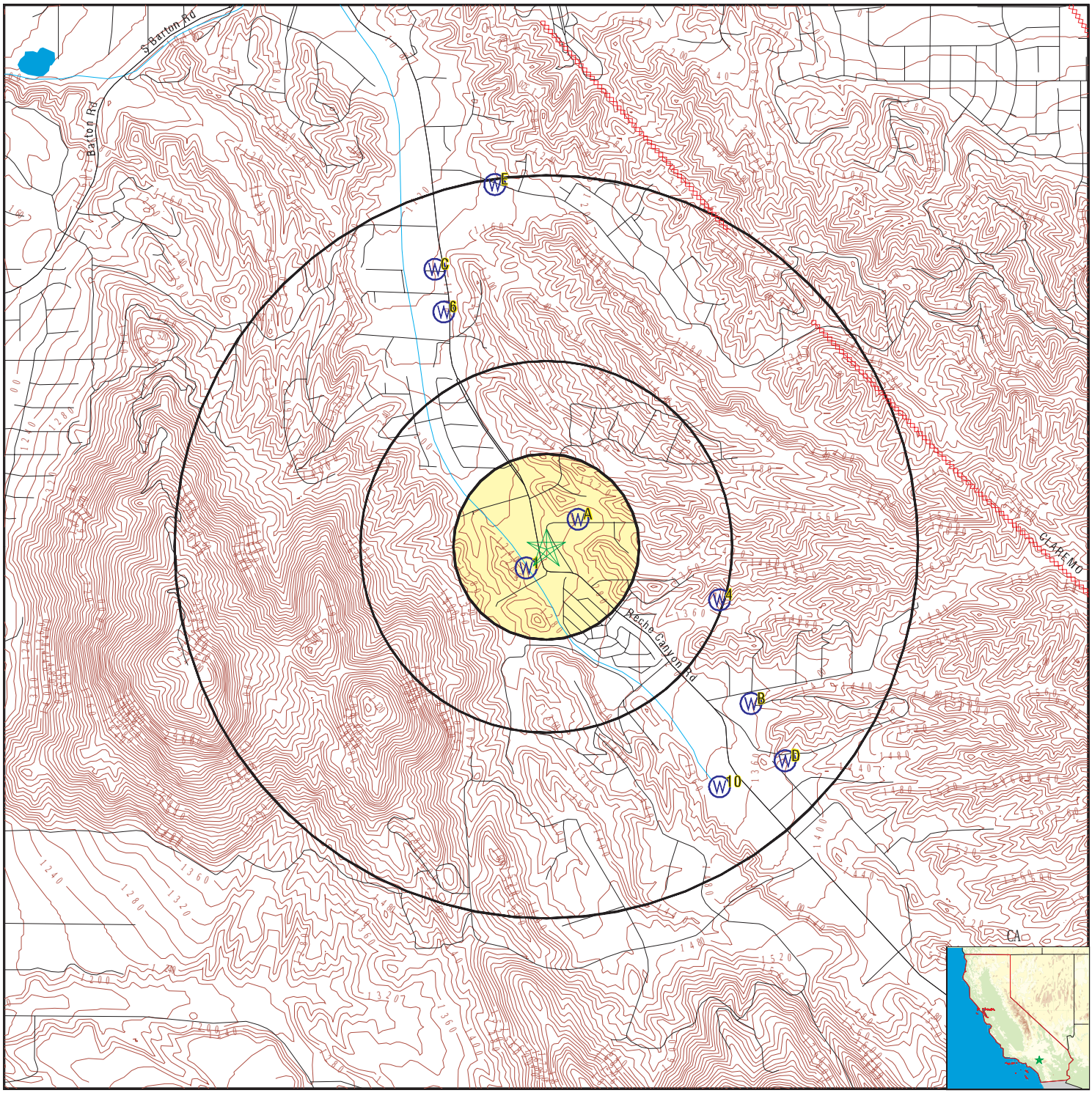
MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	2450	0 - 1/8 Mile SW
A2	2449	0 - 1/8 Mile NE
A3	CADDW0000014022	1/8 - 1/4 Mile ENE
4	CADWR0000033960	1/4 - 1/2 Mile ESE
B5	2451	1/2 - 1 Mile SE
B7	CADDW0000011413	1/2 - 1 Mile SE
B8	CADDW0000011398	1/2 - 1 Mile SE
10	CADWR0000026623	1/2 - 1 Mile SE
D12	CADDW0000012137	1/2 - 1 Mile SE
D13	CADDW0000010446	1/2 - 1 Mile SE
D14	2461	1/2 - 1 Mile SE
E15	CADDW0000022487	1/2 - 1 Mile North
E16	973	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 6672166.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Proposed Commercial Development	CLIENT:	Salem Engineering Group
ADDRESS:	RECHE CANYON RD/CRYSTAL RIDGE LN COLTON CA 92324	CONTACT:	Reily Rivera
		INQUIRY #:	6672166.2s
LAT/LONG:	34.026674 / 117.279131	DATE:	September 21, 2021 5:53 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
SW
0 - 1/8 Mile
Higher

CA WELLS **2450**

Seq:	2450	Prim sta c:	02S/04W-02M04 S
Frds no:	3600402001	County:	36
District:	66	User id:	36C
System no:	3600402	Water type:	G
Source nam:	MAIN WELL	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	340133.0	Longitude:	1171645.0
Precision:	2	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3600402	System nam:	Reche Canyon Mobile Estates
Hqname:	Not Reported	Address:	2751 RECHE CANYON
City:	COLTON	State:	CA
Zip:	92324	Zip ext:	Not Reported
Pop serv:	1075	Connection:	215
Area serve:	Not Reported		

A2
NE
0 - 1/8 Mile
Higher

CA WELLS **2449**

Seq:	2449	Prim sta c:	02S/04W-02E04 S
Frds no:	3601046001	County:	36
District:	66	User id:	36C
System no:	3601046	Water type:	G
Source nam:	WELL 01	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	340140.0	Longitude:	1171638.0
Precision:	2	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3601046	System nam:	Paul Shadid Wa
Hqname:	Not Reported	Address:	Not Reported
City:	Not Reported	State:	Not Reported
Zip:	Not Reported	Zip ext:	Not Reported
Pop serv:	0	Connection:	0
Area serve:	Not Reported		

A3
ENE
1/8 - 1/4 Mile
Higher

CA WELLS **CADDW0000014022**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
4 **ESE** **1/4 - 1/2 Mile** **Higher**	**CA WELLS**	**CADWR0000033960**

B5
SE
1/2 - 1 Mile
Higher

CA WELLS **2451**

Seq:	2451	Prim sta c:	02S/04W-02Q02 S
Frds no:	3601034001	County:	36
District:	66	User id:	36C
System no:	3601034	Water type:	G
Source nam:	WELL 01	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	340115.0	Longitude:	1171608.0
Precision:	2	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3601034	System nam:	Abc Water Co
Hqname:	Not Reported	Address:	Not Reported
City:	Not Reported	State:	Not Reported
Zip:	Not Reported	Zip ext:	Not Reported
Pop serv:	0	Connection:	0
Area serve:	Not Reported		

6
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000139957**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S004W34Q00AS	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19570101	Well Depth:	195
Well Depth Units:	ft	Well Hole Depth:	195
Well Hole Depth Units:	ft		

B7
SE
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000011413**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B8
SE
1/2 - 1 Mile
Higher | **CA WELLS** | **CADDW0000011398**

C9
NNW
1/2 - 1 Mile
Lower | **FED USGS** | **USGS40000139969**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S004W34K002S	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19570101	Well Depth:	85
Well Depth Units:	ft	Well Hole Depth:	100
Well Hole Depth Units:	ft		

10
SE
1/2 - 1 Mile
Higher | **CA WELLS** | **CADWR0000026623**

C11
NNW
1/2 - 1 Mile
Lower | **FED USGS** | **USGS40000139972**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	001S004W34K001S	Type:	Well
Description:	Not Reported	HUC:	18070203
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19560101	Well Depth:	100
Well Depth Units:	ft	Well Hole Depth:	102
Well Hole Depth Units:	ft		

D12
SE
1/2 - 1 Mile
Higher | **CA WELLS** | **CADDW0000012137**

Map ID Direction Distance Elevation	Database	EDR ID Number
D13 **SE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**CADDW0000010446**

D14
SE
1/2 - 1 Mile
Higher

CA WELLS **2461**

Seq:	2461	Prim sta c:	02S/04W-11A02 S
Frds no:	3301541001	County:	33
District:	63	User id:	33C
System no:	3301541	Water type:	G
Source nam:	WELL 01	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	340106.0	Longitude:	1171600.0
Precision:	2	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3301541	System nam:	Reche Canyon Mutual Water Co.
Hqname:	Not Reported	Address:	Not Reported
City:	Not Reported	State:	Not Reported
Zip:	Not Reported	Zip ext:	Not Reported
Pop serv:	0	Connection:	0
Area serve:	Not Reported		
Sample date:	13-MAR-18	Finding:	8.5
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	25-SEP-17	Finding:	8.
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	01-SEP-17	Finding:	3.6
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	23-JUN-17	Finding:	7.9
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	24-JAN-17	Finding:	8.5
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	16-JUN-16	Finding:	4.6
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	17-MAR-16	Finding:	7.
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	28-JAN-16	Finding:	3.4
Chemical:	POTASSIUM	Report units:	MG/L

Dlr:	0.		
Sample date:	28-JAN-16	Finding:	16.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	16.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	83.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	270.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	4.1
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	28-JAN-16	Finding:	260.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	220.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	7.6
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	620.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	48.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	28-JAN-16	Finding:	0.3
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	28-JAN-16	Finding:	47.
Chemical:	BARIUM	Report units:	UG/L
Dlr:	100.		
Sample date:	28-JAN-16	Finding:	380.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	0.18
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	28-JAN-16	Finding:	20.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		

Sample date:	31-DEC-15	Finding:	7.8
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	23-SEP-15	Finding:	32.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	26-MAR-15	Finding:	31.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	26-SEP-14	Finding:	3.1
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	20-AUG-14	Finding:	29.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	13-FEB-14	Finding:	35.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	15-NOV-12	Finding:	11.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	40.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	150.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	170.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	140.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	7.8
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	560.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	53.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	2.5
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	56.
Chemical:	CHLORIDE	Report units:	MG/L

Dlr:	0.		
Sample date:	15-NOV-12	Finding:	14.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	15-NOV-12	Finding:	11.
Chemical:	CHROMIUM (TOTAL)	Report units:	UG/L
Dlr:	10.		
Sample date:	15-NOV-12	Finding:	150.
Chemical:	IRON	Report units:	UG/L
Dlr:	100.		
Sample date:	15-NOV-12	Finding:	300.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-12	Finding:	20.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	15-NOV-12	Finding:	0.29
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	15-NOV-12	Finding:	1.1
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	13-SEP-12	Finding:	32.
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		

E15
North
1/2 - 1 Mile
Lower

CA WELLS **CADDW0000022487**

E16
North
1/2 - 1 Mile
Lower

CA WELLS **973**

Seq:	973	Prim sta c:	01S/04W-34H02 S
Frds no:	3610014018	County:	36
District:	13	User id:	TAN
System no:	3610014	Water type:	G
Source nam:	EAST WELL - DESTROYED	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	340227.0	Longitude:	1171652.0
Precision:	2	Status:	DS
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	3610014	System nam:	City Of Colton
Hqname:	Not Reported	Address:	650 N LA CADENA DR
City:	COLTON	State:	CA
Zip:	92324	Zip ext:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pop serv:	42103	Connection:	8604
Area serve:	CITY OF COLTON		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92324	10	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92324

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.000 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX

I

REILY RIVERA

Environmental Project Manager

EDUCATION

Bachelor of Science – Environmental Science – University of California, Riverside

EXPERIENCE

2019 to Present – Environmental Project Manager – Salem Engineering Group, Inc. – Rancho Cucamonga, CA

2017 to 2019 – Engineering Technician – Adkan Engineers – Riverside, CA

2015 to 2016 – Research Associate – Lyons Biogeochemistry Laboratory at UCR – Riverside, CA

PROFESSIONAL BACKGROUND

Environmental Engineering: Manage and conduct Phase I Environmental Site Assessments of commercial and multi-tenant properties. Manage of Phase II Environmental Site Assessments, including: oversight of installation of groundwater and soil vapor monitoring wells; groundwater, soil vapor, and ambient air sampling; report preparation for ongoing monitoring. Special knowledge includes environmental laws and regulations, technical writing, independent research, and environmental impact analysis.

Civil Engineering: Write full Initial Studies and manage associated technical studies; use AutoCAD Civil 3D for civil design, including sewer lines, water lines, storm drain lines, housing tracts, grading, topographic maps, and tract maps. Special knowledge includes AutoCAD Civil 3D, civil design, and technical writing.

Biogeochemical Research: Responsible for laboratory work involving sequential and total iron extractions, total organic/inorganic carbon analysis, chromium reductions, and sample preparation for ICP-MS analysis. Special knowledge includes soil sampling and classification; soil water content analysis; operation and troubleshooting of field equipment including dissolved oxygen meters, electrical conductivity/TDS meters, and iron, magnesium, and nitrogen test strips; and operation and troubleshooting of laboratory equipment including ELTRA Furnace and Carbon Sulfur Determinator, inductively coupled plasma mass spectrometer, pipettes, pH probes, and microscopes.

CLARENCE JIANG

Senior Geotechnical Engineer

REGISTRATION

Registered Geotechnical Engineer – California
Registered Civil Engineer - California
Registered Grading Inspector – Los Angeles

CERTIFICATION

OSHA 40-Hour Hazardous Waste Operations and Emergency Response Training (29 CFR 110.120) (HAZWOPER)
Certified Hazardous Materials Manager

EDUCATION

Masters of Science in Geotechnical Engineering, Utah State University, Logan, Utah
Bachelor of Science in Civil Engineering, Chung-Yuan University, Chung-Li, Taiwan

EXPERIENCE

2007 to Present – Senior Geotechnical Engineer, Salem Engineering Group, Inc., Rancho Cucamonga, California
2003 to 2007 – Senior Engineer, Krazan & Associates, Inc., Ontario, California
1994 to 2003 – Senior Engineer/Vice President, Morhol, Inc., Anaheim, California
1988 to 1994 – Project Engineer, Leighton & Associates, Inc., Irvine, California

PROFESSIONAL BACKGROUND

Geotechnical Investigations: Responsible for staff supervision, client relations, technical review, budget preparations, and profit/loss statements. Provided project management for geotechnical engineering projects for industrial plants, school and hospital sites, wastewater treatment plants, bridges and culverts, sewer lines, stadiums, embankments, service stations, commercial developments, industrial facilities, and landfills. Experienced in a broad range of geotechnical engineering applications such as shallow and deep foundation investigation, slope stability, pavement design, liquefaction potential, ground improvement, soil suitability and availability assessment, soil-cement treatment, soil-lime stabilization, erosion control, landfill construction, septic system design, as well as field and laboratory soil testing.

Construction Testing & Inspection Services: Responsible for overseeing Special Inspectors, testing laboratory personnel and procedures, client relations, technical review of reports, and insure conscientious cost management. Oversee the testing of concrete, post-tension cables, soil, welding, and construction materials to insure conformance to current building standards and codes. Report the results of materials tested to the appropriate agencies and companies.

Environmental Engineering: Provide detailed Phase I investigative site reports. Conduct environmental audits and provide recommendations for corrective measures. Extensive experience in lithologic logging and sampling in consolidated and unconsolidated material for environmental exploration. Provide recommendations for the management of underground storage tanks and hazardous waste.

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers (ASCE)

SALEM

APPENDIX G

PRELIMINARY WATER QUALITY MANAGEMENT PLAN

Water Quality Management Plan

For:

Reche Canyon Commercial Retail Project

APNS 1178-371-27; 0284-211-70, 71, 72

Prepared for:

Fahim Tanios

1518 Cascante Ct.

Redlands, CA 92373

(909) 422-0611

Prepared by:

Transtech Engineering

413 W MacKay Dr.

San Bernardino, Ca, 92408

(909) 384-7464

Submittal Date: 9/14/18

Revision Date: Insert Current Revision Date

Approval Date:_____

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for Fahim Tanios by Transtech Engineers. The WQMP is intended to comply with the requirements of the City of Colton and the NPDES Areawide Stormwater Program requiring the preparation of a WQMP. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with San Bernardino County's Municipal Storm Water Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

.

Project Data			
Permit/Application Number(s):	TBD	Grading Permit Number(s):	TBD
Tract/Parcel Map Number(s):	TBD	Building Permit Number(s):	TBD
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APNs 1178-371-27; 0284-211-70, 71, 72

Owner's Signature			
Owner Name: Fahim Tanios			
Title			
Company			
Address	1518 Cascante Ct., Redlands, CA 92373		
Email			
Telephone #	(909) 384-7464		
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):		Grading Permit Number(s):	TBD
Tract/Parcel Map Number(s):	TBD	Building Permit Number(s):	TBD
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APNs 1178-371-27; 0284-211-70, 71, 72

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of Regional Water Quality Control Board Order No. R8-2010-0036."

Engineer: Michael Ackerman		PE Stamp Below
Title	Project Engineer	
Company	Transtech Engineers, Inc.	
Address	413 MacKay Drive, San Bernardino, CA 92408	
Email	Michael.ackerman@transtech.org	
Telephone #	(909) 384-7464	
Signature		
Date		

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Insert Appendix Title if Applicable - Otherwise, please delete text

Insert Appendix Title if Applicable - Otherwise, please delete text

Insert Appendix Title if Applicable - Otherwise, please delete text

Insert Appendix Title if Applicable - Otherwise, please delete text

Insert Appendix Title if Applicable - Otherwise, please delete text

Section 1 Discretionary Permit(s)

Form 1-1 Project Information					
Project Name	Reche Canyon Commercial Retail Project				
Project Owner Contact Name:	Fahim Tanios				
Mailing Address:	1518 Cascante Ct., Redlands, CA 92373	E-mail Address:		Telephone:	(909) 384-7464
Permit/Application Number(s):			Tract/Parcel Map Number(s):	APNs 1178-371-27; 0284-211-70, 71, 72	
Additional Information/ Comments:					
Description of Project:	The subject site is located in Planning Area 9 as identified in the Reche Canyon Specific Plan (RCSP). **Phase I:** Development of a Convenience Store consisting of approximately 3,650 Sq. Ft. of sales area and storage back room, 6-fuel dispensers and 3,574 Sq. Ft. overhead canopy, and a 1,750 Sq. Ft. express carwash. **Phase II:** Development of 9,800 Sq. Ft. Retail Building (Neighborhood Commercial Services). The number of proposed businesses contained in this retail space may range from 3 to 7 individual businesses. There has been no pre-leasing of the proposed retail space, however preliminary indications are that there will be a strong interest from local business owners to occupy this area of the canyon and provide services to the surrounding neighborhood, e.g. small restaurants, gas, food, sundries, and other permitted services. The center will include required parking stalls (regular & ADA), Drive aisles, landscape and 'equestrian-style' trail system along Reche Canyon Road to include Horse Tie-Up as Rest & Shelter and Water Supply.				

Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	NA

Section 2 Project Description

2.1 Project Information

This section of the WQMP should provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

Form 2.1-1 Description of Proposed Project

1 Development Category (Select all that apply):

☐ Significant re-development involving the addition or replacement of 5,000 ft² or more of impervious surface on an already developed site	☒ New development involving the creation of 10,000 ft² or more of impervious surface collectively over entire site	☐ Automotive repair shops with standard industrial classification (SIC) codes 5013, 5014, 5541, 7532- 7534, 7536-7539	☐ Restaurants (with SIC code 5812) where the land area of development is 5,000 ft² or more
☐ Hillside developments of 5,000 ft² or more which are located on areas with known erosive soil conditions or where the natural slope is 25 percent or more	☐ Developments of 2,500 ft² of impervious surface or more adjacent to (within 200 ft) or discharging directly into environmentally sensitive areas or waterbodies listed on the CWA Section 303(d) list of impaired waters.	☒ Parking lots of 5,000 ft² or more exposed to storm water	☒ Retail gasoline outlets that are either 5,000 ft² or more, or have a projected average daily traffic of 100 or more vehicles per day

☐ Non-Priority / Non-Category Project *May require source control LID BMPs and other LIP requirements. Please consult with local jurisdiction on specific requirements*.

2 Project Area (ft2):	125,568 (ft2)	**3** Number of Dwelling Units:	7	**4** SIC Code:	

5 Is Project going to be phased? Yes ☒ No ☐ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

6 Does Project include roads? Yes ☒ No ☐ *If yes, ensure that applicable requirements for transportation projects are addressed (see Appendix A of TGD for WQMP)*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:

The property is currently owned by Fahim Tanios. The owner is also the developer of the project. The owner will be responsible for the funding and implementation of all required BMPs. Upon completion of construction, the owner will commence with the rental program for the units. The owner will continue to own and manage the project. To assure long term maintenance of the water quality facilities, a Covenant and Agreement Regarding Water Quality Management Plan and Stormwater Best Management Practices Transfer, Access and Maintenance will be recorded. This document will be recorded and run with the property and will be subject to any future owners of the property.

2.3 Potential Stormwater Pollutants

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-3 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern			
Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	
Nutrients - Phosphorous	E ☒	N ☐	
Nutrients - Nitrogen	E ☒	N ☐	
Noxious Aquatic Plants	E ☒	N ☐	
Sediment	E ☒	N ☐	
Metals	E ☒	N ☐	
Oil and Grease	E ☒	N ☐	
Trash/Debris	E ☒	N ☐	
Pesticides / Herbicides	E ☒	N ☐	
Organic Compounds	E ☒	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

2.4 Water Quality Credits

A water quality credit program is applicable for certain types of development projects if it is not feasible to meet the requirements for on-site LID. Proponents for eligible projects, as described below, can apply for water quality credits that would reduce project obligations for selecting and sizing other treatment BMP or participating in other alternative compliance programs. Refer to Section 6.2 in the TGD for WQMP to determine if water quality credits are applicable for the project.

Form 2.4-1 Water Quality Credits

1 Project Types that Qualify for Water Quality Credits: *Select all that apply*

☐ Redevelopment projects that reduce the overall impervious footprint of the project site. [Credit = % impervious reduced]	Higher density development projects ☐ Vertical density [20%] ☐ 7 units/ acre [5%]	☐ Mixed use development, (combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that demonstrate environmental benefits not realized through single use projects) [20%]	☐ Brownfield redevelopment (redevelop real property complicated by presence or potential of hazardous contaminants) [25%]
☐ Redevelopment projects in established historic district, historic preservation area, or similar significant core city center areas [10%]	☐ Transit-oriented developments (mixed use residential or commercial area designed to maximize access to public transportation) [20%]	☒ In-fill projects (conversion of empty lots & other underused spaces < 5 acres, substantially surrounded by urban land uses, into more beneficially used spaces, such as residential or commercial areas) [10%]	☐ Live-Work developments (variety of developments designed to support residential and vocational needs) [20%]

2 Total Credit % 10 *(Total all credit percentages up to a maximum allowable credit of 50 percent)*

Description of Water Quality Credit Eligibility (if applicable)	In-fill project.

Section 3 Site and Watershed Description

Describe the project site conditions that will facilitate the selection of BMP through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed DMAs) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. ***If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet.***

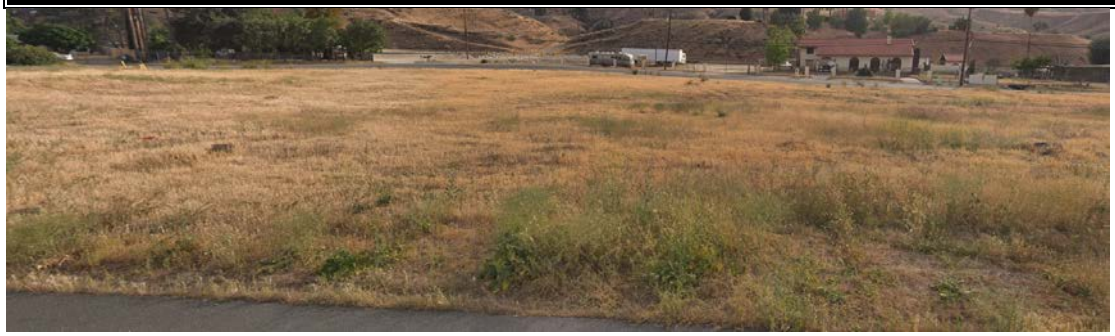
Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34*01'35.12"	Longitude 117*16'44.45"	Thomas Bros Map page 646
1 San Bernardino County climatic region: ☒ Valley ☐ Mountain			
2 Does the site have more than one drainage area (DA): Yes☐ No☒ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*			

Conveyance	Briefly describe on-site drainage features to convey runoff that is not retained within a DMA

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1

For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA A	DMA B	DMA C	DMA D
1 DMA drainage area (ft^2)	137,463			
2 Existing site impervious area (ft^2)	0			
3 Antecedent moisture condition *For desert areas, use* *http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	2			
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*	A, B			
5 Longest flowpath length (ft)	880			
6 Longest flowpath slope (ft/ft)	.023			
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	GRASS			
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	FAIR			



Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1 (use only as needed for additional DMA w/in DA 1)				
For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA E	DMA F	DMA G	DMA H
1 DMA drainage area (ft^2)				
2 Existing site impervious area (ft^2)				
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*				
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://permitrack.sbcounty.gov/wap/*				
5 Longest flowpath length (ft)				
6 Longest flowpath slope (ft/ft)				
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*				
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*				

Form 3-3 Watershed Description for Drainage Area

Receiving waters *Refer to Watershed Mapping Tool -* *http://permitrack.sbcounty.gov/wap/* *See 'Drainage Facilities" link at this website*	Reche Canyon Creek, Santa Ana River
Applicable TMDLs *Refer to Local Implementation Plan*	Santa Ana River - Reach 2 Indicator Bacteria
303(d) listed impairments *Refer to Local Implementation Plan and Watershed Mapping Tool –* *http://permitrack.sbcounty.gov/wap/ and State Water Resources Control Board website – http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/index.shtml*	Santa Ana River - Reach 4: Pathogens Reach 3: Copper, Lead, Pathogens Reach 2: Indicator Bacteria
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool –* *http://permitrack.sbcounty.gov/wap/*	Coastal Sage Scrub
Unlined Downstream Water Bodies *Refer to Watershed Mapping Tool –* *http://permitrack.sbcounty.gov/wap/*	NA
Hydrologic Conditions of Concern	☐ Yes *Complete Hydrologic Conditions of Concern (HCOC) Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-10 in submittal* ☒ No
Watershed–based BMP included in a RWQCB approved WAP	☐ Yes *Attach verification of regional BMP evaluation criteria in WAP* • *More Effective than On-site LID* • *Remaining Capacity for Project DCV* • *Upstream of any Water of the US* • *Operational at Project Completion* • *Long-Term Maintenance Plan* ☒ No

Section 4 Best Management Practices (BMP)

4.1 Source Control BMP

4.1.1 Pollution Prevention

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	Education on Stormwater BMP's will be implemented where practicable.
N2	Activity Restrictions	☒	☐	Activity Restrictions will be implemented where practicable.
N3	Landscape Management BMPs	☒	☐	Landscape Management BMP's will be implemented where practicable.
N4	BMP Maintenance	☒	☐	BMP Maintenance will be implemented where practicable.
N5	Title 22 CCR Compliance (How development will comply)	☒	☐	Title 22 CCR Compliance will be implemented where practicable.
N6	Local Water Quality Ordinances	☒	☐	Low Water Quality Ordinances will be implemented where practicable.
N7	Spill Contingency Plan	☒	☐	Spill Contingency Plan will be implemented where practicable.
N8	Underground Storage Tank Compliance	☒	☐	Underground Storage Tank Compliance will be implemented where practicable.
N9	Hazardous Materials Disclosure Compliance	☒	☐	Hazardous Materials Disclosure Compliance will be implemented where practicable.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	Uniform Fire Implementation will be implemented where practicable.
N11	Litter/Debris Control Program	☒	☐	Litter/Debris Control Program will be implemented where practicable.
N12	Employee Training	☒	☐	Employee Training will be implemented where practicable.
N13	Housekeeping of Loading Docks	☒	☐	Housekeeping of Loading Docks will be implemented where practicable.
N14	Catch Basin Inspection Program	☒	☐	Catch Basin Inspection Program will be implemented where practicable.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	Vacuum Sweeping of Private Streets and Parking Lots will be implemented where practicable.
N16	Other Non-structural Measures for Public Agency Projects	☒	☐	Other Non-structural Measures for Public Agency Projects will be implemented where practicable.
N17	Comply with all other applicable NPDES permits	☒	☐	All other applicable NPDES permits will comply and be implemented where practicable.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	Provided storm drain system stenciling and signage will be implemented where practicable.
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☒	☐	Design and construction of outdoor material storage areas to reduce pollution introduction will be implemented where practicable.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Design and construction of trash and waste storage areas to reduce pollution introduction will be implemented where practicable.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	Use of efficient irrigation systems & landscape design, water conservation, smart controllers, and source control will be implemented where practicable.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement will be implemented where practicable.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☒	☐	Project slopes and channels and provided energy dissipation will be implemented where practicable.
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☒	☐	Covered dock areas will be implemented where practicable.
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☒	☐	Covered maintenance bays with spill containment plans will be implemented where practicable.
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☒	☐	Vehicle wash areas with spill containment plans will be implemented where practicable.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☒	☐	Covered outdoor processing areas will be implemented where practicable.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☒	☐	Equipment wash areas with spill containment plans will be implemented where practicable.
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☒	☐	Fueling Areas will be implemented where practicable.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☐	☒	This project is not a hillside development.
S14	Wash water control for food preparation areas	☐	☒	This project does not have food preparation areas.
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	This project does not have community car wash rack. S9 will be utilized.

4.1.2 Preventative LID Site Design Practices

Site design practices associated with new LID requirements in the MS4 Permit should be considered in the earliest phases of a project. Preventative site design practices can result in smaller DCV for LID BMP and hydromodification control BMP by reducing runoff generation. Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Preventative LID Site Design Practices Checklist

Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☒ No ☐ Explanation: Impervious areas will be minimized where practicable.
Maximize natural infiltration capacity: Yes ☒ No ☐ Explanation: Natural infiltration capacity will be minimized where practicable.
Preserve existing drainage patterns and time of concentration: Yes ☒ No ☐ Explanation: Existing drainage patterns and time of concentration will be preserved where practicable.
Disconnect impervious areas: Yes ☒ No ☐ Explanation: Impervious areas will disconnect where practicable.
Protect existing vegetation and sensitive areas: Yes ☒ No ☐ Explanation: Existing vegetation and sensitive areas will be protected where practicable.
Re-vegetate disturbed areas: Yes ☒ No ☐ Explanation: Disturbed areas will be re-vegetated where practicable.
Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐ Explanation: Unnecessary compaction in stormwater retention/infiltration basin/trench areas will be minimized where practicable.
Utilize vegetated drainage swales in place of underground piping or imperviously lined swales: Yes ☒ No ☐ Explanation: Vegetated drainage swales in place of underground piping or imperviously lined swales will be utilized where practicable.
Stake off areas that will be used for landscaping to minimize compaction during construction : Yes ☒ No ☐ Explanation: Staking off areas that will be used for landscaping to minimize compaction during construction will be implemented where practicable.

4.2 Project Performance Criteria

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in the MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection of any downstream waterbody segments with a HCOC. ***If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.***

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), the San Bernardino County Stormwater Program requires use of the P_6 method (MS4 Permit Section XI.D.6a.ii) – Form 4.2-1
- For HCOC pre- and post-development hydrologic calculation, the San Bernardino County Stormwater Program requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for HCOC performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA 1)

1 Project area DA 1 (ft^2): 137,463	**2** Imperviousness after applying preventative site design practices (Imp%): 49.49%	**3** Runoff Coefficient (Rc): _.336 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.477 http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.477*1.4807 = 0.7063 *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 5,336 (ft.3) *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-2 Summary of HCOC Assessment (DA 1)

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☐ No ☒

Go to: *http://permitrack.sbcounty.gov/wap/*

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	**1** *Form 4.2-3 Item 12*	**2** *Form 4.2-4 Item 13*	**3** *Form 4.2-5 Item 10*
Post-developed	**4** *Form 4.2-3 Item 13*	**5** *Form 4.2-4 Item 14*	**6** *Form 4.2-5 Item 14*
Difference	**7** *Item 4 – Item 1*	**8** *Item 2 – Item 5*	**9** *Item 6 – Item 3*
Difference (as % of pre-developed)	**10** % *Item 7 / Item 1*	**11** % *Item 8 / Item 2*	**12** % *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 1)

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in): *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in):
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft^3):
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 1)

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1 *Use additional forms if there are more than 4 DMA*				Post-developed DA1 *Use additional forms if there are more than 4 DMA*			
	DMA A	DMA B	DMA C	DMA D	DMA A	DMA B	DMA C	DMA D
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o *= Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} *= (1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t *= Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c *= Item 5 + Item 11*								
13 Pre-developed time of concentration (min): *Minimum of Item 12 pre-developed DMA*								
14 Post-developed time of concentration (min): *Minimum of Item 12 post-developed DMA*								
15 Additional time of concentration needed to meet HCOC requirement (min): $T_{C\text{-}HCOC}$ *= (Item 13 * 0.95) – Item 14*								

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 1)

Compute peak runoff for pre- and post-developed conditions

Variables		Pre-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*			Post-developed DA to Project Outlet (*Use additional forms if more than 3 DMA)*		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (Acres) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	**9** Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	**10** Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*
10 Peak runoff from pre-developed condition confluence analysis (cfs): *Maximum of Item 8, 9, and 10 (including additional forms as needed)*		
11 Post-developed Q_p at T_c for DMA A: *Same as Item 8 for post-developed values*	**12** Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	**13** Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*
14 Peak runoff from post-developed condition confluence analysis (cfs): *Maximum of Item 11, 12, and 13 (including additional forms as needed)*		
15 Peak runoff reduction needed to meet HCOC Requirement (cfs): *$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*		

4.3 Project Conformance Analysis

Complete the following forms for each project site DA to document that the proposed LID BMPs conform to the project DCV developed to meet performance criteria specified in the MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the MS4 Permit (see Section 5.3.1 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design and Hydrologic Source Controls (Form 4.3-2)
- Retention and Infiltration (Form 4.3-3)
- Harvested and Use (Form 4.3-4) or
- Biotreatment (Form 4.3-5).

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2.1 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Forms 4.3-2 and 4.3-4 to determine the feasibility of applicable HSC and harvest and use BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable HSC BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of LID HSC, retention and infiltration, and harvest and use BMPs are unable to mitigate the entire DCV, then biotreatment BMPs may be implemented by the project proponent. If biotreatment BMPs are used, then they must be sized to provide sufficient capacity for effective treatment of the remainder of the volume-based performance criteria that cannot be achieved with LID BMPs (TGD for WQMP Section 5.4.4.2). **Under no circumstances shall any portion of the DCV be released from the site without effective mitigation and/or treatment**.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

[1] Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒
Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

[2] Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒
(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

[3] Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[4] Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[5] Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[6] Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒
See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

[7] Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒
If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

[8] Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒
If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP. If no, then proceed to Item 9, below.

[9] All answers to Item 1 through Item 6 are "No":
Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP. Proceed to Form 4.3-2, Hydrologic Source Control BMP.

4.3.1 Site Design Hydrologic Source Control BMP

Section XI.E. of the Permit emphasizes the use of LID preventative measures; and the use of LID HSC BMPs reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable HSC shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of HSC, if a project cannot feasibly meet BMP sizing requirements or cannot fully address HCOCs, feasibility of all applicable HSC must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Complete Form 4.3-2 to identify and calculate estimated retention volume from implementing site design HSC BMP. Refer to Section 5.4.1 in the TGD for more detailed guidance.

Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3):		$V_{retention}$ *=Sum of Item 4 for all BMPs*	
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)			
8 Ponding depth (ft)			
9 Surface area of amended soil/gravel (ft^2)			
10 Average depth of amended soil/gravel (ft)			
11 Average porosity of amended soil/gravel			
12 Retention volume achieved from on-lot infiltration (ft^3) $V_{retention}$ *= (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*			
13 Runoff volume retention from on-lot infiltration (ft^3):		$V_{retention}$ *=Sum of Item 12 for all BMPs*	

Form 4.3-2 cont. Site Design Hydrologic Source Control BMPs (DA 1)

14 Implementation of evapotranspiration BMP (green, brown, or blue roofs): Yes ☐ No ☒ *If yes, complete Items 15-20. If no, proceed to Item 21*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Rooftop area planned for ET BMP (ft^2)			
16 Average wet season ET demand (in/day) *Use local values, typical ~ 0.1*			
17 Daily ET demand (ft^3/day) *Item 15 * (Item 16 / 12)*			
18 Drawdown time (hrs) *Copy Item 6 in Form 4.2-1*			
19 Retention Volume (ft^3) *$V_{retention}$ = Item 17 * (Item 18 / 24)*			
20 Runoff volume retention from evapotranspiration BMPs (ft^3): *$V_{retention}$ =Sum of Item 19 for all BMPs*			
21 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 22-25. If no, proceed to Item 26*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
22 Number of Street Trees			
23 Average canopy cover over impervious area (ft^2)			
24 Runoff volume retention from street trees (ft^3) *$V_{retention}$ = Item 22 * Item 23 * (0.05/12) assume runoff retention of 0.05 inches*			
25 Runoff volume retention from street tree BMPs (ft^3): *$V_{retention}$ = Sum of Item 24 for all BMPs*			
26 Implementation of residential rain barrel/cisterns: Yes☐ No ☒ *If yes, complete Items 27-29; If no, proceed to Item 30*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
27 Number of rain barrels/cisterns			
28 Runoff volume retention from rain barrels/cisterns (ft^3) *$V_{retention}$ = Item 27 * 3*			
29 Runoff volume retention from residential rain barrels/Cisterns (ft3): *$V_{retention}$ =Sum of Item 28 for all BMPs*			
30 Total Retention Volume from Site Design Hydrologic Source Control BMPs: *Sum of Items 5, 13, 20, 25 and 29*			

4.3.2 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix D of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5.1 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

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Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC BMP (ft^3): *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*			
BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 1 DMA A BMP Type Infiltration Basin	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	0.6		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	2		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	0.3		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	1.275		
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	1.2		
8 Infiltrating surface area, SA_{BMP} (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	4450		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	NA		
10 Amended soil porosity	NA		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	NA		
12 Gravel porosity	NA		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3		
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	5336		
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*			
16 Total Retention Volume from LID Infiltration BMPs: 5336 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*			
17 Fraction of DCV achieved with infiltration BMP: 100% *Retention% = Item 16 / Form 4.2-1 Item 7*			
18 Is full LID DCV retained onsite with combination of hydrologic source control and LID retention/infiltration BMPs? Yes ☒ No ☐ *If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.*			

4.3.3 Harvest and Use BMP

Harvest and use BMP may be considered if the full LID DCV cannot be met by maximizing infiltration BMPs. Use Form 4.3-4 to compute on-site retention of runoff from proposed harvest and use BMPs.

Volume retention estimates for harvest and use BMPs are sensitive to the on-site demand for captured stormwater. Since irrigation water demand is low in the wet season, when most rainfall events occur in San Bernardino County, the volume of water that can be used within a specified drawdown period is relatively low. The bottom portion of Form 4.3-4 facilitates the necessary computations to show infeasibility if a minimum incremental benefit of 40 percent of the LID DCV would not be achievable with MEP implementation of on-site harvest and use of stormwater (Section 5.5.4 of the TGD for WQMP).

Form 4.3-4 Harvest and Use BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC or infiltration BMP (ft^3): *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16*			
BMP Type(s) *Compute runoff volume retention from proposed harvest and use BMP (Select BMPs from Table 5-4 of the TGD for WQMP) - Use additional forms for more BMPs*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Describe cistern or runoff detention facility			
3 Storage volume for proposed detention type (ft^3) *Volume of cistern*			
4 Landscaped area planned for use of harvested stormwater (ft^2)			
5 Average wet season daily irrigation demand (in/day) Use local values, typical ~ 0.1 in/day			
6 Daily water demand (ft^3/day) *Item 4 * (Item 5 / 12)*			
7 Drawdown time (hrs) *Copy Item 6 from Form 4.2-1*			
8 Retention Volume (ft^3) *$V_{retention}$ = Minimum of (Item 3) or (Item 6 * (Item 7 / 24))*			
9 Total Retention Volume (ft^3) from Harvest and Use BMP *Sum of Item 8 for all harvest and use BMP included in plan*			
10 Is the full DCV retained with a combination of LID HSC, retention and infiltration, and harvest & use BMPs? Yes ☐ No ☐ *If yes, demonstrate conformance using Form 4.3-10. If no, then re-evaluate combinations of all LID BMP and optimize their implementation such that the maximum portion of the DCV is retained on-site (using a single BMP type or combination of BMP types). If the full DCV cannot be mitigated after this optimization process, proceed to Section 4.3.4.*			

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration, and harvest and use BMPs. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-5 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV w. Biotreatment computations are included as follows:

- Use Form 4.3-6 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-7 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-8 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-5 Selection and Evaluation of Biotreatment BMP (DA 1)

1 Remaining LID DCV not met by site design HSC, infiltration, or harvest and use BMP for potential biotreatment (ft^3): *Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16- Form 4.3-4 Item 9*	List pollutants of concern *Copy from Form 2.3-1.*	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-6 and 4.3-7 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-8 to compute treated volume*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet extended detention ☐ Dry extended detention	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): *Form 4.3-6 Item 15 + Form 4.3-7 Item 13*	**4** Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	**5** Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

Form 4.3-6 Volume Based Biotreatment (DA 1) – Bioretention and Planter Boxes with Underdrains

Biotreatment BMP Type *(Bioretention w/underdrain, planter box w/underdrain, other comparable BMP)*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*			
2 Amended soil infiltration rate *Typical ~ 5.0*			
3 Amended soil infiltration safety factor *Typical ~ 2.0*			
4 Amended soil design percolation rate (in/hr) P_{design} *= Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 from Form 4.2-1*			
6 Maximum ponding depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Ponding Depth (ft) d_{BMP} *= Minimum of (1/12 * Item 4 * Item 5) or Item 6*			
8 Amended soil surface area (ft^2)			
9 Amended soil depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity, *n*			
11 Gravel depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
12 Gravel porosity, *n*			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Biotreated Volume (ft^3) $V_{biotreated}$ *= Item 8 * [(Item 7/2) + (Item 9 * Item 10) +(Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Total biotreated volume from bioretention and/or planter box with underdrains BMP: *Sum of Item 14 for all volume-based BMPs included in this form*			

Form 4.3-7 Volume Based Biotreatment (DA 1) – Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft^2) A_{bottom} = *Item 2 * Item 3*				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft^2) $A_{surface}$ =*(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))*				
8 Storage volume (ft^3) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =*Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]*				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = *(Item* $8_{forebay}$ *+ Item* 8_{basin}*) / (Item 9 * 3600)*				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft^3) $V_{biotreated}$ = *(Item* $8_{forebay}$ *+ Item* 8_{basin}*) +(Item 10 * Item 11 * 3600)*				
13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention : *(Sum of Item 12 for all BMP included in plan)*				

Form 4.3-8 Flow Based Biotreatment (DA 1)

Biotreatment BMP Type *Vegetated swale, vegetated filter strip, or other comparable proprietary BMP*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in TGD Table 5-5*			
2 Flow depth for water quality treatment (ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
3 Bed slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
4 Manning's roughness coefficient			
5 Bottom width (ft) b_w *= (Form 4.3-5 Item 6 * Item 4) / (1.49 * Item 2^1.67 * Item 3^0.5)*			
6 Side Slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Cross sectional area (ft^2) *A = (Item 5 * Item 2) + (Item 6 * Item 2^2)*			
8 Water quality flow velocity (ft/sec) *V = Form 4.3-5 Item 6 / Item 7*			
9 Hydraulic residence time (min) *Pollutant specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Length of flow based BMP (ft) *L = Item 8 * Item 9 * 60*			
11 Water surface area at water quality flow depth (ft^2) SA_{top} *= (Item 5 + (2 * Item 2 * Item 6)) * Item 10*			

4.3.5 Conformance Summary

Complete Form 4.3-9 to demonstrate how on-site LID DCV is met with proposed site design hydrologic source control, infiltration, harvest and use, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 5336 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 5336 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☒
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☒
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

4.3.6 Hydromodification Control BMP

Use Form 4.3-10 to compute the remaining runoff volume retention, after LID BMP are implemented, needed to address HCOC, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential HCOC. Describe hydromodification control BMP that address HCOC, which may include off-site BMP and/or in-stream controls. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

Form 4.3-10 Hydromodification Control BMPs (DA 1)

1 Volume reduction needed for HCOC performance criteria (ft^3): *(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*	**2** On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): *Sum of Form 4.3-9 Items 2, 3, and 4 Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction*
3 Remaining volume for HCOC volume capture (ft^3): *Item 1 – Item 2*	**4** Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, harvest and use, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance. Alternative compliance plans may include one or more of the following elements:

- On-site structural treatment control BMP - All treatment control BMP should be located as close to possible to the pollutant sources and should not be located within receiving waters;
- Off-site structural treatment control BMP - Pollutant removal should occur prior to discharge of runoff to receiving waters;
- Urban runoff fund or In-lieu program, if available

Depending upon the proposed alternative compliance plan, approval by the executive officer may or may not be required (see Section 6 of the TGD for WQMP).

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMP included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and may require a Maintenance Agreement (consult the jurisdiction's LIP). If a Maintenance Agreement is required, it must also be attached to the WQMP.

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their local Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

6.4 Other Supporting Documentation

- BMP Educational Materials
- Activity Restriction – C, C&R's & Lease Agreements

APPENDIX H

NOISE AND VIBRATION ANALYSIS

NOISE AND VIBRATION IMPACT ANALYSIS

RECHE CANYON PLAZA PROJECT

COLTON, CALIFORNIA

LSA

February 2022

NOISE AND VIBRATION IMPACT ANALYSIS

RECHE CANYON PLAZA PROJECT

COLTON, CALIFORNIA

Submitted to:

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Colton, California 92324

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Project No. CLT1802.06

LSA

February 2022

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LIST OF ABBREVIATIONS AND ACRONYMS

ac	acre(s)
ADT	average daily traffic
APN	Assessor's Parcel Number
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
City	City of Colton
CNEL	Community Noise Equivalent Level
dB	decibel(s)
dBA	A-weighted decibel(s)
FHWA	Federal Highway Administration
ft	foot/feet
FTA	Federal Transit Administration
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second
L_{dn}	day-night average noise level
L_{eq}	equivalent continuous sound level
L_{max}	maximum instantaneous noise level
LSA	LSA Associates, Inc.
mi	mile(s)
PPV	peak particle velocity
project	Reche Canyon Plaza Project
RMS	root-mean-square (velocity)
sf	square foot/feet
VdB	vibration velocity decibels

NOISE AND VIBRATION IMPACT ANALYSIS

INTRODUCTION

This Noise and Vibration Impact Analysis has been prepared to evaluate the potential noise and vibration impacts and reduction measures associated with the Reche Canyon Plaza Project (project) in Colton, California. This report is intended to satisfy City of Colton (City) and California Environmental Quality Act (CEQA) requirements for a project-specific noise and vibration impact analysis by examining the impacts of the proposed uses on the project site and identifying reduction measures that the project requires.

PROJECT LOCATION

The project site is located in the southeast corner of Colton, on the west side of Reche Canyon Road just south of Crystal Ridge Lane. The approximately 2.9-acre (ac) site includes four parcels, Assessor's Parcel Numbers (APNs) 0284-211-70, 71, 72, and 1178-371-27. The triangular-shaped site was created as a result of the realignment of Reche Canyon Road. Old Reche Canyon Road forms the west and south boundaries of the site. Other site boundaries include Crystal Ridge Lane to the north and Reche Canyon Road to the east. The regional and project location is shown on Figure 1.

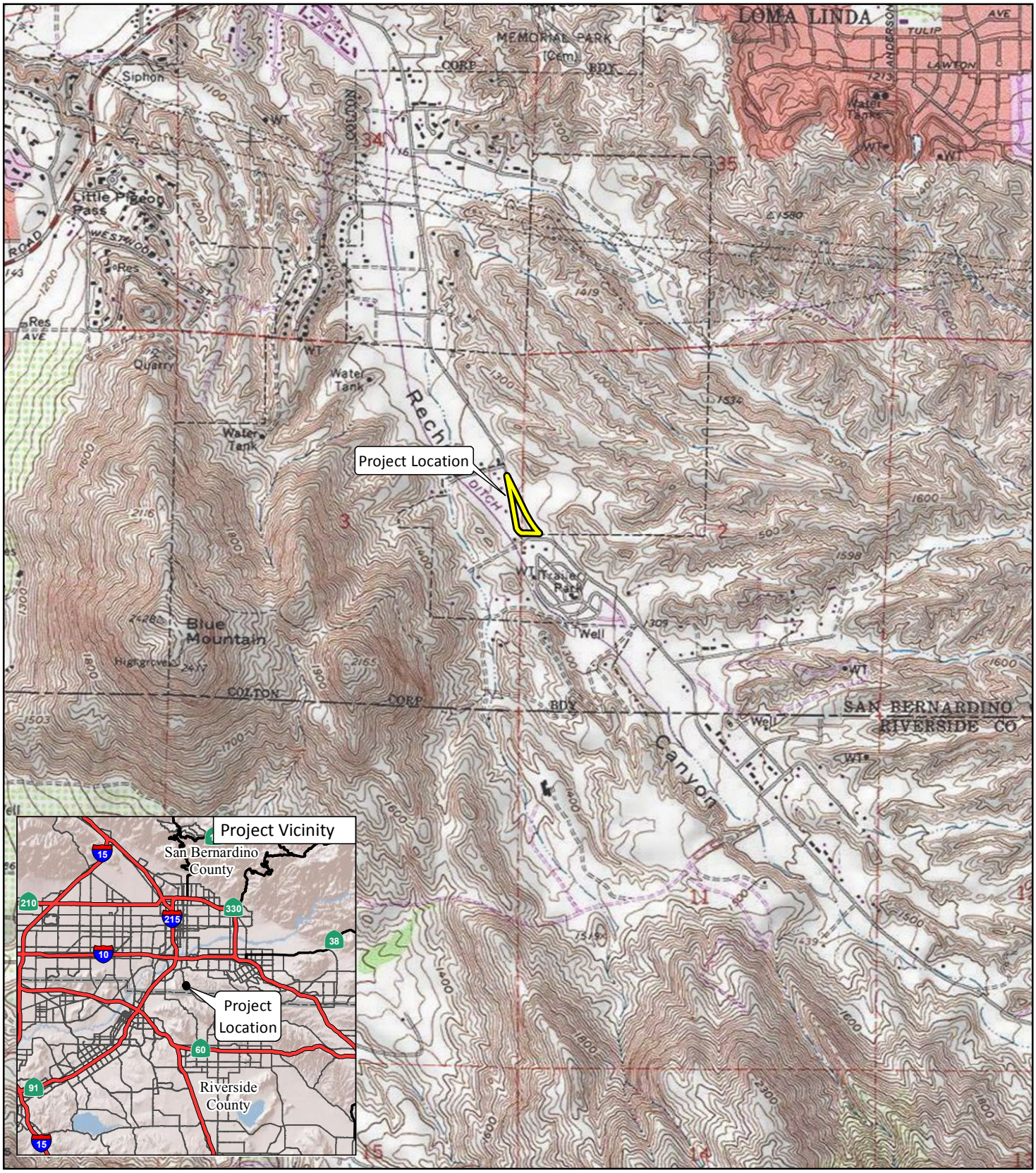
PROJECT DESCRIPTION

The project consists of the development of approximately 18,770 square feet (sf) of neighborhood retail commercial uses on 2.9 ac in the lower end of Reche Canyon. Specific uses include a 3,574 sf fueling station with 6 fueling dispensers, a 3,000 sf convenience store, 9,800 sf of neighborhood commercial retail space, and a 1,750 sf drive through car wash (see Figure 2). Retail space will be divided among approximately six different businesses. Adequate parking would be provided for the retail space and gas station (approximately 42 spaces for the retail uses and 25 spaces for the gas station). Access to the site will be provided from both Shadid Drive and Reche Canyon Road, which is located south of the project site. An equestrian water supply, horse tie-up, and shelter are located north of the project site, with an equestrian trail running along the eastern portion of the proposed project site. The hours of operation for the proposed project would be from 8:00 a.m. to 6:00 p.m. daily. The site plan is shown on Figure 2.

CHARACTERISTICS OF SOUND

Sound is increasing in the environment and can affect quality of life. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations (or cycles per second) of a wave, resulting in the tone's range from high to low. Loudness is the strength of a sound and describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be



LSA

LEGEND

Project Location

FIGURE 1

N

0 1000 2000

FEET

SOURCE: USGS 7.5' Quad - San Bernardino South (1980), CA

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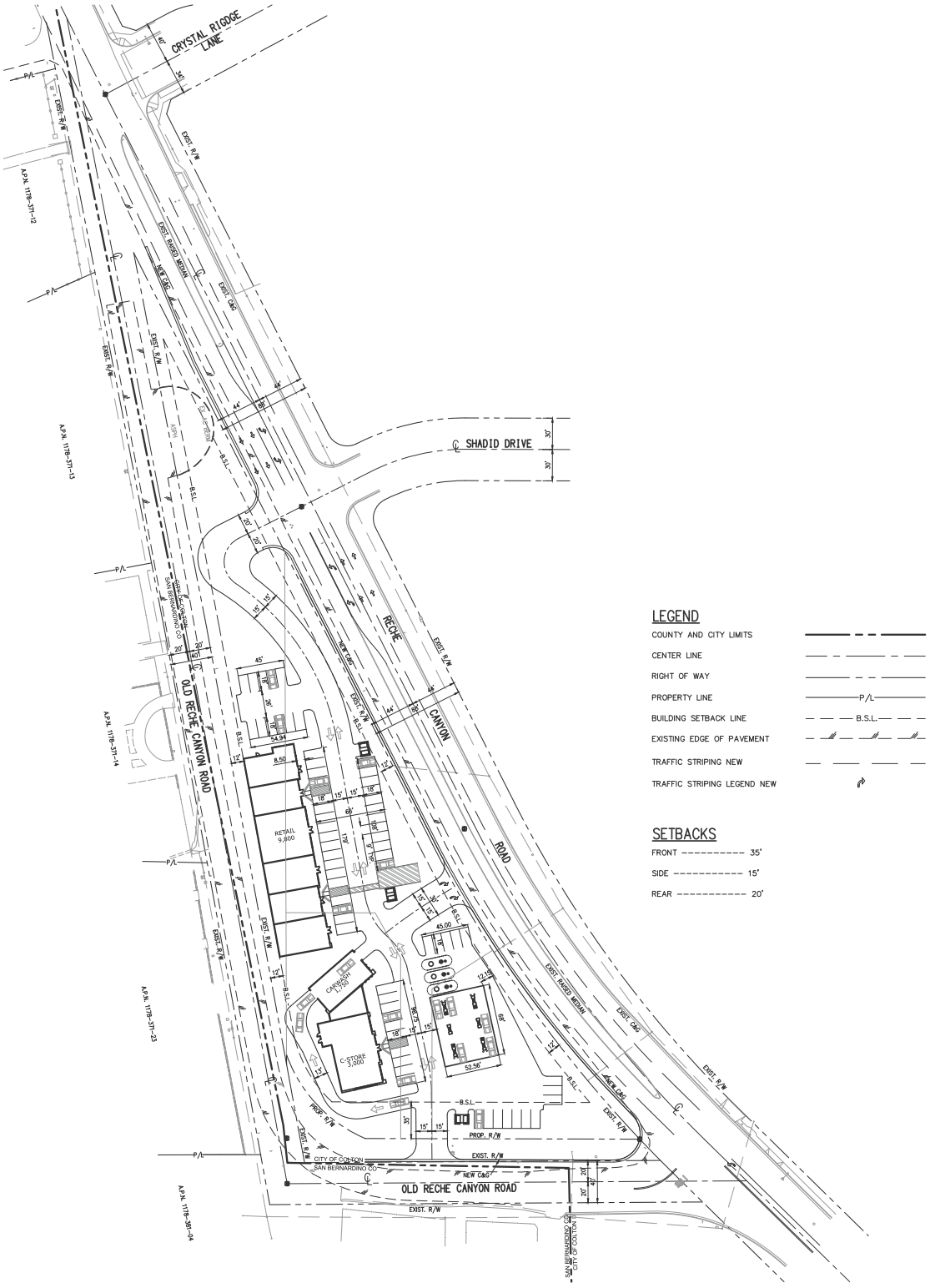
Reche Canyon Plaza Project

Regional and Project Location



LSA

FIGURE 2

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0 80 160

FEET

SOURCE: Transtech

Reche Canyon Plaza Project

Proposed Site Plan

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precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike units of measurement that use a linear scale (e.g., inches or pounds), decibels use a scale based on powers of 10.

For example, 10 decibels (dB) is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound-pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 A-weighted decibels (dBA) (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases 3 dB for each doubling of distance in a hard site environment. Line-source noise in a relatively flat environment with absorptive vegetation decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in California are L_{eq} and the Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during relaxation hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance, when assessing the annoyance factor, include the maximum instantaneous noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Another noise scale often used together with L_{max} in noise ordinances for enforcement purposes is noise standards in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half of the time the noise level exceeds this level, and half of the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category, audible impacts, refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally involve a change of 3 dB or greater because that level has been found to be barely perceptible in exterior environments. The second category, potentially audible impacts, refers to a change in the noise level between 1 and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category involves changes in noise level of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions and thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA will potentially result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less-developed areas.

Table A lists definitions of acoustical terms, and Table B shows common sound levels and their noise sources.

FUNDAMENTALS OF VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Outdoors, the motion may be discernible, but without the effects associated with the shaking of a building, there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Table A: Definitions of Acoustical Terms

Term	Definition
Decibel, dB	A unit of noise level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_2, L_8, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter during a designated time interval using fast-time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time; usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurement and Noise Control* (Harris 1991).

Table B: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near-Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Quiet	½ as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	¼ as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	⅛ as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2004).

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet (ft) from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 ft (FTA 2018). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, both construction of the project and the freight train operations could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for train-induced ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes (e.g., blasting and pile driving) to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS velocity is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. The vibration velocity level in decibels is defined as the following:

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where L_v is the vibration velocity in decibels (VdB), V is the RMS velocity amplitude, and V_{ref} is the reference velocity amplitude, or 1×10^{-6} inches/second (in/sec) used in the United States.

REGULATORY SETTING

Federal Regulations

Federal Transit Administration

Vibration standards included in the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018) are used in this analysis for ground-borne vibration impacts on human annoyance. The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. Table C provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building.

Table D lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). FTA guidelines show that a vibration level of up to 0.50 PPV (in/sec) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster) and would not result in any construction vibration damage. For non-engineered timber and masonry buildings, the construction building vibration damage criterion is 0.20 PPV (in/sec).

Table C: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max L_v (VdB)[1]	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for offices and similar areas not as sensitive to vibration.
Residential Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20X).
Residential Night and Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100X) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in 1/3-octave bands of frequency over the frequency range 8 to 80 Hz.
FTA = United States Federal Transit Administration
Hz = hertz
L_V = vibration velocity in decibels
Max = maximum
VdB = vibration velocity decibels

Table D: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate L_V (VdB)[1]
Reinforced concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry buildings	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
µin/sec = microinches per second
FTA = Federal Transit Administration
in/sec = inches per second
L_V = vibration velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

Local Regulations

City of Colton

Municipal Code. Section 18.42.040 of the City's Municipal Code (2021) limits maximum noise levels to 65 dBA radiated by any use of facility when measured at the boundary line of the property on which the noise is generated. Noise levels radiated shall not be obnoxious by reason of the sound's intensity, pitch, or dynamic characteristics as determined by the City.

Section 18.42.050 of the City's Municipal Code requires that all activities not generate ground vibration by equipment other than motor vehicles and trains, or by temporary construction or demolition, which is perceptible without instruments by the average person at or beyond any lot line of the lot containing the activities.

County of San Bernardino

County Code. The City's Municipal Code has not adopted time periods in which exterior construction activities would not be permitted nor any maximum noise level associated specifically

with construction noise. Section 38.01.080 of the San Bernardino County Code limits temporary construction, maintenance, repair, or demolitions activities between the hours of 7:00 a.m. and 7:00 p.m. except on Sundays and federal holidays.

EXISTING SETTING

Sensitive Land Uses in the Project Vicinity

Existing land uses within the project area include residences and a convenience store (commercial). Single-family residences surround the project to the east, south, and west of the project site. The convenience store is located south of the project site across Old Reche Canyon Road.

Overview of the Existing Ambient Noise Environment

The primary existing noise sources in the project area are transportation facilities. Traffic on Reche Canyon Road and other local streets contributes to the ambient noise levels in the project vicinity. Noise from motor vehicles is generated by engines, the interaction between the tires and the road, and the vehicles' exhaust systems. Other sources of noise in the project area include commercial activity at the convenience store.

Ambient Noise Measurements

Short-Term Noise Measurements

Short-term (20-minute) noise level measurements were conducted on November 30, 2021, using a Larson Davis Model 831 Type 1 sound level meter. Table E shows the results of the short-term noise level measurements along with a description of the measurement location and noise sources that occurred during the measurement. As shown in Table E, the measured average noise levels in the project vicinity ranged from 69.7 to 81.6 dBA L_{eq}, and the measured maximum noise levels ranged from 69.3 to 83.1 dBA L_{max}. Figure 3 shows the short-term monitoring locations. The short-term noise level measurement sheets are provided in Appendix A.

Table E: Short-Term Ambient Noise Level Measurements

Monitor No.	Location	Date	Start Time	Noise Level (dBA)				Noise Sources
				L_{eq}	L_{max}	L_{min}	CNEL[1]	
ST-1	East side of Reche Canyon Road, at fence line of 2594 Reche Canyon Road. Approximately 33 ft east of the edge of Reche Canyon Road's northbound lane.	11/30/21	9:47 AM	68.0	81.6	39.8	71.2	Traffic on Reche Canyon Road and very faint aircraft noise.
ST-2	West of the project site. At 12400 Reche Canyon Road, at the southwest corner of the paved part of the driveway.	11/30/21	10:19 AM	58.1	69.7	37.8	62.2	Traffic on Reche Canyon Road.

Source: Compiled by LSA Associates, Inc. (2022).
[1] The CNEL noise levels at ST-1 and ST-2 were calculated based on the noise level profile at LT-1.
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum instantaneous noise level

LSA

FIGURE 3

LEGEND

- Project Site Boundary
- ST-1 - Short-Term Noise Monitoring Location
- LT-1 - Long-Term Noise Monitoring Location

N

0 75 150

FEET

SOURCE: Google Earth 2021

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Reche Canyon Plaza

Noise Monitoring Locations

Long-Term Noise Measurements

The long-term (24-hour) noise level measurements were conducted from November 30 to December 1, 2021, using Larson Davis Spark dosimeters. Tables F, G, and H show hourly L_{eq} results from the long-term noise level measurements, and Table I shows the daytime and nighttime noise level range (L_{eq} and L_{max}) along with the calculated CNEL from the long-term noise level measurements at LT-1 and LT-2. As shown in Table I, the daytime noise levels ranged from 65.0 to 72.6 dBA L_{eq} at monitoring location LT-1, from 55.3 to 60.3 dBA L_{eq} at monitoring location LT-2, and from 54.0 to 59.8 dBA L_{eq} at monitoring location LT-3. The daytime maximum instantaneous noise level ranged from 83.3 to 92.7 dBA at LT-1, from 68.9 to 80.2 dBA at LT-2, and from 67.2 to 77.5 dBA at LT-3. The calculated daily noise levels were 73.7 dBA CNEL at LT-1, 61.7 dBA CNEL at LT-2, and 60.7 dBA CNEL at LT-3. Figure 3 shows the long-term monitoring locations.

Existing Aircraft Noise

Airport-related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. San Bernardino International Airport, Flabob Airport, Redlands Municipal Airport, and March Air Reserve Base are 4.6 miles (mi) northeast, 7.6 mi southwest, 6.1 mi northeast, and 8.7 mi south of the project site, respectively. Based on the Airport Layout Plan Narrative Report for San Bernardino International Airport (SBIAA 2010), the project site is outside of the 65 dBA CNEL noise contour of San Bernardino International Airport. Based on the Riverside County Airport Land Use Compatibility Plan (RCALUC 2004), the project site is located outside the 55 dBA CNEL and 60 dBA CNEL noise contour of Flabob Airport and March Air Reserve Base, respectively. Also, based on the Redlands Municipal Airport Land Use Compatibility Plan (Shutt Moen Associates 2003), the project site is located outside the 60 dBA CNEL noise contour of Redlands Municipal Airport. Additionally, there are no private airstrips within 2 mi of the project site.

Table F: Long-Term (24-Hour) Noise Level Measurement Results at LT-1

Start Time		Date	Noise Level (dBA)		
			L_{eq}	L_{max}	L_{min}
1	10:00 AM	11/30/21	69.7	86.1	38.8
2	11:00 AM	11/30/21	69.7	84.8	37.3
3	12:00 PM	11/30/21	70.3	88.4	37.4
4	1:00 PM	11/30/21	71.3	92.7	45.1
5	2:00 PM	11/30/21	71.5	85.4	44.4
6	3:00 PM	11/30/21	71.8	86.6	46.3
7	4:00 PM	11/30/21	72.6	91.4	52.5
8	5:00 PM	11/30/21	71.2	83.7	51.6
9	6:00 PM	11/30/21	69.7	83.3	48.4
10	7:00 PM	11/30/21	67.3	83.7	42.8
11	8:00 PM	11/30/21	66.8	87.2	41.5
12	9:00 PM	11/30/21	65.0	83.0	41.0
13	10:00 PM	11/30/21	63.3	80.4	39.8
14	11:00 PM	11/30/21	61.2	83.4	37.3
15	12:00 AM	12/1/21	59.0	77.5	38.0
16	1:00 AM	12/1/21	59.9	77.4	37.3
17	2:00 AM	12/1/21	59.9	81.1	36.7
18	3:00 AM	12/1/21	63.9	85.3	36.8
19	4:00 AM	12/1/21	67.1	86.3	39.6
20	5:00 AM	12/1/21	70.6	85.4	43.2
21	6:00 AM	12/1/21	71.0	86.0	44.2
22	7:00 AM	12/1/21	69.6	85.2	53.1
23	8:00 AM	12/1/21	68.4	88.8	49.2
24	9:00 AM	12/1/21	71.3	91.6	43.8

Source: Compiled by LSA (2022).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum instantaneous noise level

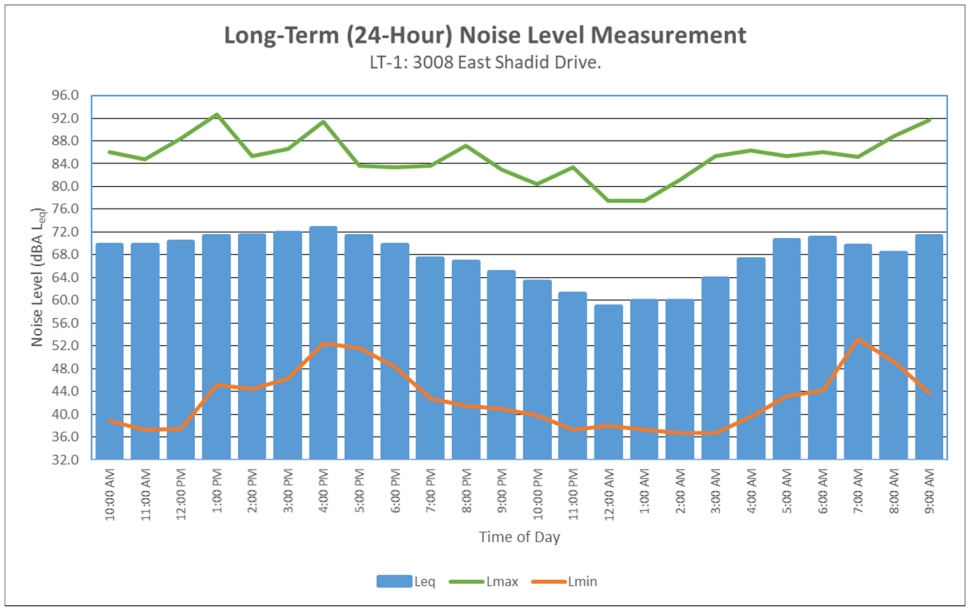


Table G: Long-Term (24-Hour) Noise Level Measurement Results at LT-2

Start Time		Date	Noise Level (dBA)		
			L_{eq}	L_{max}	L_{min}
1	10:00 AM	11/30/21	56.9	72.9	39.5
2	11:00 AM	11/30/21	56.3	73.8	39.4
3	12:00 PM	11/30/21	59.2	80.2	40.5
4	1:00 PM	11/30/21	58.3	74.6	43.2
5	2:00 PM	11/30/21	58.2	71.0	43.3
6	3:00 PM	11/30/21	59.2	78.9	44.8
7	4:00 PM	11/30/21	60.3	76.1	47.9
8	5:00 PM	11/30/21	59.7	77.8	48.0
9	6:00 PM	11/30/21	59.8	77.7	47.1
10	7:00 PM	11/30/21	56.9	79.2	42.1
11	8:00 PM	11/30/21	56.4	77.1	43.0
12	9:00 PM	11/30/21	55.3	78.4	41.9
13	10:00 PM	11/30/21	52.8	73.1	41.7
14	11:00 PM	11/30/21	52.9	77.0	36.7
15	12:00 AM	12/1/21	47.8	60.6	39.0
16	1:00 AM	12/1/21	50.7	75.1	39.1
17	2:00 AM	12/1/21	48.4	63.1	38.0
18	3:00 AM	12/1/21	51.5	70.0	36.9
19	4:00 AM	12/1/21	54.4	74.7	41.0
20	5:00 AM	12/1/21	57.2	69.6	43.9
21	6:00 AM	12/1/21	58.6	79.6	46.0
22	7:00 AM	12/1/21	59.6	78.7	47.7
23	8:00 AM	12/1/21	56.6	68.9	47.9
24	9:00 AM	12/1/21	58.0	77.7	43.4

Source: Compiled by LSA (2022).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum instantaneous noise level

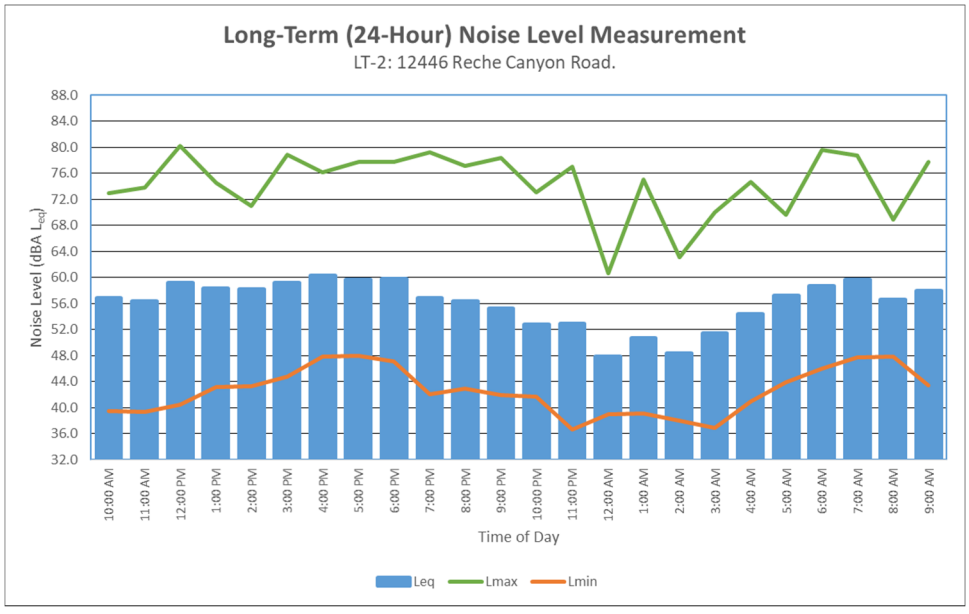


Table H: Long-Term (24-Hour) Noise Level Measurement Results at LT-3

Start Time		Date	Noise Level (dBA)		
			L_{eq}	L_{max}	L_{min}
1	10:00 AM	11/30/21	54.1	70.7	39.4
2	11:00 AM	11/30/21	54.0	71.4	36.5
3	12:00 PM	11/30/21	55.4	73.0	36.4
4	1:00 PM	11/30/21	57.0	75.7	47.7
5	2:00 PM	11/30/21	57.0	77.5	48.8
6	3:00 PM	11/30/21	57.9	74.2	49.8
7	4:00 PM	11/30/21	59.8	73.4	51.7
8	5:00 PM	11/30/21	59.4	71.5	52.7
9	6:00 PM	11/30/21	59.2	76.8	49.6
10	7:00 PM	11/30/21	55.3	67.0	44.0
11	8:00 PM	11/30/21	55.8	74.6	43.7
12	9:00 PM	11/30/21	54.7	73.0	41.1
13	10:00 PM	11/30/21	52.1	65.2	41.3
14	11:00 PM	11/30/21	50.7	69.9	36.4
15	12:00 AM	12/1/21	48.6	60.7	38.9
16	1:00 AM	12/1/21	49.2	66.0	38.3
17	2:00 AM	12/1/21	48.6	64.8	37.1
18	3:00 AM	12/1/21	51.0	63.4	38.3
19	4:00 AM	12/1/21	53.8	69.3	40.8
20	5:00 AM	12/1/21	56.4	69.1	44.0
21	6:00 AM	12/1/21	57.5	71.4	47.0
22	7:00 AM	12/1/21	57.6	71.5	47.8
23	8:00 AM	12/1/21	56.0	67.2	48.6
24	9:00 AM	12/1/21	55.2	68.9	41.3

Source: Compiled by LSA (2022).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum instantaneous noise level

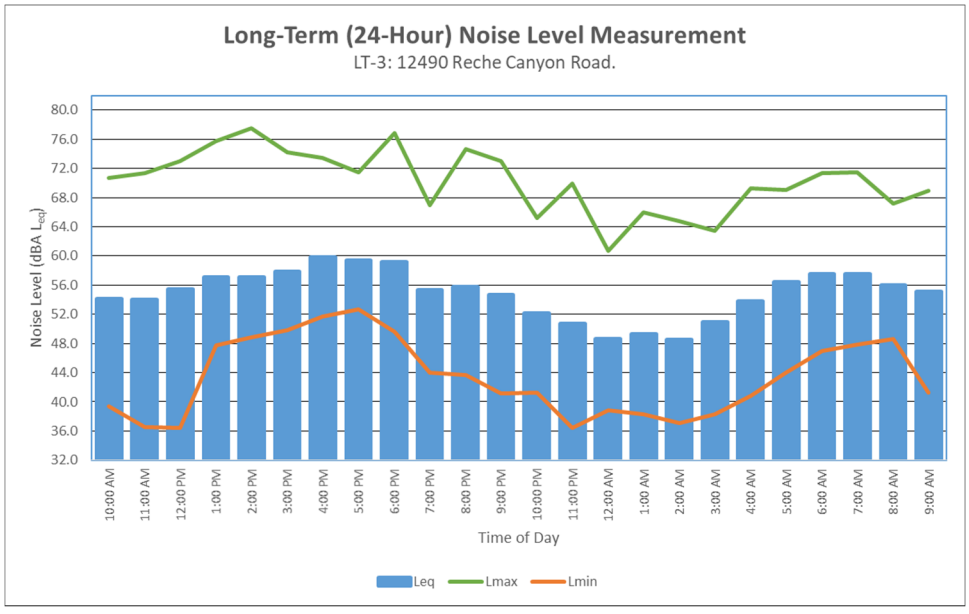


Table I: Long-Term Ambient Noise Monitoring Results

Monitor No.	Location	Noise Level (dBA)					Noise Sources
		Daytime		Nighttime		CNEL	
		L_{eq}	L_{max}	L_{eq}	L_{max}		
LT-1	3008 Shadid Drive. On a utility pole.	65.0-72.6	83.0-92.7	59.0-71.0	77.4-86.3	73.7	Traffic on Reche Canyon Road and faint aircraft noise.
LT-2	12446 Reche Canyon Road. On a utility pole.	68.6–75.5	85.0–96.3	64.0–71.4	81.3–93.0	61.7	Traffic on Reche Canyon Road and faint aircraft noise.
LT-3	12490 Reche Canyon Road. On a utility pole.	55.3-60.3	68.9-80.2	47.8-58.6	60.6-79.6	60.7	Traffic on Reche Canyon Road and faint aircraft noise.

Source: Compiled by LSA Associates, Inc. (2022).
Note: Long-term (24-hour) noise level measurements were conducted from November 30, 2021, to December 1, 2021.
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
CNEL = Community Noise Equivalent Level
L_{max} = maximum instantaneous noise level
ft = foot/feet

Existing Traffic Noise

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) (FHWA 1977) was used to evaluate traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Existing average daily traffic (ADT) volumes in the project area were obtained from the project's Traffic Impact Study (LSA 2021). The standard vehicle mix for Southern California roadways was used for roadways in the project area. Table J lists the existing traffic noise levels on Reche Canyon Road in the project area. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in Appendix B.

Table J shows that traffic noise levels along Reche Canyon Road are moderately high, with 70, 65, and 60 dBA CNEL impact zones that extend up to 60 ft, 127 ft, and 272 ft, respectively, from the roadway centerline.

IMPACTS

Short-Term Construction Noise Impacts

Two types of short-term noise impacts could occur during construction on the project site. First, construction crew commutes and the transport of construction equipment and materials to the site for the project would incrementally increase noise levels on roadway leading to the project site. The pieces of construction equipment for construction activities would move on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the project vicinity. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to a maximum of 84 dBA), the effect on longer-term ambient noise levels would be small because the number of daily construction-related vehicle trips is small compared to existing average daily traffic volumes in the

Table J: Existing Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane
Reche Canyon Road between Crystal Ridge Lane and Shadid Drive	21,683	59	125	268	69.7
Reche Canyon Road between Shadid Drive and Old Reche Canyon Road	22,095	60	127	272	69.7
Reche Canyon Road South of Old Reche Canyon Road	21,386	58	124	266	69.6

Source: Compiled by LSA Associates, Inc. (2022).
Note: Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = feet

project area. The building construction phase would generate the most trips out of all of the construction phases, at 146 trips per day based on the California Emissions Estimator Model (CalEEMod) (Version 2020.4.0). Roadways that would be used to access the project site is Reche Canyon Road. Based on Table J, Reche Canyon Road have an existing average daily traffic volume of 21,386 near the project site. Based on the information above, construction-related traffic would not increase noise. Therefore, no short-term construction-related impacts associated with worker commutes and transport of construction equipment and material to the project site would occur, and no noise reduction measures would be required.

The second type of short-term noise impact is related to noise generated from construction activities. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. The project anticipates site preparation, grading, building construction, paving, and architectural coating phases of construction. These various sequential phases change the character of the noise generated on a project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table K lists the L_{max} recommended for noise impact assessments for typical construction equipment included in the *FHWA Highway Construction Noise Handbook* (FHWA 2006), based on a distance of 50 ft between the equipment and a noise receptor.

Typical noise levels range up to 88 dBA L_{max} at 50 ft during the noisiest construction phases. The site preparation and grading phase tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front-end loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders.

Table K: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor[1]	Maximum Noise Level (L_{max}) at 50 ft[2]
Backhoe	40	80
Compactor (ground)	20	80
Compressor	40	80
Crane	16	85
Dozer	40	85
Dump Truck	40	84
Excavator	40	85
Flatbed Truck	40	84
Forklift	20	85
Front-End Loader	40	80
Grader	40	85
Impact Pile Driver	20	95
Jackhammer	20	85
Pickup Truck	40	55
Pneumatic Tools	50	85
Pump	50	77
Rock Drill	20	85
Roller	20	85
Scraper	40	85
Tractor	40	84
Welder	40	73

Source: *FHWA Highway Construction Noise Handbook,* Table 9.1 (FHWA 2006).
Note: The noise levels reported in this table are rounded to the nearest whole number.
[1] The usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] The maximum noise levels were developed based on Specification 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the "Big Dig" project.
CA/T = Central Artery/Tunnel
FHWA = Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous noise level

Project construction is expected to require the use of graders, bulldozers, and water trucks/pickup trucks. Noise associated with the use of each type of construction equipment for the site preparation and grading phase is estimated to be between 55 dBA L_{max} and 85 dBA L_{max} at a distance of 50 ft from the active construction area. As shown in Table K, the maximum noise level generated by each grader is assumed to be approximately 85 dBA L_{max} at 50 ft. Each bulldozer would generate approximately 85 dBA L_{max} at 50 ft. The maximum noise level generated by water trucks/pickup trucks is approximately 55 dBA L_{max} at 50 ft from these vehicles. Each doubling of the sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 88 dBA L_{max} at a distance of 50 ft from the active construction area. Based on a usage factor of 40 percent, the worst-case combined noise level during this phase of construction would be 84 dBA L_{eq} at a distance of 50 ft from the active construction area.

The closest residential property line is located approximately 50 ft from the project construction boundary, and residences may be subject to short-term construction noise reaching up to 88 dBA L_{max} (84 dBA L_{eq}) generated by construction activities in the project area. Daytime ambient noise

levels in the project vicinity range between 55.3 and 75.5 dBA L_{eq} and between 68.9 and 96.3 dBA L_{max} based on the long-term noise level measurements at LT-2 and LT-3 shown in Table I. Although the noise generated by project construction activities would be higher than the ambient noise levels and may result in a temporary increase in the ambient noise levels, construction noise would stop once project construction is completed. Since noise generated by project construction activities would temporarily be higher than ambient noise levels, noise impacts from the project construction activities would be potentially significant. Therefore, the implementation of noise reduction measures that limit project construction activities to the allowable daytime hours similar to San Bernardino County along with other noise reduction measures listed below would be required. With the implementation of noise reduction measures, no noise impacts from construction activities would occur.

- The construction contractor shall limit construction activities to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. Construction shall be prohibited outside these hours and on Sundays and federal holidays.

- The construction contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.

- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors nearest the project site during all project construction.

- The construction contractor shall place all stationary construction equipment so that the emitted noise is directed away from the sensitive receptors nearest the project site.

Short-Term Construction Vibration Impacts

This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damage using vibration levels in PPV (in/sec). Vibration levels calculated in RMS velocity are best for characterizing human response to building vibration, whereas vibration levels in PPV are best for characterizing damage potential. As shown in Table D, the FTA guidelines indicate that a vibration level up to 0.50 PPV (in/sec) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster) and would not result in any construction vibration damage (FTA 2018). For a non-engineered timber and masonry building, the construction vibration damage criterion is 0.20 PPV (in/sec). For a fragile building, the construction vibration damage criterion is 0.12 PPV (in/sec).

Table L shows the reference vibration levels at a distance of 25 ft for each type of standard construction equipment from the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Project construction is expected to require the use of a large bulldozer and loaded trucks, which would generate ground-borne vibration levels of up to 87 VdB (0.089 PPV [in/sec]) and 86 VdB (0.076 PPV [in/sec]), respectively, when measured at 25 ft.

The greatest vibration levels are anticipated to occur during the site preparation and grading phase. All other phases are expected to result in lower vibration levels. The distance to the nearest

buildings for vibration impact analysis is measured between the nearest off-site buildings and the

Table L: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] The equipment shown in **bold** is expected to be used on site.
µin/sec = microinches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
L_V = vibration velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts normally occur within the buildings.

The formula for vibration transmission is provided below:

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$

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

Table M lists the projected vibration levels from various construction equipment expected to be used on the project site to the nearest buildings in the project vicinity. As shown in Table M, the closest residential and commercial buildings are located approximately 100 ft and 165 ft, respectively, from the project construction boundary and would experience vibration levels of 69 VdB (0.011 PPV [in/sec]) and 62 VdB (0.005 PPV [in/sec]), respectively. These vibration levels would not result in building damage because the residential and commercial buildings surrounding the project would be constructed equivalent to non-engineered timber and masonry and vibration levels would not exceed the FTA vibration damage threshold of 0.20 PPV (in/sec). Also, these vibration levels would not result in community annoyance because they would not exceed the FTA community annoyance threshold of 78 VdB for daytime residences and 84 VdB for land uses that are not as sensitive to vibration. Therefore, no construction vibration impacts would occur during project construction. No vibration reduction measures are required.

Long-Term Aircraft Noise Impacts

As discussed above, San Bernardino International Airport, Flabob Airport, Redlands Municipal Airport, and March Air Reserve Base are 4.6 mi northeast, 7.6 mi southwest, 6.1 mi southwest, and 8.7 mi south of the project site, respectively. Based on the Airport Layout Plan Narrative Report for

Table M: Summary of Construction Vibration Levels

Land Use	Direction	Equipment/Activity	Reference Vibration Level at 25 ft		Distance to Structure (ft)	Maximum Vibration Level	
			VdB	PPV (in/sec)		VdB	PPV (in/sec)
Residence	East	Large bulldozers	87	0.089	110	68	0.010
		Loaded trucks	86	0.076	110	67	0.008
Commercial	South	Large bulldozers	87	0.089	165	62	0.005
		Loaded trucks	86	0.076	165	61	0.004
Residence	South	Large bulldozers	87	0.089	130	66	0.008
		Loaded trucks	86	0.076	130	65	0.006
Residence	West	Large bulldozers	87	0.089	100	69	0.011
		Loaded trucks	86	0.076	100	68	0.010

Source: Compiled by LSA Associates, Inc. (2022).
Note: The FTA-recommended building damage threshold is 94 VdB (0.20 PPV [in/sec]) at the receiving non-engineered timber and masonry building.
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
PPV = peak particle velocity
VdB = vibration velocity decibels

San Bernardino International Airport (SBIAA 2010), the project site is outside of the 65 dBA CNEL noise contour of San Bernardino International Airport. Based on the Riverside County Airport Land Use Compatibility Plan (RCALUC 2004), the project site is located outside the 55 dBA CNEL and 60 dBA CNEL noise contour of Flabob Airport and March Air Reserve Base, respectively. Also, based on the Redlands Municipal Airport Land Use Compatibility Plan (Shutt Moen Associates 2003), the project site is located outside the 60 dBA CNEL noise contour of Redlands Municipal Airport. Additionally, there are no private airstrips within 2 mi of the project site. Therefore, the project would not expose people working in the project area to excessive noise levels.

Long-Term Traffic Noise Impacts

The FHWA Highway Traffic Noise Prediction Model (FHWA RD-77-108) (FHWA 1977) was used to evaluate traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing (2021), cumulative (2023), and future build-out (2040) ADT volumes were obtained from the project's Traffic Impact Study (LSA 2021). The standard vehicle mix for Southern California roadways was used for roadways in the project area. Tables N, O, and P show the existing (2021), cumulative (2023), and future build-out (2040) traffic noise levels without and with the project, respectively, on Reche Canyon Road in the project area. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location

where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in Appendix B.

Tables N, O, and P show that the project-related traffic noise would increase by up to 0.1 dBA along Reche Canyon Road. Noise level increases less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, no traffic noise impacts from project-related traffic on off-site sensitive receptors would occur. No noise reduction measures are required.

Table N: Existing (2021) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Traffic Conditions					With Project Traffic Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Reche Canyon Road between Crystal Ridge Lane and Shadid Drive	21,683	59	125	268	69.7	22,419	60	128	274	69.8	0.1
Reche Canyon Road between Shadid Drive and Old Reche Canyon Road	22,095	60	127	272	69.7	22,400	60	128	274	69.8	0.1
Reche Canyon Road South of Old Reche Canyon Road	21,386	58	124	266	69.6	21,884	59	126	270	69.7	0.1

Source: Compiled by LSA Associates, Inc. (2022).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = feet

Table O: Cumulative (2023) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Traffic Conditions					With Project Traffic Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Reche Canyon Road between Crystal Ridge Lane and Shadid Drive	24,859	64	137	294	70.3	25,595	66	139	300	70.4	0.1
Reche Canyon Road between Shadid Drive and Old Reche Canyon Road	25,285	65	138	297	70.3	25,590	66	139	300	70.4	0.1
Reche Canyon Road South of Old Reche Canyon Road	24,694	64	136	293	70.2	25,192	65	138	296	70.3	0.1

Source: Compiled by LSA Associates, Inc. (2022).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = feet

Table P: Future Build-Out (2040) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Traffic Conditions					With Project Traffic Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Reche Canyon Road between Crystal Ridge Lane and Shadid Drive	31,028	74	158	341	71.2	31,764	75	161	346	71.3	0.1
Reche Canyon Road between Shadid Drive and Old Reche Canyon Road	31,440	75	160	344	71.3	31,745	75	161	346	71.3	0.0
Reche Canyon Road South of Old Reche Canyon Road	30,731	74	157	338	71.2	31,745	75	161	346	71.3	0.1

Source: Compiled by LSA Associates, Inc. (2022).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = feet

Long-Term Stationary-Source Noise Impacts

Car wash, fueling activities, parking activities, truck delivery and truck-unloading activities, and heating, ventilation, and air conditioning (HVAC) equipment associated with the project. These activities would take place during the hours of operation from 8:00 a.m. to 6:00 p.m. daily and would potentially affect the existing off-site sensitive land uses. The following provides a detailed noise analysis and discussion of each stationary noise source.

Car Wash

The proposed project would include a car wash and would generate a noise level of 87.3 dBA at a distance of 20 ft based on reference noise level measurements for eight 15-horsepower Peco dryers located near the car wash tunnel exit. At a distance of 50 ft, noise levels from the Peco dryers would be 79.3 dBA L_{eq}. Table Q summarizes the noise levels generated by the car wash at the adjacent land using SoundPLAN. The SoundPLAN results are shown in Appendix C.

Table Q: Car Wash Noise Levels

Receptor Land Use Type	Direction	Reference Noise Level at 50 ft (dBA L_{eq})	Noise Level at Receptor Location (dBA L_{eq})
Residential	East	79.3	65.0
Commercial	South	79.3	49.8
Residential	South	79.3	47.3
Residential	West	79.3	67.7

Source: Compiled by LSA Associates, Inc. (2022).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level

Fueling Activities

Fueling activities would include engine start-up noise, car door slams, back-up alarms, and tire squeals, which would generate noise levels of approximately 70 dBA L_{max} at 50 ft. It is assumed that fueling activities would generate the maximum noise level for a cumulative period of 15 minutes in any hour, which would be 64.0 dBA L_{eq} at 50 ft. The residences to the west would be shielded by the proposed 17 ft high commercial/retail building and 15 ft high car wash and convenience store and would provide a minimum noise reduction of 5 dBA. The closest residences are located approximately 120 ft east, 145 ft south, and 205 ft west of fueling activities on the project site. Also, the closest commercial use is located approximately 380 ft south of fueling activities on the project site.

Parking Activities

The proposed project would include surface parking spaces near the convenience store and commercial retail space on the project site. Noise generated from parking lot activities would include noise generated by vehicles traveling at slow speeds, engine start-up noise, car door slams, car horns, car alarms, and tire squeals. Representative parking activities would generate approximately 60 to 70 dBA L_{max} at 50 ft. It is assumed that parking activities would generate the

maximum noise level for a cumulative period of 10 minutes in any hour, which would be 62.2 dBA L_{eq} at 50 ft. The residences to the west would be shielded by the proposed 17 ft high commercial/ retail building and 15 ft high car wash and convenience store and would provide a minimum noise reduction of 10 dBA. The closest residences are located approximately 95 ft east, 80 ft south, and 75 ft west of parking activities on the project site. Also, the closest commercial use is located approximately 260 ft south of parking activities on the project site.

Truck Delivery and Truck-Unloading Activities

Truck delivery and truck-unloading activities for the project would occur on the east end of the project site near the fueling station and the commercial retail area. Noise levels generated from these activities include truck movement, docking at loading dock doors, backup alarms, air brakes, idling, and unloading activities. These activities would result in a maximum noise similar to noise readings from truck delivery and truck-unloading activities for other projects, which would generate a noise level of 75 dBA L_{max} at 50 ft. Although a typical truck-unloading process takes an average of 15 to 20 minutes, this maximum noise level occurs in a much shorter period of time (less than 5 minutes). Also, it is estimated that there would be a maximum of one delivery truck per hour, which would result in a cumulative period of 5 minutes in any hour. Based on the assumptions above, truck delivery and truck-unloading activities would generate a noise level of 64.2 dBA L_{eq} at 50 ft. The residences to the west would be shielded by the proposed 17 ft high commercial/retail building and 15 ft high car wash and convenience store and would provide a minimum noise reduction of 5 dBA. The closest residences are located approximately 105 ft east, 190 ft south, and 170 ft west of truck delivery and truck unloading activities on the project site. Also, the closest commercial use is located approximately 195 ft south of truck delivery and truck unloading activities on the project site.

Heating, Ventilation, and Air Conditioning Noise

The proposed project would include a rooftop HVAC unit for the convenience store and the commercial retail space, which would consist of six different businesses. The HVAC equipment could operate 24 hours per day. The HVAC units would each generate a noise level of 49.4 dBA L_{eq} at 50 ft. Table R summarizes the noise levels generated by the rooftop HVAC units at the adjacent land uses. The detailed HVAC noise analysis and noise calculations are provided in Appendix D.

Table R: Rooftop HVAC Noise Levels

Land Use	Direction	Number of HVAC Units	Reference Noise Level at 50 ft (dBA L_{eq})	Noise Level (dBA L_{eq})
Residential	East	7	49.4	37.4
Commercial	South	7	49.4	31.9
Residential	South	7	49.4	36.2
Residential	West	7	49.4	46.3

Source: Compiled by LSA Associates, Inc. (2022).
dBA = A-weighted decibels
HVAC = heating, ventilation, and air conditioning
L_{eq} = equivalent continuous sound level

Stationary-Source Noise Impacts Summary

Table S shows the individual stationary-source noise from the car wash, fueling activities, parking activities, truck delivery and truck-unloading activities, and rooftop HVAC equipment, as well as the distance from the source to the property line, distance attenuation, noise reduction from shielding, combined stationary-source noise level at each property line, average daytime ambient noise levels, average daytime ambient noise level plus project-related stationary noise, and increase in noise over the ambient noise level.

As shown in Table S, the combined stationary-source noise levels at the closest residences to the east, south, and east are 66.7 dBA L_{eq}, 60.7 dBA L_{eq}, and 67.9 dBA L_{eq}, respectively. Also, the combined stationary-source noise levels at the closest commercial use to the south is 55.8 dBA L_{eq}. These noise levels would not exceed the City's noise standard of 65 dBA L_{eq}, except for the residences to the east and west. For the residences to the east, although noise levels generated from project operations would exceed the City's noise standard of 65 dBA L_{eq}, the increase in ambient noise level would be approximately 1.5 dBA. This increase in noise would not be perceptible to the human ear in an outdoor environment. Therefore, no noise impacts from project operations would occur at the residences east of the project.

For the residences to the west, noise levels generated from project operations would exceed the City's noise standard of 65 dBA L_{eq} and the increase in ambient noise level would be approximately 11.3 dBA. This increase in noise would be perceptible to the human ear in an outdoor environment. The implementation of a minimum 9 ft high wall along the project's western property line between the commercial/retail building and the car wash/convenience store building would reduce project-related noise levels to 63.9 dBA L_{eq}, as shown in Table T. Although the increase in project-related noise from project operations would be perceptible, noise generated from project operations would not exceed the City's noise standard of 65 dBA L_{eq}. Therefore, no noise impacts from project operations would occur with the implementation of a minimum 9 ft high wall along the project's western property line between the commercial/retail building and the car wash/convenience store building. Figure 4 shows the location of the wall.

Long-Term Ground-Borne Noise and Vibration from Vehicular Traffic

The project would not generate vibration. In addition, vibration levels generated from project-related traffic on the adjacent roadway (Reche Canyon Road) would be unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Vibration generated from project-related traffic on the adjacent roadway would be less than significant, and no noise reduction measures are required.

Table S: Stationary-Source Noise Levels

Land Use	Direction	Noise Source	Reference Noise Level at 50 ft (dBA L_{eq})	Distance from Source to Receptor (ft)	Distance Attenuation (dBA)	Shielding (dBA)	Noise Level (dBA L_{eq})	Combined Noise Level (dBA L_{eq})	Average Daytime Ambient Noise Level (dBA L_{eq})	Combined Noise Level with Ambient Noise Level (dBA L_{eq})	Noise Increase Over Ambient Noise Level (dBA)
Residential	East	Car Wash	79.3	--	--	--	65.0[1]	66.7	70.6	71.5	0.9
		Fueling Activities	64.0	120	13.4	0	56.4				
		Parking Activities	62.2	95	6.8	0	56.6				
		Truck Delivery and Truck-Unloading Activities	64.2	105	8.6	0	57.8				
		HVAC	49.4	--	--	--	37.4[2]				
Commercial	South	Car Wash	79.3	--	--	--	49.8[1]	55.8	60.7	61.9	1.2
		Fueling Activities	64.0	380	17.6	0	46.4				
		Parking Activities	62.2	260	14.3	0	47.9				
		Truck Delivery and Truck-Unloading Activities	64.2	195	11.8	0	52.4				
		HVAC	49.4	--	--	--	31.9[2]				
Residential	South	Car Wash	79.3	--	--	--	47.3[1]	60.7	58.5	62.8	4.3
		Fueling Activities	64.0	145	9.2	--	54.8				
		Parking Activities	62.2	80	4.1	0	58.1				
		Truck Delivery and Truck-Unloading Activities	64.2	190	11.6	0	52.6				
		HVAC	49.4	--	--	0	38.2[2]				
Residential	West	Car Wash	79.3	--	--	--	67.7[1]	67.8	56.9	68.2	11.3
		Fueling Activities	64.0	205	12.3	5[3]	46.7				
		Parking Activities	62.2	75	3.5	10[4]	48.7				
		Truck Delivery and Truck-Unloading Activities	64.2	170	10.6	5[3]	48.6				
		HVAC	49.4	--	--	--	46.3[2]				

Source: Compiled by LSA Associates, Inc. (2022).

[1] Noise level modeled using SoundPLAN.

[2] Appendix D provides the detailed HVAC noise calculations.

[3] The proposed 17 ft high commercial/retail building and 15 ft high car wash and convenience store would provide a minimum noise reduction of 5 dBA.

[4] The proposed 17 ft high commercial/retail building and 15 ft high car wash and convenience store would provide a minimum noise reduction of 10 dBA.

dBA = A-weighted decibels
ft = foot/feet
HVAC = heating, ventilation, and air conditioning
L_{eq} = equivalent continuous sound level

Table T: Stationary-Source Noise Levels (with Noise Reduction Measures)

Land Use	Direction	Noise Source	Reference Noise Level at 50 ft (dBA L_{eq})	Distance from Source to Receptor (ft)	Distance Attenuation (dBA)	Shielding (dBA)	Noise Level (dBA L_{eq})	Combined Noise Level (dBA L_{eq})	Average Daytime Ambient Noise Level (dBA L_{eq})	Combined Noise Level with Ambient Noise Level (dBA L_{eq})	Noise Increase Over Ambient Noise Level (dBA)
Residential	West	Car Wash	79.3	--	--	--	63.5[1]	63.9	56.9	64.7	7.8
		Fueling Activities	64.0	205	12.3	5[3]	46.7				
		Parking Activities	62.2	75	3.5	10[4]	48.7				
		Truck Delivery and Truck-Unloading Activities	64.2	170	10.6	5[3]	48.6				
		HVAC	49.4	--	--	--	46.3[2]				

Source: Compiled by LSA Associates, Inc. (2022).

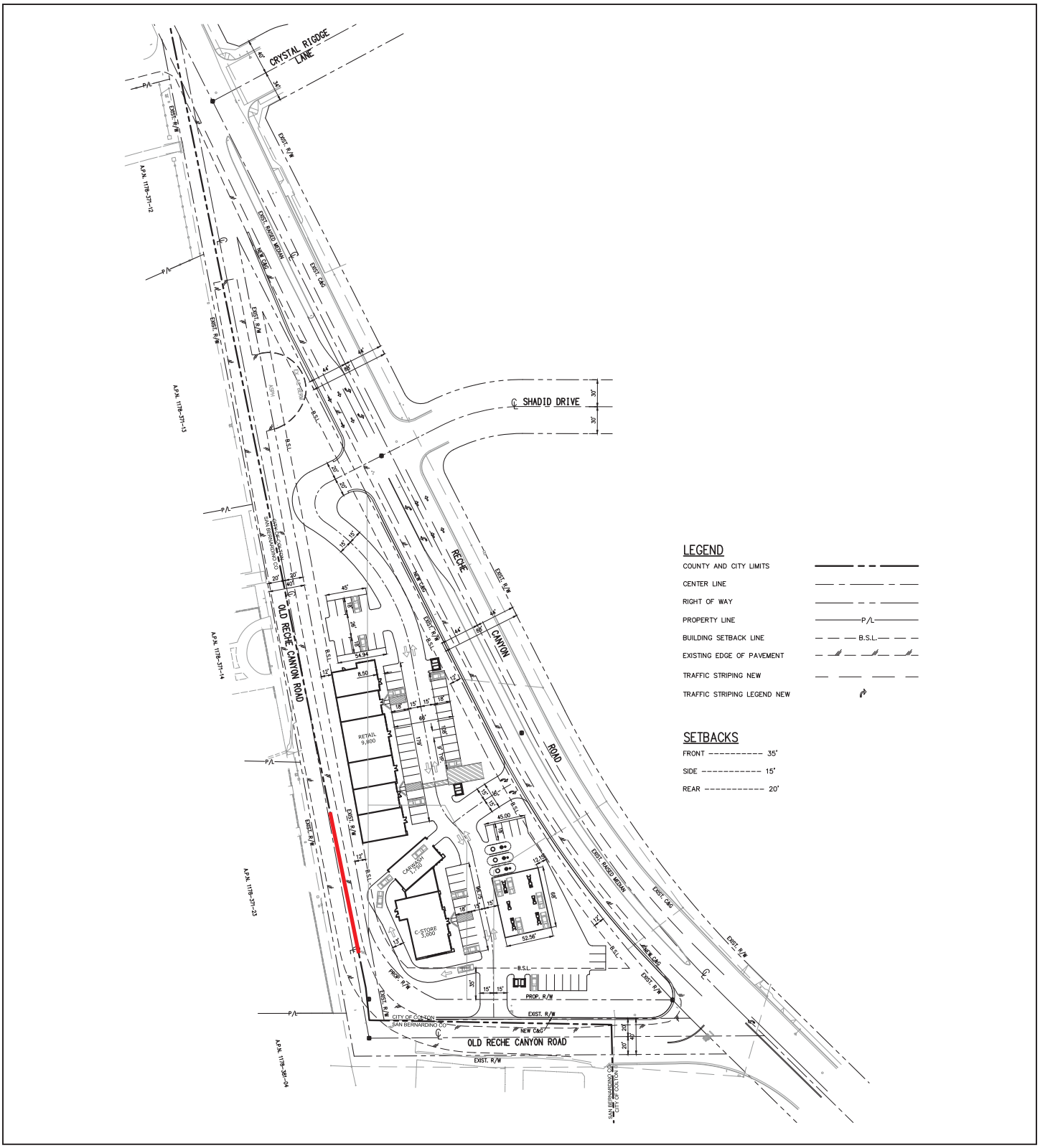
[1] Noise level with a minimum 9 ft high wall along the western property line between the commercial/retail building and the car wash/convenience store building using SoundPLAN.

[2] Appendix D provides the detailed HVAC noise calculations.

[3] The proposed 17 ft high commercial/retail building and 15 ft high car wash and convenience store would provide a minimum noise reduction of 5 dBA.

[4] The proposed 17 ft high commercial/retail building and 15 ft high car wash and convenience store would provide a minimum noise reduction of 10 dBA.

dBA = A-weighted decibels
ft = foot/feet
HVAC = heating, ventilation, and air conditioning
L_{eq} = equivalent continuous sound level



LSA

FIGURE 4

LEGEND

- Wall Location

N

0 80 160

FEET

SOURCE: Transtech

Reche Canyon Plaza Project

Wall Location

I:\CLT1802.06\G\Wall_Location.ai (12/13/2021)

REDUCTION MEASURES

Short-Term Construction Noise Impacts

The following noise reduction measures are required:

- The construction contractor shall limit construction activities to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. Construction shall be prohibited outside these hours and on Sundays and federal holidays.
- The construction contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall place all stationary construction equipment so that the emitted noise is directed away from the sensitive receptors nearest the project site.

Short-Term Construction Vibration Impacts

No vibration reduction measures are required.

Long-Term Aircraft Noise Impacts

No noise reduction measures are required.

Long-Term Traffic Noise Impacts

No noise reduction measures are required.

Long-Term Stationary-Source Noise Impacts

The following measure would be required to reduce noise impacts from the operations of the project.

- A minimum 9 ft high wall located along the project's western property line between the commercial/retail building and the car wash/convenience store building is required to shield off-site residences located west of the project site. Figure 4 shows the location of the wall. The wall shall be continuous with no gaps or holes and have a minimum density of 4 pounds per square foot.

Long-Term Vibration Impacts

No vibration reduction measures are required.

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APPENDIX A

NOISE LEVEL MEASUREMENT SHEETS

Project Number: CLT1802.06
Project Name: Reche Canyon
Test Personnel: Corey Knips

LSA
LSA Associates, Inc.

Noise Measurement Survey

Site Number: ST-1 Date: 11/30/21 Time: From 9:47 a.m. To 10:07 a.m.

Site Location: East side of Reche Canyon Road, at fenceline of 2594 Reche Canyon Road, 33 feet east of edge of travel lane (NB)

Primary Noise Sources: Traffic on Reche Canyon Road, very faint aircraft noise

Measurement Results

	dBA
L_{eq}	68.0
L_{max}	81.6
L_{min}	39.8
L_{peak}	103.2
L_2	74.6
L_8	72.3
L_{25}	70.0
L_{50}	64.1
L_{90}	49.8
L_{99}	42.0
SEL	98.8

Comments:

Equipment: Larson Davis 831 SLM Stored File: 506

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	Comments
3.5	1.2	82.9	15.6	

Project Number: CLT1802.06
Project Name: Reche Canyon
Test Personnel: Corey Knips

LSA
LSA Associates, Inc.

Noise Measurement Survey

Site Number: ST-2 Date: 11/30/21 Time: From 10:19 a.m. To 10:39 a.m.

Site Location: 12400 Reche Canyon Road, at southwest corner of paved part of driveway

Primary Noise Sources: Traffic on Reche Canyon Road

Measurement Results

	dBA
L_{eq}	58.1
L_{max}	69.7
L_{min}	37.8
L_{peak}	96.7
L_2	64.5
L_8	61.9
L_{25}	59.3
L_{50}	56.2
L_{90}	46.3
L_{99}	39.8
SEL	88.9

Comments:

Equipment: Larson Davis 831 Stored File: .507

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	Comments
5.2	1.4	85.5	16.6	

APPENDIX B

FHWA HIGHWAY TRAFFIC NOISE MODEL PRINTOUTS

TABLE Existing NP-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Crystal Ridge Lane and Shadid Drive
NOTES: Reche Canyon Plaza - Existing NP

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21683 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.66

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
59.0	125.0	268.3	577.4

TABLE Existing NP-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Shadid Drive and Old Reche Canyon Road
NOTES: Reche Canyon Plaza - Existing NP

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22095 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
59.7	126.6	271.6	584.7

TABLE Existing NP-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road South of Old Reche Canyon Road
NOTES: Reche Canyon Plaza - Existing NP

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21386 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.60

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
58.5	123.9	265.8	572.1

TABLE Existing P-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Crystal Ridge Lane and Shadid Drive
NOTES: Reche Canyon Plaza - Existing P

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22419 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
60.3	127.8	274.3	590.4

TABLE Existing P-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Shadid Drive and Old Reche Canyon Road
NOTES: Reche Canyon Plaza - Existing P

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 22400 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.81

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
60.2	127.7	274.1	590.0

TABLE Existing P-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road South of Old Reche Canyon Road
NOTES: Reche Canyon Plaza - Existing P

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 21884 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
59.3	125.8	269.9	580.9

TABLE 2023 NP-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Crystal Ridge Lane and Shadid Drive
NOTES: Reche Canyon Plaza - 2023 NP

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24859 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.26

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
64.4	136.8	293.8	632.4

TABLE 2023 NP-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Shadid Drive and Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2023 NP

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25285 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
65.1	138.4	297.1	639.6

TABLE 2023 NP-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road South of Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2023 NP

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 24694 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.23

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
64.1	136.2	292.5	629.6

TABLE 2023 P-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Crystal Ridge Lane and Shadid Drive
NOTES: Reche Canyon Plaza - 2023 P

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25595 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
65.6	139.5	299.6	644.9

TABLE 2023 P-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Shadid Drive and Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2023 P

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25590 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
65.6	139.5	299.5	644.8

TABLE 2023 P-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road South of Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2023 P

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 25192 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
65.0	138.0	296.4	638.1

TABLE 2040 NP-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Crystal Ridge Lane and Shadid Drive
NOTES: Reche Canyon Plaza - 2040 NP

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31028 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.22

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.3	158.4	340.5	733.1

TABLE 2040 NP-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Shadid Drive and Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2040 NP

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31440 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.28

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.0	159.8	343.5	739.6

TABLE 2040 NP-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road South of Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2040 NP

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30731 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.18

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
73.9	157.4	338.3	728.4

TABLE 2040 P-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Crystal Ridge Lane and Shadid Drive
NOTES: Reche Canyon Plaza - 2040 P

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31764 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.5	160.9	345.9	744.7

TABLE 2040 P-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road between Shadid Drive and Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2040 P

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31745 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.4	160.9	345.7	744.4

TABLE 2040 P-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 12/03/2021
ROADWAY SEGMENT: Reche Canyon Road South of Old Reche Canyon Road
NOTES: Reche Canyon Plaza - 2040 P

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31745 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
75.4	160.9	345.7	744.4

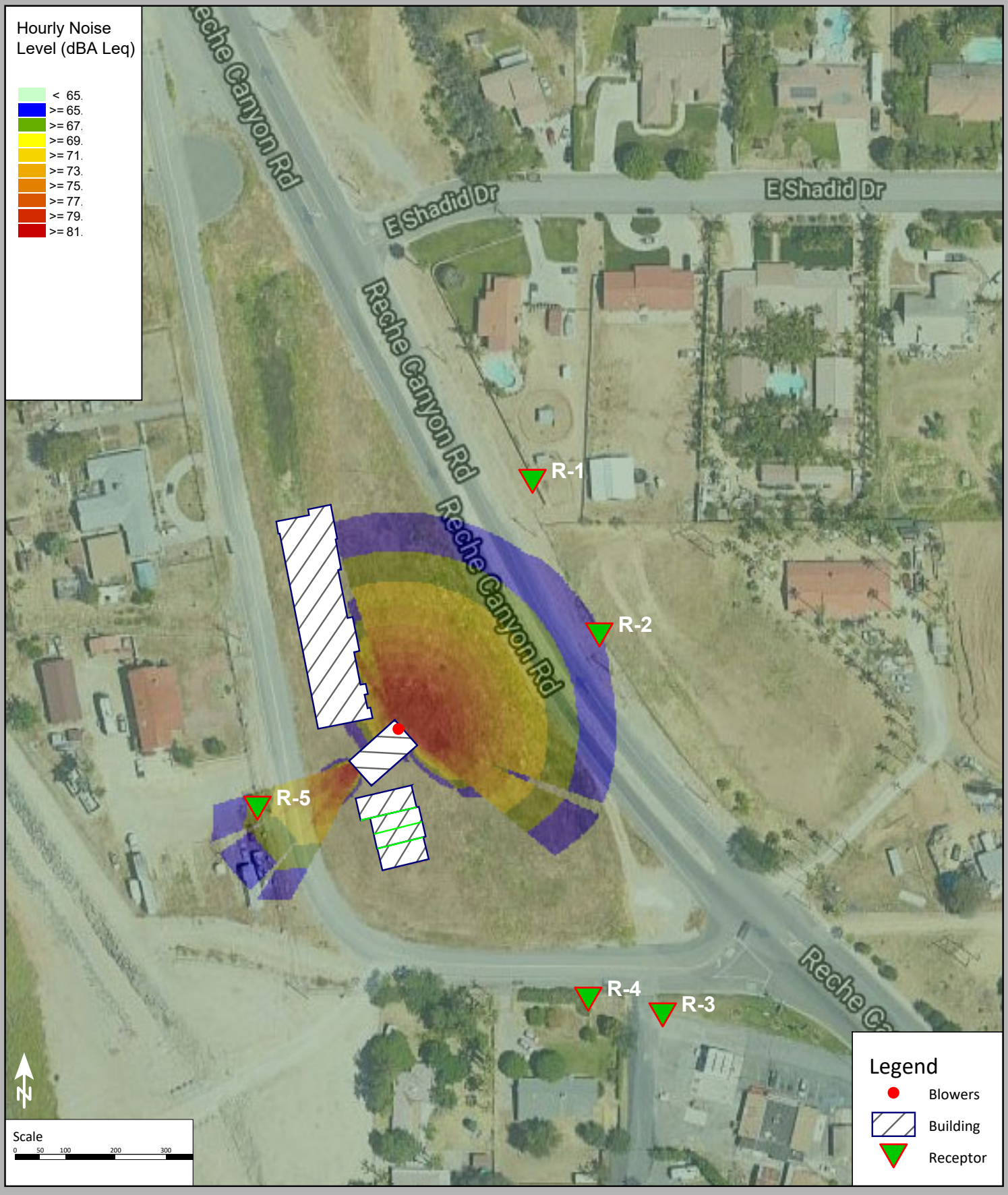
APPENDIX C

SOUNDPLAN RESULTS

Reche Canyon Plaza

Project No. CLT1802.06

Project Operational Noise Levels - Daytime

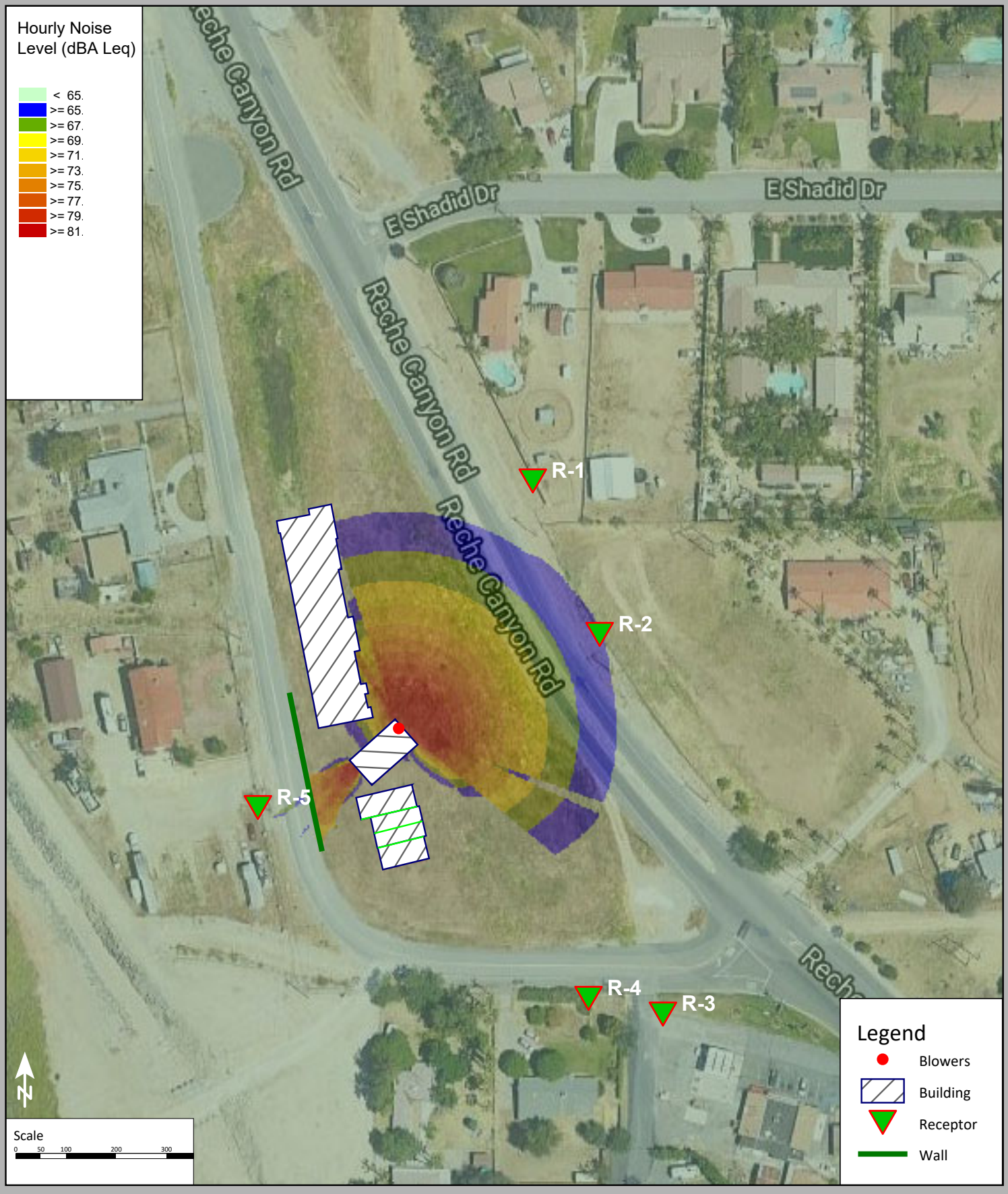


C:\GIS_Download\CLT1802.06_Offline\CLT1802.06 SoundPLAN\Project-NoMit.sgs - last edit 12/13/2021

Reche Canyon Plaza

Project No. CLT1802.06

Project Operational Noise Levels With Mitigation - Daytime



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APPENDIX D

DETAILED HVAC NOISE CALCULATIONS

Detailed HVAC Noise Calculations									
Land Use	**Direction**	**HVAC No.**	**Reference Noise Level (dBA L_{eq})**	**Reference Distance (ft)**	**Distance from Equipment to Property Line (ft)**	**Distance Attenuation (dBA)**	**Shielding (dBA)**	**Noise Level (dBA L_{eq})**	**Combined Noise Level (dBA L_{eq})**
Residential	East	1	49.4	50	200	12	8	29.4	37.4
		2	49.4	50	200	12	8	29.4	
		3	49.4	50	200	12	8	29.4	
		4	49.4	50	205	12.3	8	29.1	
		5	49.4	50	220	12.9	8	28.5	
		6	49.4	50	220	12.9	8	28.5	
		7	49.4	50	235	13.4	8	28.0	
Commercial	South	1	49.4	50	525	20.4	8	21.0	31.9
		2	49.4	50	500	20	8	21.4	
		3	49.4	50	460	19.3	8	22.1	
		4	49.4	50	435	18.8	8	22.6	
		5	49.4	50	410	18.3	8	23.1	
		6	49.4	50	380	17.6	8	23.8	
		7	49.4	50	260	14.3	8	27.1	
Residential	South	1	49.4	50	425	18.6	8	22.8	36.2
		2	49.4	50	395	18	8	23.4	
		3	49.4	50	350	16.9	8	24.5	
		4	49.4	50	320	16.1	8	25.3	
		5	49.4	50	290	15.3	8	26.1	
		6	49.4	50	255	14.2	8	27.2	
		7	49.4	50	125	8	8	33.4	
Residential	West	1	49.4	50	75	3.5	8	37.9	46.3
		2	49.4	50	75	3.5	8	37.9	
		3	49.4	50	75	3.5	8	37.9	
		4	49.4	50	70	2.9	8	38.5	
		5	49.4	50	70	2.9	8	38.5	
		6	49.4	50	70	2.9	8	38.5	
		7	49.4	50	105	6.4	8	35.0	

APPENDIX I

TRAFFIC IMPACT STUDY

TRAFFIC IMPACT STUDY

RECHE CANYON RETAIL

CITY OF COLTON

SAN BERNARDINO COUNTY, CALIFORNIA

This Traffic Impact Study has been prepared under the supervision of
Ambarish Mukherjee, P.E.

LSA

June 2023

TRAFFIC IMPACT STUDY

RECHE CANYON RETAIL

CITY OF COLTON

SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for:

City of Colton
160 South 10th Street
Colton, CA 92324

Prepared by:
LSA Associates, Inc.
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Riverside, California 92507
(951) 781-9310

LSA Project No. CLT1802.06

City Project No. DAP-001-453

LSA

June 2023

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1.0 INTRODUCTION

This Traffic Impact Study (TIS) has been prepared for the proposed Reche Canyon Retail project (project) to be located along the Reche Canyon Road, between Crystal Ridge Lane and Old Reche Canyon Road in the City of Colton. Figure 1-1 illustrates the regional and project location. (Figures and tables are located at the end of each chapter.)

This report is intended to satisfy the requirements established by the San Bernardino County Congestion Management Program, City of Colton General Plan as well as the requirements for the disclosure of potential impacts and mitigation measures pursuant to the California Environmental Quality Act (CEQA). The scope of work for this TIS, including trip generation, trip distribution, study area, and analysis methodologies, has been approved by City staff via the Scoping Agreement process. A copy of the Scoping Agreement is included in Appendix A.

This study examines traffic operations in the vicinity of the proposed project under the following five scenarios:

- Existing conditions;
- Project Opening Year no project conditions;
- Project Opening Year plus project conditions;
- General Plan Buildout no project conditions; and
- General Plan Buildout plus project conditions.

Traffic conditions were examined for the weekday daily, a.m., and p.m. peak hour conditions. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m. Roadway segments were analyzed using daily volume counts and comparisons were made to the daily service volume standards.

1.1 PROJECT DESCRIPTION

The project will include 9,484 square feet (sf) retail space, and a gas station with convenience store and car wash. The project will be located along the Reche Canyon Road, between Crystal Ridge Lane and Old Reche Canyon Road within the City. Access to the project will be provided via one right-in right-out (RIRO) driveway on Reche Canyon Road and one full access driveway on Old Reche Canyon Road. Additionally, the project will also have a driveway at the intersection of Reche Canyon Road/Shadid Drive for emergency vehicles ingress/egress movements only. As such, this driveway will not be functioning as a regular driveway. The project is anticipated to be completed by the year 2023. Figure 1-2 illustrates the conceptual site plan for the proposed project.

As part of the project design feature, the project will be developing the project frontage, along with adding a second southbound through lane along Reche Canyon Road between Crystal Ridge Lane and Old Reche Canyon Road. The second southbound lane will be tapered back to one lane south of the intersection of Reche Canyon Road/Michelle Road. The second southbound through lane will help reduce southbound travel time along the project frontage and will also work as an

acceleration/deceleration lane for the project traffic that are trying to access the project using the RIRO project driveway on Reche Canyon Road.

Additionally, as part of the project, the project will also add a Two Way Left Turn Lane (TWLTL) median at the intersection of Reche Canyon Road/Shadid Drive. The TWLTL will extend from the north end of the southbound left turn lane at this intersection and will continue up to 150 feet south of this intersection, with provision of merging lane for the westbound left-turn traffic from Shadid Drive. This project design feature will facilitate safe maneuver for ingress/egress traffic from Shadid Drive to Reche Canyon Road as well as the project emergency driveway. A conceptual striping plan illustrating the project design features is included in the "Circulation Improvements" chapter of this study.

1.2 STUDY AREA

Study intersections considered for the analysis were finalized during the TIS scoping agreement process and based on discussion with City staff.

1.2.1 Study Intersections

Per the Scoping Agreement (Appendix A), intersections analyzed in this study are as follows:

1. Reche Canyon Road/Crystal Ridge Lane;
2. Reche Canyon Road/Shadid Drive;
3. Reche Canyon Road/Project Driveway 1;
4. Reche Canyon Road/Old Reche Canyon Road;
5. Reche Canyon Road/Shane Drive-Mobile Home Estates;
6. Reche Canyon Road/Washington Street;
7. Hunts Lane/Washington Street; and
8. Existing Reche Canyon Road/Future Realignment (Future Intersection).

It should also be noted that Reche Canyon Road is proposed to be realigned with Hunts Lane in the future, with the estimated completion date as 2025. As such, project trips accessing Hunts Lane or moving eastwards towards Loma Linda will be using this new connection once the realignment is completed. Since the project opening year is 2023, two separate project trip distributions are provided for this analysis to demonstrate project trip distributions under project opening year and at General Plan Buildout conditions.

Figure 1-3 illustrates the locations of all study intersections.

1.3 LIST OF CHAPTER 1.0 FIGURES

- Figure 1-1: Regional and Project Location
- Figure 1-2: Conceptual Site Plan
- Figure 1-3: Study Area Intersections

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FIGURE 1-1

N

0 1000 2000

FEET

Reche Canyon Retail
Traffic Impact Study

Regional and Project Location

SOURCE: ESRI Streetmap, 2013; Google Earth, 2018.

P:\CLT1802.06 Reche Canyon Retail EIR Reinitiation\2.4 Traffic-VMT\GIS\Reports\fig1-1_Reg_ProjLoc.mxd (6/29/2022)

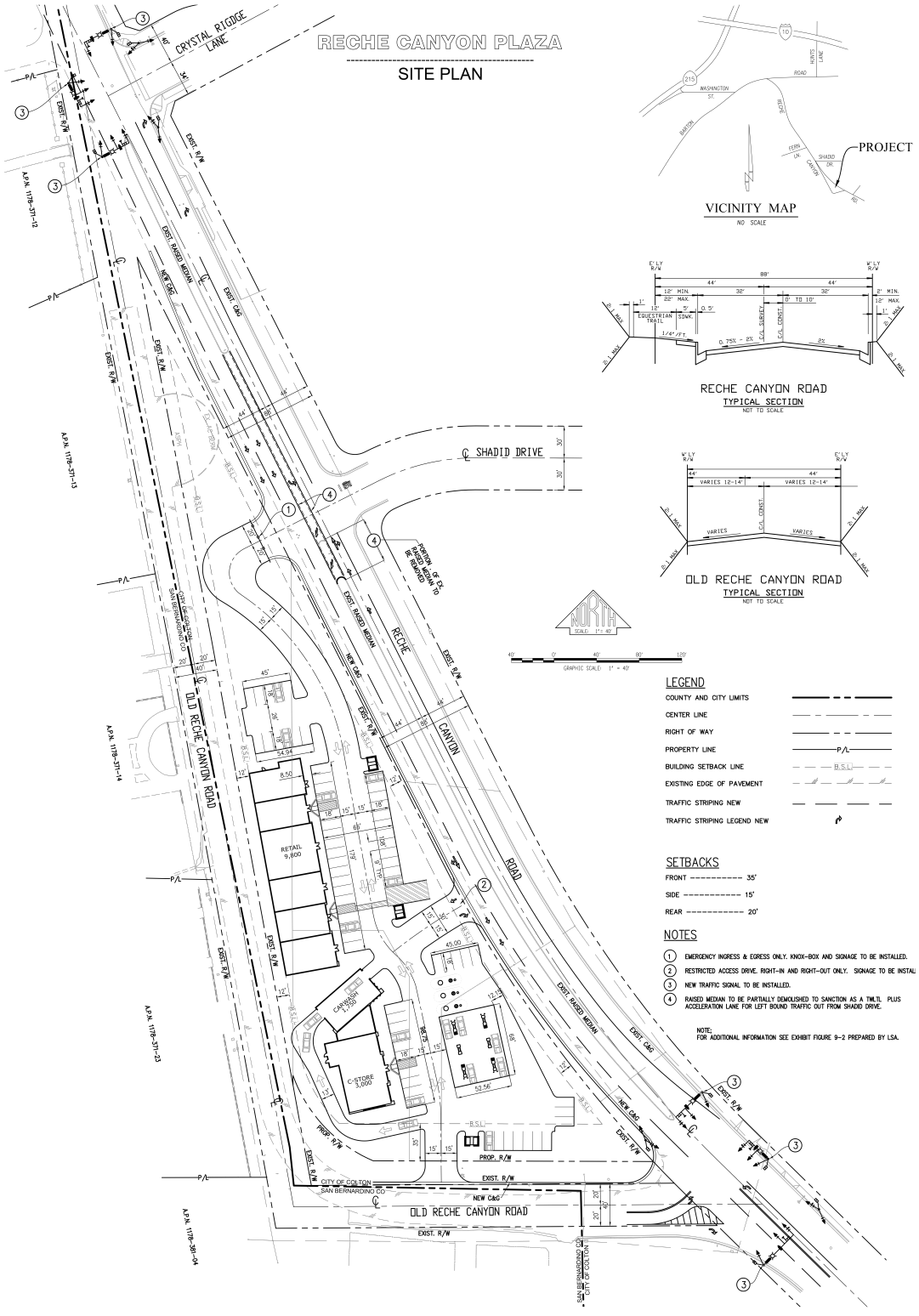

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FIGURE 1-2

0 75 150
FEET

SOURCE: Transtech, June 2022

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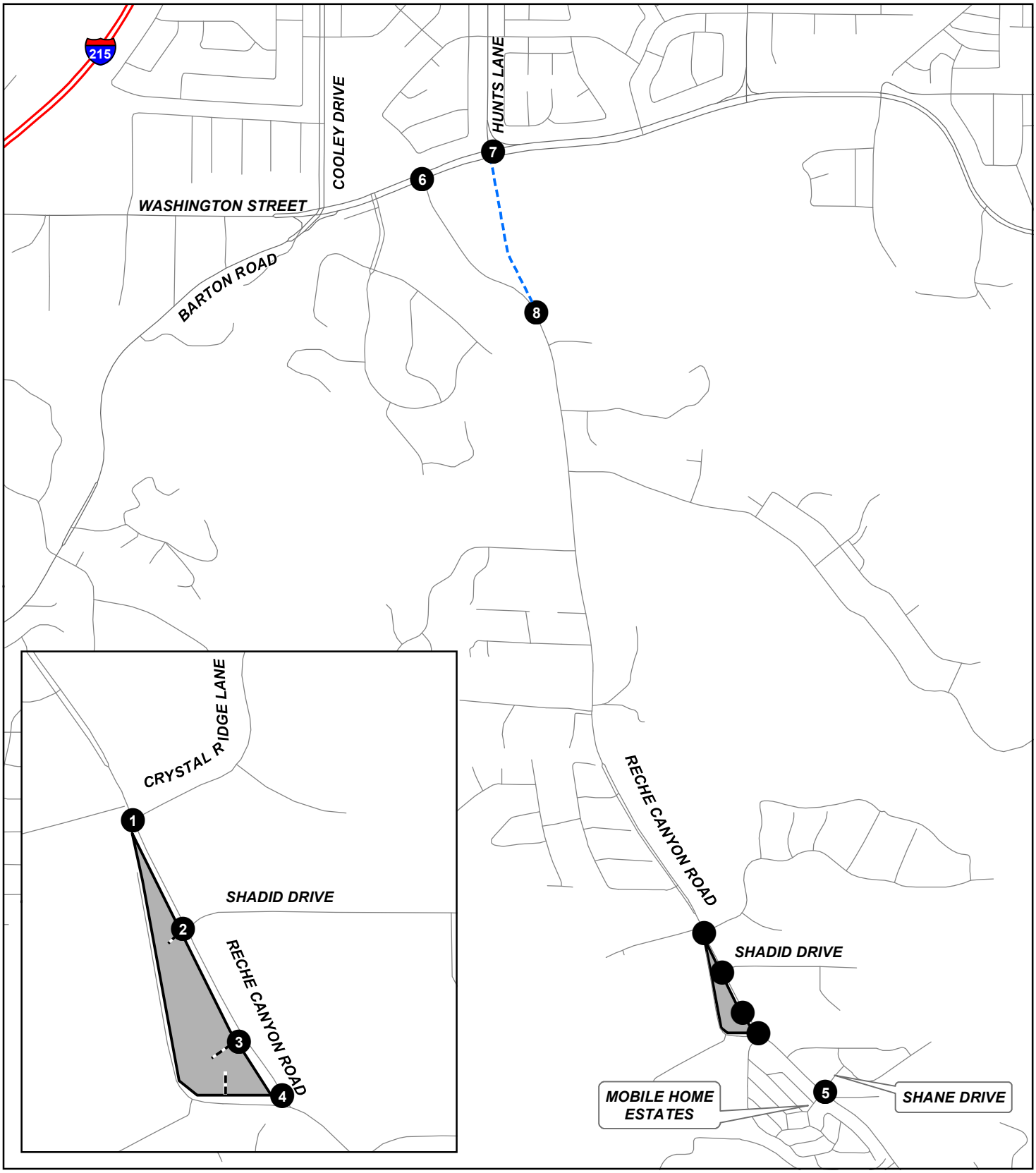
Reche Canyon Retail
Traffic Impact Study

Conceptual Site Plan



LSA

LEGEND

- Project Site
- Study Area Intersections
- Project Driveway
- Future Connection

0 625 1250
FEET

FIGURE 1-3

Reche Canyon Retail
Traffic Impact Study
Study Area Intersections

SOURCE: ESRI Streetmap, 2018.

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2.0 ANALYSIS METHODOLOGY AND THRESHOLDS

2.1 LEVEL OF SERVICE DEFINITIONS

LOS can be characterized for the whole intersection, each intersection approach, and by each lane group. Control delay alone is used to characterize LOS for the entire intersection. Control delay quantifies the increase in travel time due to the traffic signal control, and is a surrogate measure of driver discomfort and fuel consumption.

A complete description of the meaning of LOS can be found in the Transportation Research Board Special Report 209, *Highway Capacity Manual* (HCM). The HCM establishes LOS A through F for intersections. A description of LOS for signalized and unsignalized intersections is summarized in Table 2-A. Table 2-B shows the LOS criteria for unsignalized and signalized intersections.

For all study area intersections, the *Highway Capacity Manual 6th Edition* (HCM 6) analysis methodologies were used to determine intersection LOS. Intersection LOS was calculated using the Synchro 11 software, which uses the HCM 6 methodologies.

2.2 LEVEL OF SERVICE PROCEDURES AND THRESHOLDS

Study intersections and roadway segments analyzed in this report are under the jurisdiction of the City of Colton. Based on the City of Colton General Plan Mobility Element, the City identifies LOS D as the acceptable LOS standard within the City. Therefore LOS D was considered as the minimum level of service criterion for all study intersections. At study intersections under the jurisdiction of the City, the determination of an operational deficiency is based on the impact criteria contained in the SBCTA CMP guidelines, which state that a significant project impact occurs when the park hour LOS falls below the Cities' LOS standard, LOS D (to E or F), or when the project contributes to an existing deficiency.

2.3 LIST OF CHAPTER 2.0 TABLES

- Table 2-A: Intersection Level of Service Definitions
- Table 2-B: Level of Service Criteria for Unsignalized and Signalized Intersections

Table 2-A: Intersection Level of Service Definitions

LOS	Description
A	Traffic operations with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Traffic operations with control delay between 10 seconds per vehicle and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	Traffic operations with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	Traffic operations with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Traffic operations with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	Traffic operations with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: *Highway Capacity Manual* (6th Edition)

Table 2-B: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: *Highway Capacity Manual* (6th Edition)

3.0 CIRCULATION NETWORK SETTING

3.1 EXISTING AND FUTURE ROADWAY NETWORK

This section provides a description of the circulation network within the study area. Within the City of Colton, all major roadways are classified based on the Street Classification Plan provided in the Mobility Element of the City of Colton *General Plan*. Following is a brief description of major roadways within the study area:

- **Reche Canyon Road**: Reche Canyon Road is designated as a Major Arterial in the City's General Plan. Within the study area, Reche Canyon Road is a 2-lane roadway. It is partially divided by a median between Shadid Drive and Old Reche Canyon Road. There are no bike facilities along either direction. There is no provision for on-street parking within the study area.
- **Washington Street**: Washington Street is designated as a Major Arterial in the City's General Plan. Within the study area, Washington Street is a 4-lane divided roadway. There are no bike facilities along either direction. There is no provision for on-street parking within the study area.
- **Hunts Lane**: Hunts Lane is designated as a Secondary Arterial in the City's General Plan. Within the study area, Hunts Lane is a 4-lane undivided roadway. There are no bike facilities along either direction. There is no provision for on-street parking within the study area.

As summarized in section 1.2, Reche Canyon Road is proposed to be aligned with Hunts Lane. This will add the south leg at the intersection of Hunts Lane/Washington Street. Additionally, as recommended by the City staff, at the southerly end of this realigned section will be align with the Canyon Homes Apartment Driveway. Proposed intersection geometrics at these two intersections were obtained from *The Reche Canyon Road Realignment To Hunts Lane Project* Traffic Study, prepared by KOA, dated September 2021, and information obtained from the City staff.

Figure 3-1 illustrates existing study intersection geometrics and traffic control. Figure 3-2 illustrates General Plan Buildout study intersection geometrics and traffic control including the Reche Canyon Road realignment. Figure 3-3 illustrates the General Plan Mobility Element Roadway Classification for the City.

3.2 EXISTING BICYCLE, PEDESTRIAN, AND TRANSIT FACILITIES

3.2.1 Bicycle Facilities

The City of Colton encourages bicycle mobility to support physical activity and alternative modes of transportation, so that the City residents would be able to bike to work, school, parks, libraries and other local destinations using convenient routes.

Based on the mobility element of the City's General Plan, the bikeway network within the City is classified into three categories: Class I – Bike Paths, Class II – Bike Lanes, and Class III – Bike Routes. Class I bikeways provide bicycle travel on a paved right-of-way completely separated from any street or highway. Class II bikeways provide a striped and stenciled lane for one-way travel on a street or highway. Class III bikeways provide for shared use with motor vehicle traffic and are identified only by signing.

Currently, no designated bike facility is present within the study area. However, Reche Canyon Road is designated as a bicycle street in the City's General Plan Mobility elements roadway typology. Washington Street is classified both as a Bicycle Street and as Multimodal within the roadway typology. Figure 3-4 illustrates the existing and proposed bike lanes within the City.

3.2.2 Pedestrian Facilities

The implementation of enhanced pedestrian linkage with a comprehensive trails system links residential areas, schools, parks, and commercial centers so that residents can travel within the community without driving. Safe and attractive sidewalks and walkways improve the walkability of the City. Sidewalks are generally provided on both sides of the streets throughout the City. Additionally, standard paved trails and non-standard unpaved trails are frequently used by bicyclists and pedestrians in the City. The existence of trails and sidewalks provides accessible facilities, provides safety features, and improves walkability in the City.

Paved sidewalks are present intermittently on Reche Canyon Road within the study area. Within the Study Area, paved sidewalks are present on both sides of Washington Street and Hunts Lane.

3.2.3 Transit Facilities

OmniTrans is the transportation service agency within the County of San Bernardino and is responsible for providing transit services within its service area. Currently, OmniTrans Routes 19 and Route 305 provides transit services along Washington Street within the study area and connects the study area with the neighboring local jurisdictions and major transit hubs. Additionally, Riverside Transit Agency (RTA) route 14 also provides transit services along Washington Street, connecting to the Cities of Riverside, Grand Terrace, and other Riverside County destinations. Figure 3-5 illustrates the Transit Plan within the City as included in the City's General Plan.

3.3 LIST OF CHAPTER 3.0 FIGURES

- Figure 3-1: Existing Study Intersection Geometrics and Traffic Control
- Figure 3-2: General Plan Buildout Year Study Intersection Geometrics and Traffic Control
- Figure 3-3: City of Colton Roadway Classification
- Figure 3-4: City of Colton Existing and Proposed Bikeway Network
- Figure 3-5: City of Colton General Plan Transit Plan

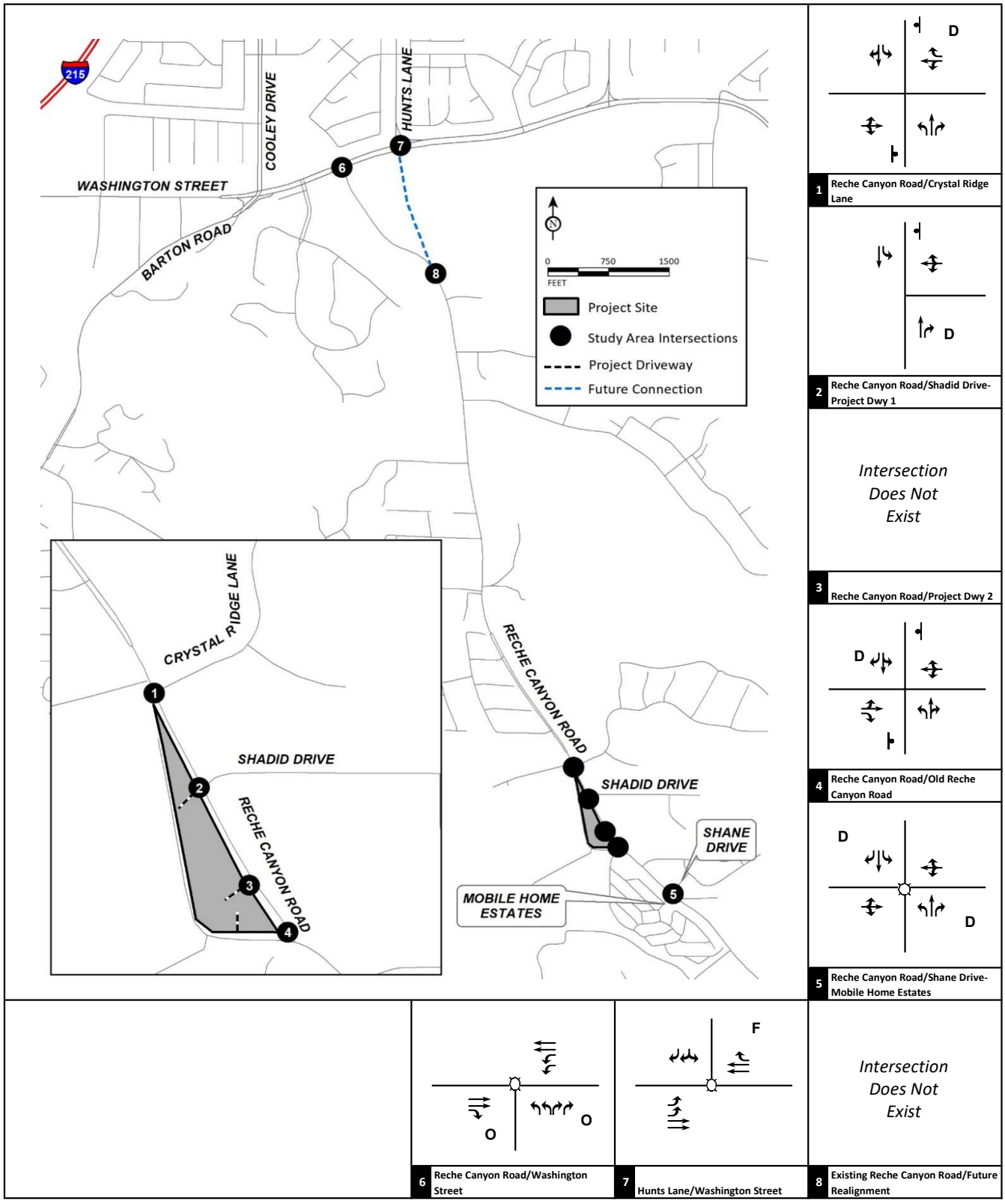

FIGURE 3-1

Legend
Signal
Stop Sign
Project Driveway
D De-facto Right Turn
F Free Right Turn
O Overlap Phasing

Reche Canyon Retail Traffic Impact Study

Existing Study Intersection Geometrics and Traffic Control

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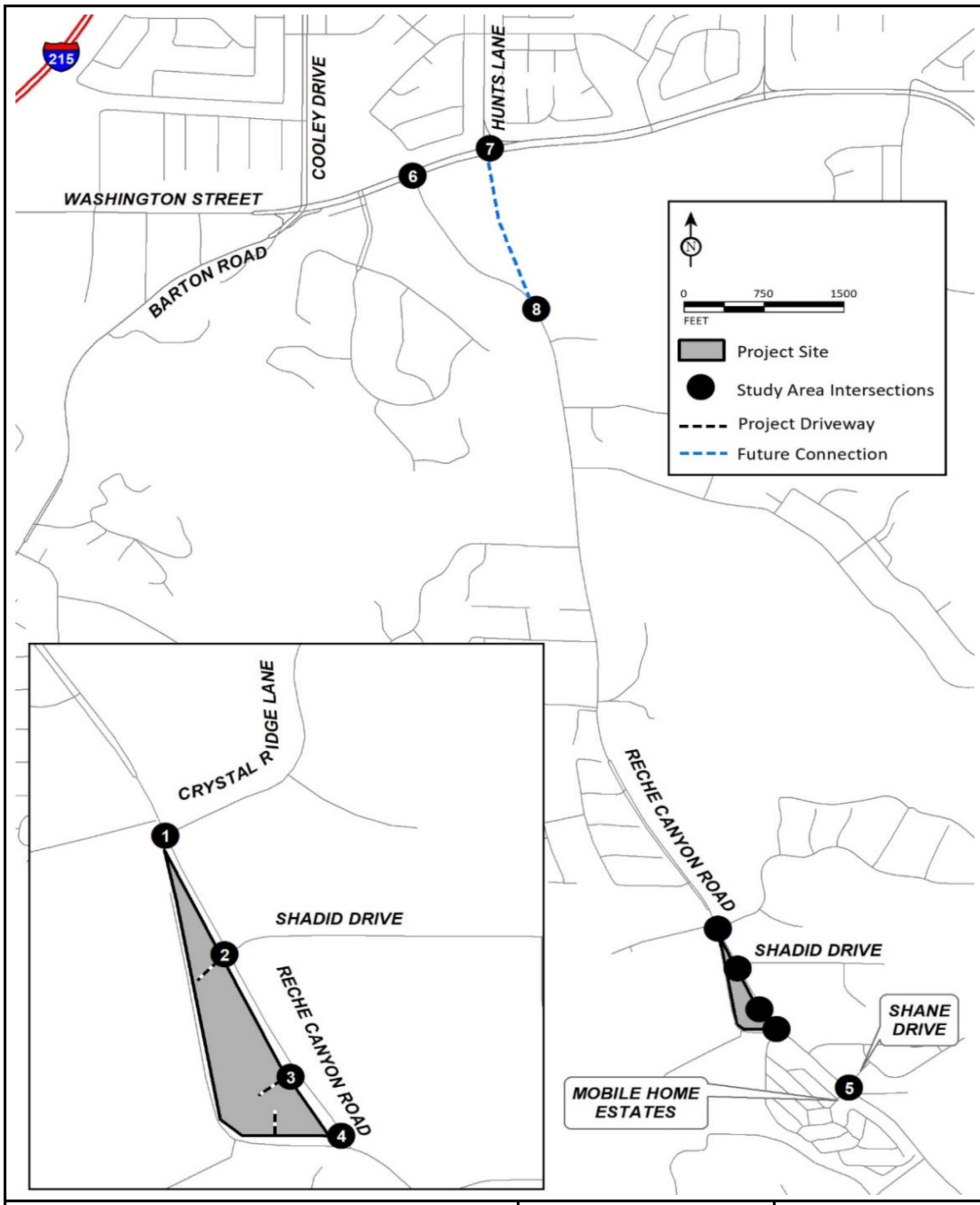
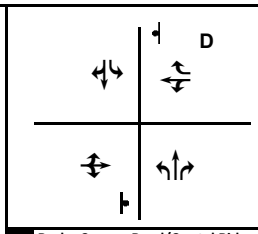
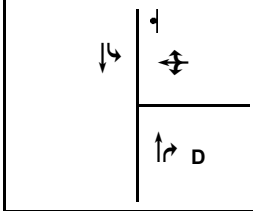




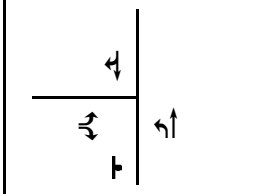
1 Reche Canyon Road/Crystal Ridge Lane



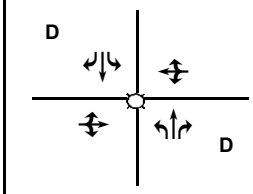
2 Reche Canyon Road/Shadid Drive

Intersection Does Not Exist

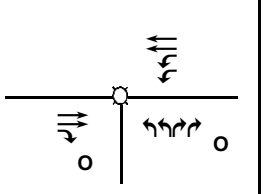
3 Reche Canyon Road/Project Dwy 1



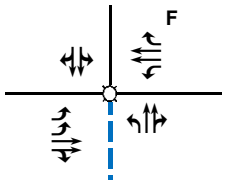
4 Reche Canyon Road/Old Reche Canyon Road



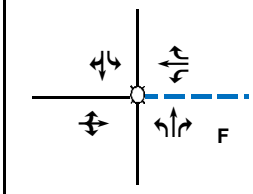
5 Reche Canyon Road/Shane Drive-Mobile Home Estates



6 Reche Canyon Road/Washington Street



7 Hunts Lane/Washington Street



8 Existing Reche Canyon Road/Future Realignment

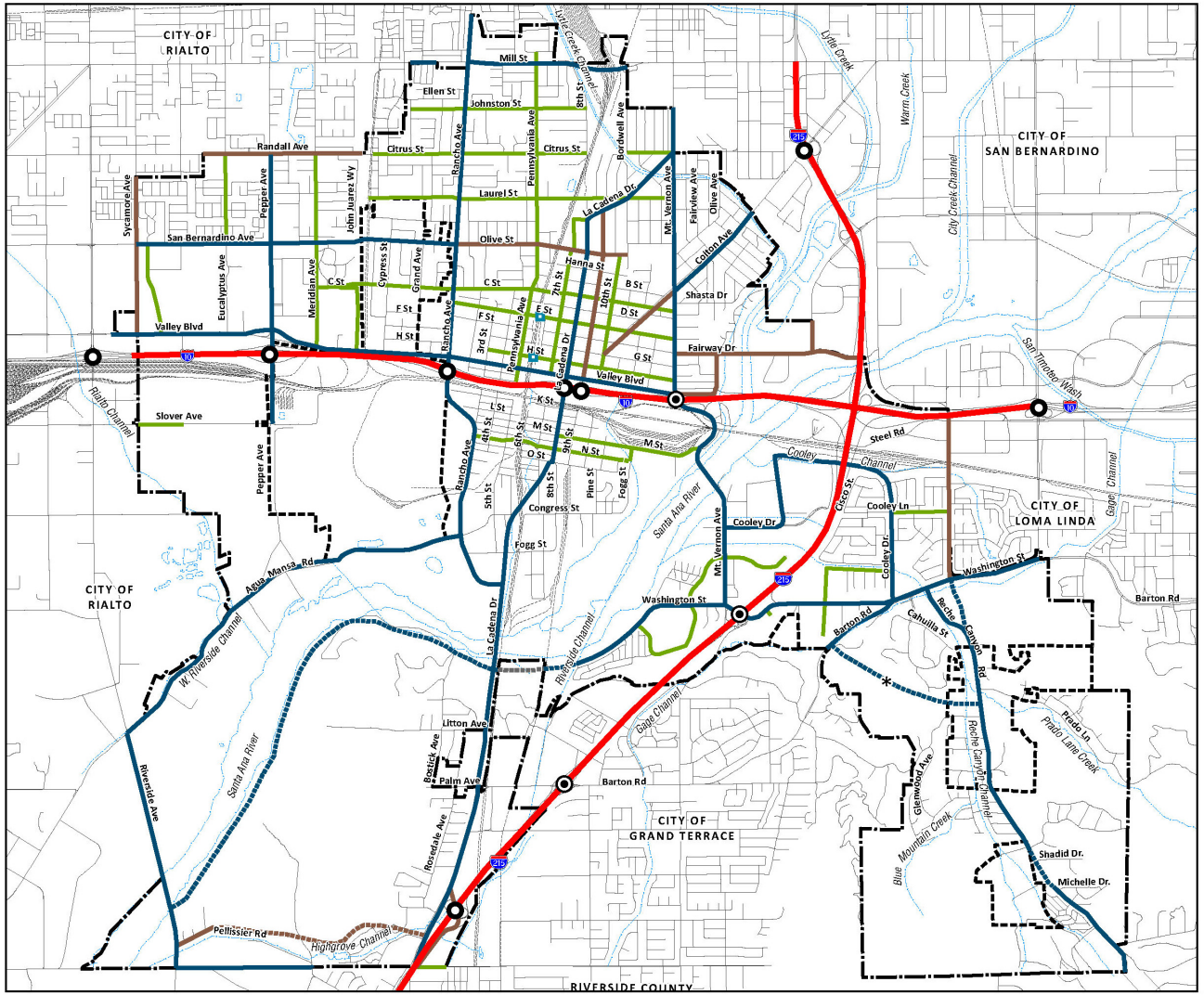
FIGURE 3-2

LSA

Legend
Signal
Stop Sign
Project Driveway
D De-facto Right Turn
F Free Right Turn
O Overlap Phasing
Future Connection

Reche Canyon Retail Traffic Impact Study

General Plan Buildout Year Study Intersection Geometrics and Traffic Control



LSA

FIGURE 3-3

Reche Canyon Retail
Traffic Impact Study

City of Colton Roadway Classification

SOURCE: City of Colton General Plan Mobility Element, 2014

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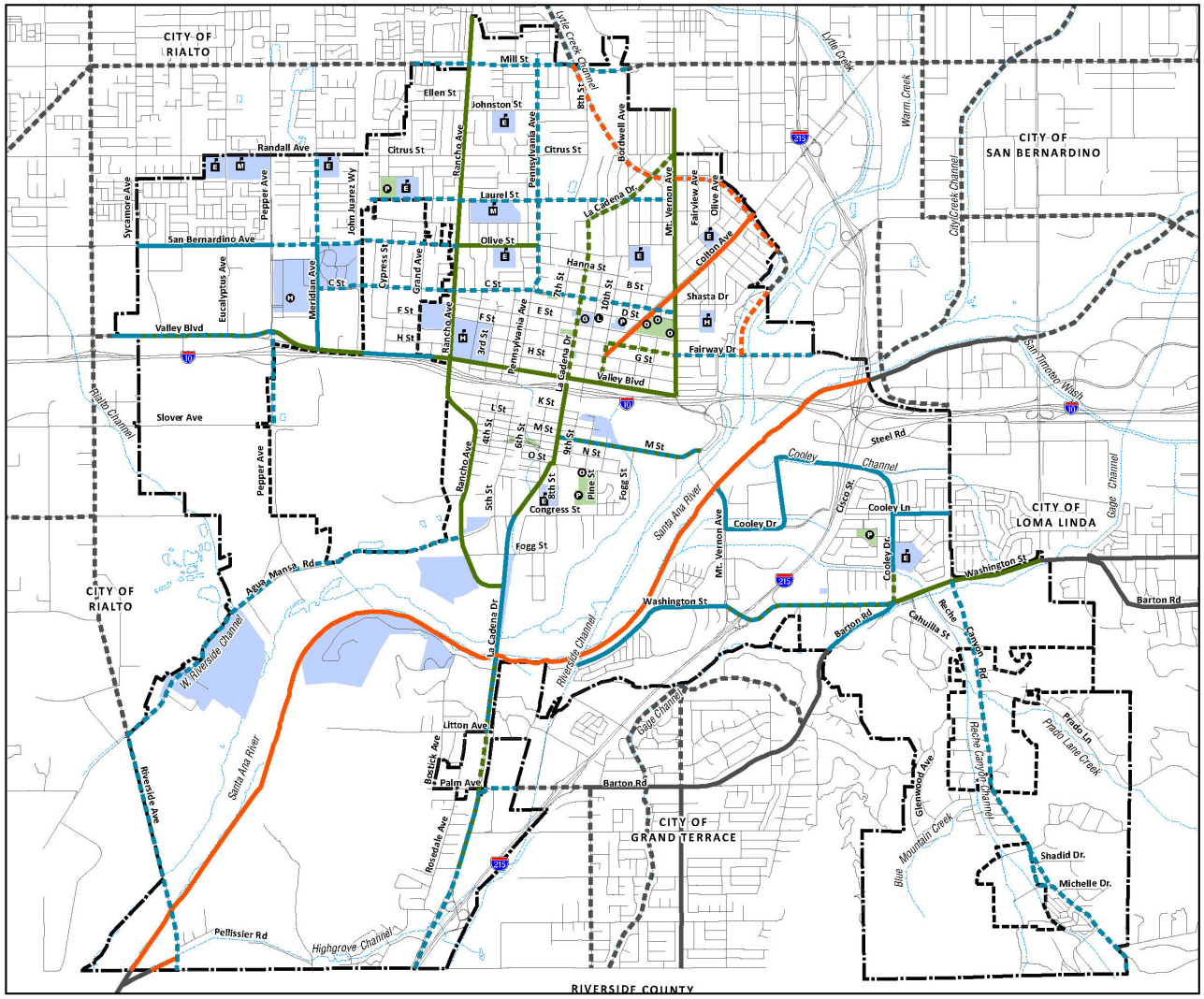
CITY OF RIALTO
CITY OF SAN BERNARDINO
CITY OF LOMA LINDA
CITY OF GRAND TERRACE
RIVERSIDE COUNTY
Mill St
Ellen St
Johnston St
Randall Ave
Citrus St
Laurel St
Olive St
Hanna St
San Bernardino Ave
Valley Blvd
Slover Ave
Fairway Dr
Shasta Dr
Steel Rd
Cooley Dr
Cooley Ln
Washington St
Barton Rd
Fogg St
Congress St
Litton Ave
Palm Ave
Pellissier Rd
Agua Mansa Rd
Cahuilla St
Shadid Dr.
Michelle Dr.
Prado Ln
Prado Lane Creek
Mt. Vernon Ave
La Cadena Dr
Pepper Ave
Rancho Ave
Pennsylvania Ave
Grand Ave
Cypress St
Meridian Ave
Eucalyptus Ave
Sycamore Ave
John Isarez Wy
Bordwell Ave
Fairview Ave
Olive Ave
Colton Ave
Cisco St
Reche Canyon Rd
Glenwood Ave
Riverside Ave
Rosedale Ave
Bostick Ave
Santa Ana River
Lytle Creek
Warm Creek
City Creek Channel
Lytle Creek Channel
Rialto Channel
W. Riverside Channel
Riverside Channel
Eagle Channel
Gage Channel
Cooley Channel
San Timoteo Wash
Reche Canyon Channel
Blue Mountain Creek
Highgrove Channel
Santa Ana River
Barton Rd
Pine St
Foge St
5th St
6th St
8th St
9th St
10th St
3rd St
7th St
Bordwell Ave
Pennsylvania Ave
Rancho Ave
La Cadena Dr
Mt. Vernon Ave
Fairview Ave
Olive Ave
Colton Ave
Cisco St
Cooley Dr
Cooley Ln
Steel Rd
Washington St
Barton Rd
Cahuilla St
Reche Canyon Rd
Glenwood Ave
Prado Ln
Prado Lane Creek
Shadid Dr.
Michelle Dr.
Litton Ave
Palm Ave
Barton Rd
Bostick Ave
Rosedale Ave
Riverside Ave
Pellissier Rd
Highgrove Channel
Santa Ana River
Eagle Channel
Riverside Channel
W. Riverside Channel
Agua Mansa Rd
Rialto Channel
Slover Ave
Pepper Ave
Valley Blvd
Fairway Dr
Shasta Dr
Colton Ave
Olive Ave
Fairview Ave
Mt. Vernon Ave
La Cadena Dr
Bordwell Ave
Pennsylvania Ave
Rancho Ave
Grand Ave
Cypress St
Meridian Ave
Eucalyptus Ave
Sycamore Ave
John Isarez Wy
Pepper Ave
San Bernardino Ave
Randall Ave
Citrus St
Laurel St
Olive St
Hanna St
Mill St
Ellen St
Johnston St
Lytle Creek Channel
Lytle Creek
Warm Creek
City Creek Channel
San Timoteo Wash
Gage Channel
Cooley Channel
Santa Ana River
Reche Canyon Channel
Blue Mountain Creek
Highgrove Channel
Eagle Channel
Riverside Channel
W. Riverside Channel
Rialto Channel
Agua Mansa Rd
Slover Ave
Valley Blvd
Fairway Dr
Shasta Dr
Steel Rd
Cooley Dr
Cooley Ln
Washington St
Barton Rd
Cahuilla St
Reche Canyon Rd
Glenwood Ave
Prado Ln
Prado Lane Creek
Shadid Dr.
Michelle Dr.
Litton Ave
Palm Ave
Barton Rd
Bostick Ave
Rosedale Ave
Riverside Ave
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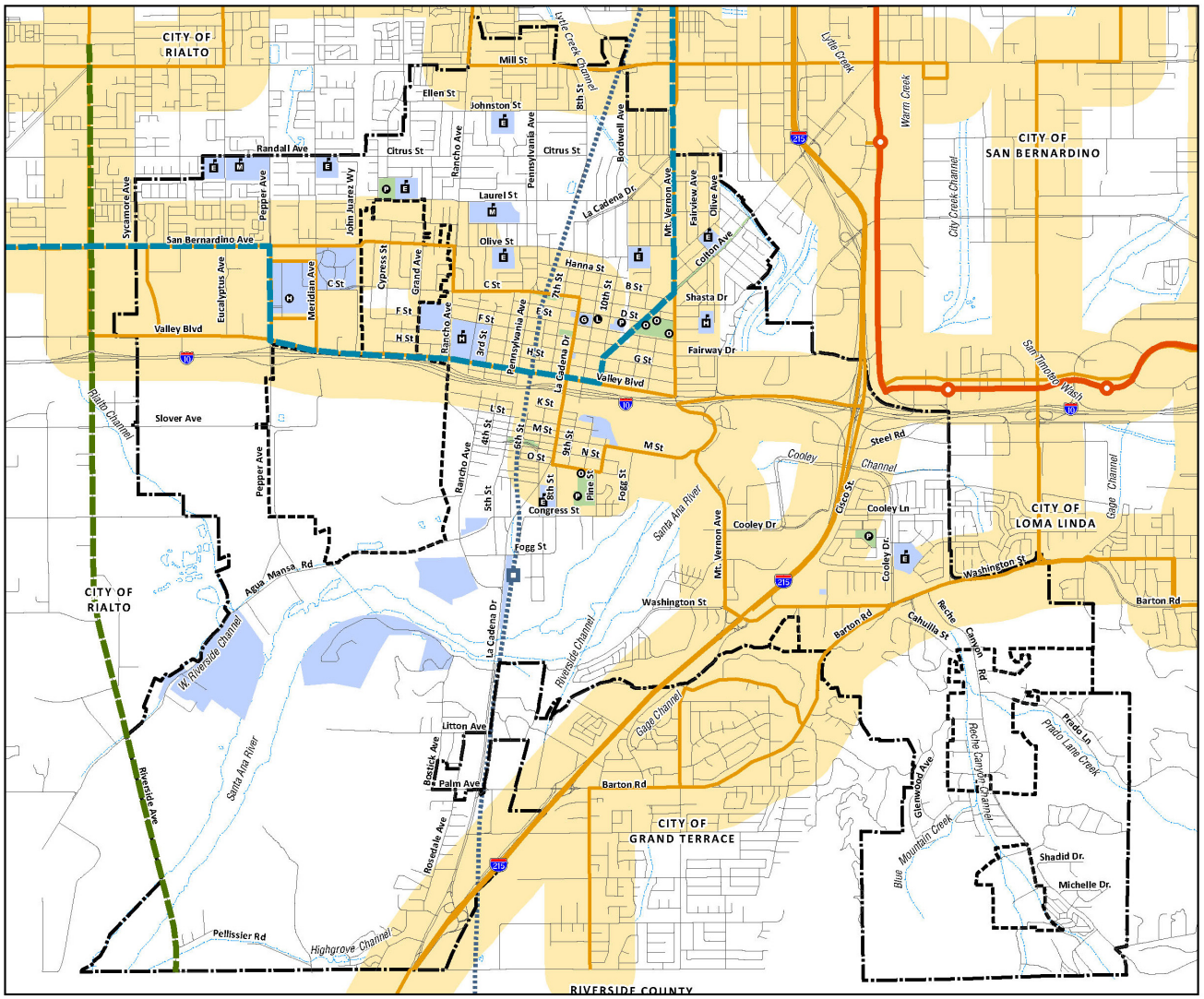
Slover Ave
Pepper



LSA

FIGURE 3-5

Reche Canyon Retail Traffic Impact Study

City of Colton Transit Plan

SOURCE: City of Colton General Plan Mobility Element, 2014

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4.0 TRAFFIC VOLUMES FOR WITHOUT PROJECT SCENARIOS

4.1 EXISTING TRAFFIC VOLUMES

Traffic volumes for existing year traffic conditions are typically developed using existing count data collected at study intersections and roadway segments. Due to the current statewide school and office closures/restrictions for the COVID-19 pandemic, new traffic counts will not reflect realistic traffic conditions at the study intersections. LSA obtained historic counts from the 2018 study wherever available and consulted traffic counters to obtain historic traffic counts at other study intersections, wherever available. At other locations, traffic counts were collected in August 2021. To identify the differences between COVID time and historical traffic counts at the study intersections recent counts were also collected at the intersection of Reche Canyon Road/Crystal Ridge Lane and Hunts lane/Washington Street. Existing counts were adjusted accordingly based on the difference between these two counts. Following is a brief description of the development of existing traffic volumes from historic and COVID counts.

Step 1: For the intersections where historic counts were available, a 1 percent per annum growth was applied to develop the existing 2021 traffic counts.

Step 2: For the locations where historical counts were not available, new traffic counts were conducted in August 2021. New traffic counts along Reche Canyon Road were adjusted based on the volumes developed in Step 1. New counts were also taken at the intersection of Reche Canyon Road/Crystal Ridge Lane, where historical counts were already available. This was used to estimate the reduction rate between historic and COVID counts, taking into account the annual growth rate of 1%. The new counts were adjusted to account for that reduction.

Step 3: Vehicle classification counts were collected at the intersections of Reche Canyon Road/Crystal Ridge Lane, Reche Canyon Road/Shane Drive, and Hunts Lane/Washington Street. At these locations, counts were converted to Passenger Car Equivalent (PCE) volumes. The concept of PCEs accounts for the larger impact of trucks on traffic operations. It does so by assigning each type of truck a PCE factor that represents the number of passenger vehicles that could travel through an intersection in the same time that a particular type of truck could. PCE volumes at study intersections were computed using a factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with four or more axles.

Step 4: The percentage of trucks at the remaining study intersections without classification counts was determined based on truck percentages derived from adjacent intersections with classification counts. At these locations, PCE volumes were computed using a PCE factor of 2.0, consistent with the HCM 6 methodologies.

Figure 4-1 illustrates existing peak hour traffic volumes at study intersections. Detailed counts are included in Appendix B. Detailed volume development worksheets are included in Appendix C.

4.2 PROJECT OPENING YEAR NO PROJECT TRAFFIC VOLUMES

Traffic volumes for Project Opening Year no project conditions were developed by applying a growth rate of 1 percent per annum to the existing without project traffic volumes and adding trips from approved and pending cumulative projects in the area.

Information concerning cumulative projects in the vicinity of the proposed project was obtained from the Cities of Colton, Grand Terrace, Loma Linda, Moreno Valley, and unincorporated counties of Riverside and San Bernardino. Figure 4-2 illustrates the cumulative project locations. The trip generation for cumulative projects was developed using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition), and/or using information from approved traffic studies where available.

Table 4-A lists the cumulative projects included in this analysis, and shows the cumulative projects are estimated to generate 3,008 new a.m. peak hour trips, 4,061 new p.m. peak hour trips, and 44,920 daily trips.

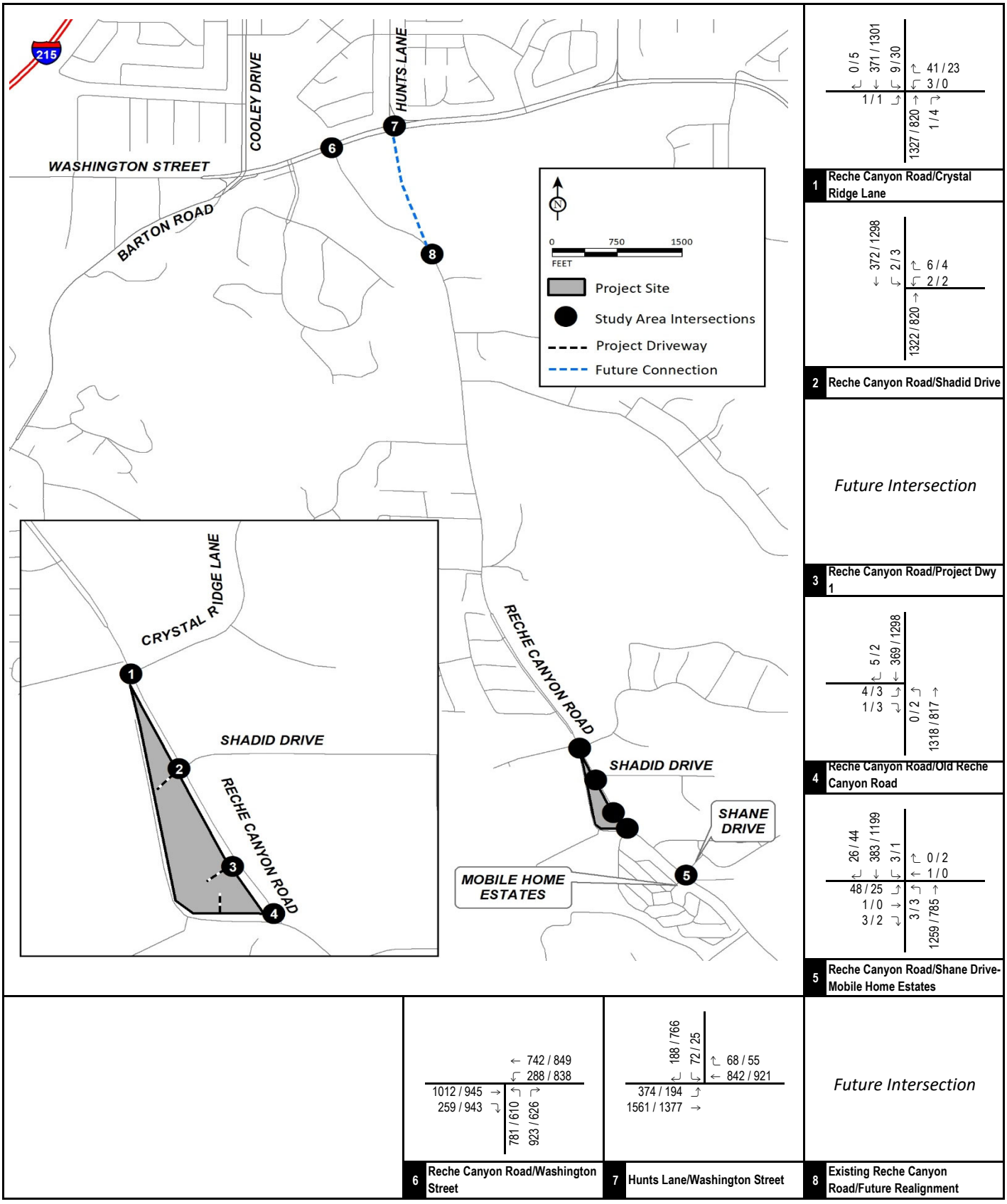
Cumulative project trips were assigned to the roadway network based on their locations in relation to surrounding land uses and regional arterials, and/or using information from approved traffic studies where available. Figure 4-3 illustrates the peak hour cumulative project trip assignment at the study area intersections. Figure 4-4 illustrates the peak hour traffic volumes at study intersections under Project Opening Year no project conditions.

4.3 GENERAL PLAN BUILDOUT YEAR NO PROJECT TRAFFIC VOLUMES

General Plan Buildout no Project volumes was developed using forecast volumes obtained from the latest version of the San Bernardino Traffic Analysis Model and by applying the SBCTA recommended procedures for post-processing of modeled traffic volumes. It should also be noted that Reche Canyon Road is proposed to be aligned with Hunts Lane in the future, with the estimated completion date as 2025. Therefore, General Plan Buildout year volumes were adjusted to account for this re-alignment. Figure 4-5 illustrates the peak hour traffic volumes at study intersections under General Plan Buildout no project conditions.

4.4 LIST OF CHAPTER 4.0 FIGURES AND TABLES

- Figure 4-1: Existing Peak Hour Traffic Volumes
- Figure 4-2: Cumulative Project Locations
- Figure 4-3: Cumulative Projects Trip Assignment
- Figure 4-4: Project Opening Year no project Peak Hour Traffic Volumes
- Figure 4-5: General Plan Buildout no Project Peak Hour Traffic Volumes
- Table 4-A: Cumulative Projects Trip Generation



LSA

FIGURE 4-1

XXXX / YYYY

AM / PM Peak Hour Traffic Volumes (In PCE)

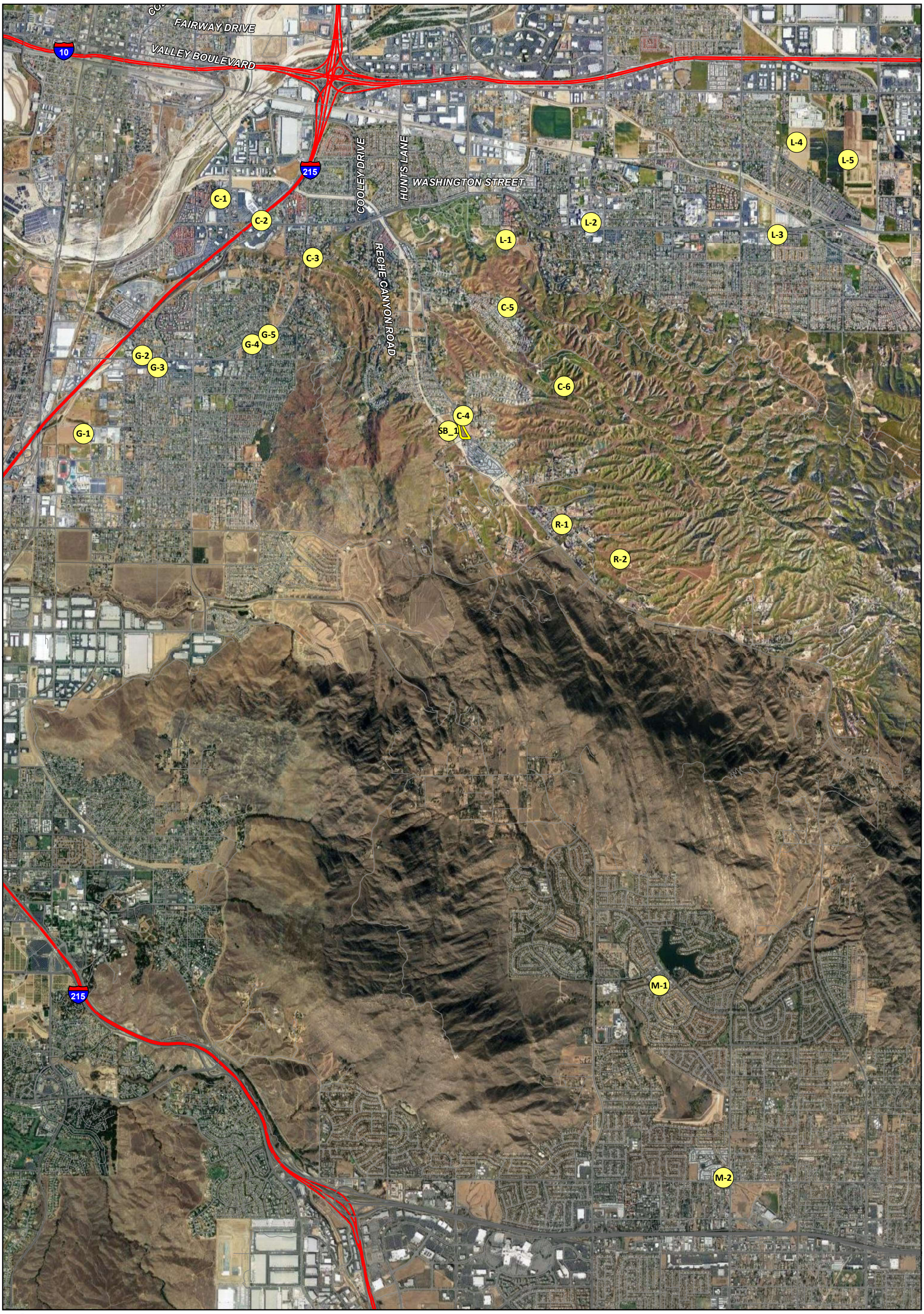
----- Project Driveway

----- Future Connection

Reche Canyon Retail

Traffic Impact Study

Existing Peak Hour Traffic Volumes



LSA

LEGEND

Project Location

Cumulative Project Locations

N

0 1750 3500

FEET

SOURCE: ESRI Streetmap, 2013; Google Earth, 2018.

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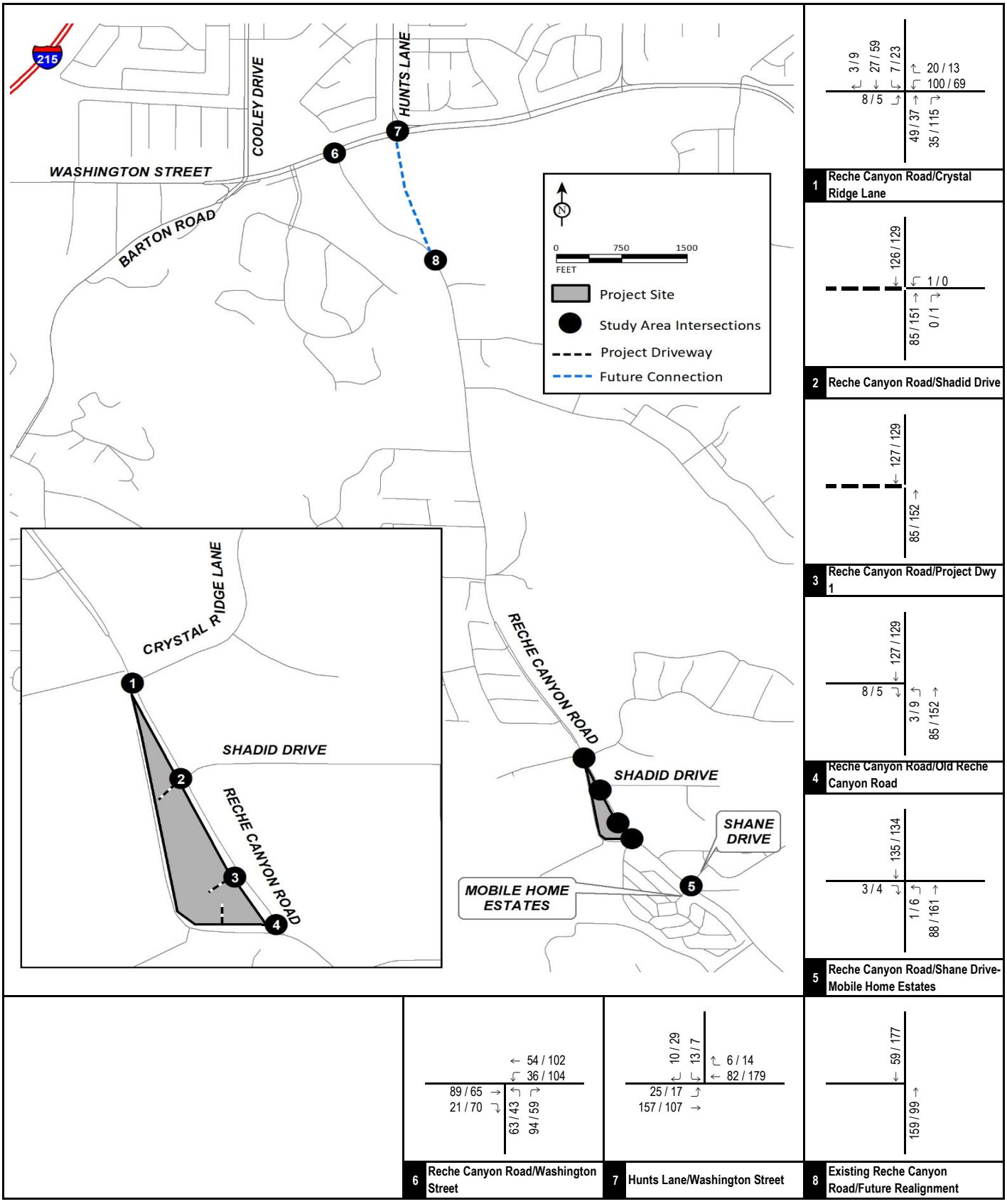
FIGURE 4-2

Reche Canyon Retail
Traffic Impact Study

Cumulative Project Location



LSA

FIGURE 4-3

XXX / YYY

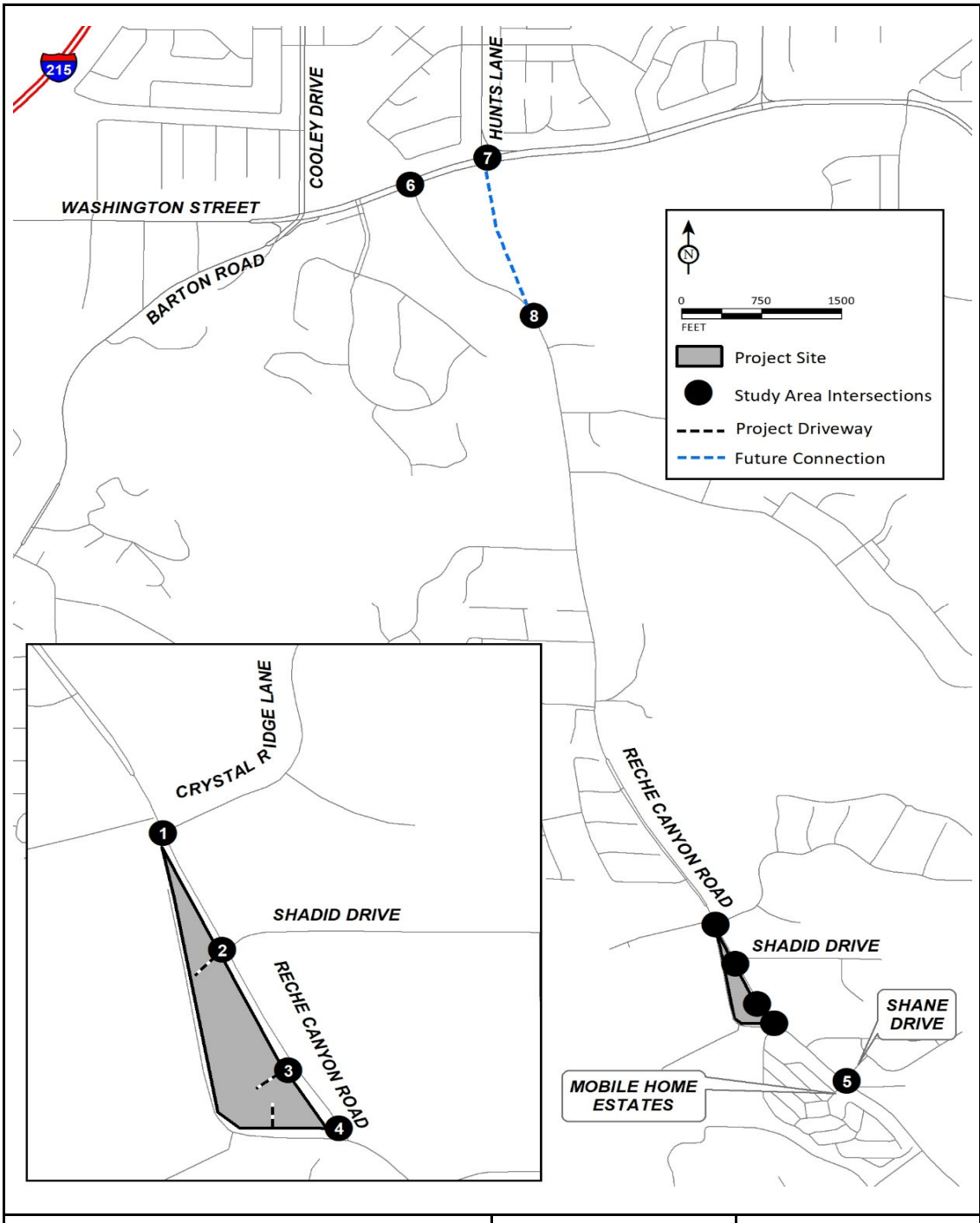
AM / PM Peak Hour Traffic Volumes (In PCE)

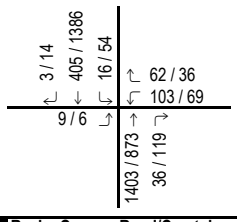
----- Project Driveway

----- Future Connection

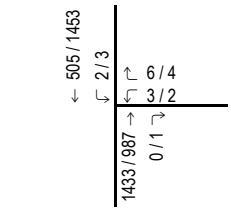
Reche Canyon Retail
Traffic Impact Study

Cumulative Project Trip Assignment





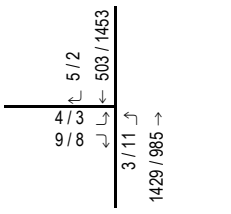
1 Reche Canyon Road/Crystal Ridge Lane



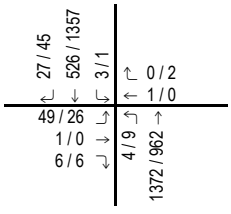
2 Reche Canyon Road/Shadid Drive

Future Intersection

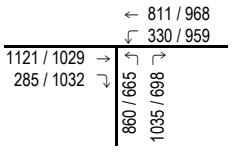
3 Reche Canyon Road/Project Dwy 1



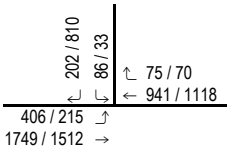
4 Reche Canyon Road/Old Reche Canyon Road



5 Reche Canyon Road/Shane Drive-Mobile Home Estates



6 Reche Canyon Road/Washington Street



7 Hunts Lane/Washington Street

Future Intersection

8 Existing Reche Canyon Road/Future Realignment

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FIGURE 4-4

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes (In PCE)
----- Project Driveway
----- Future Connection

Reche Canyon Retail
Traffic Impact Study

Project Opening Year Peak Hour Traffic Volumes

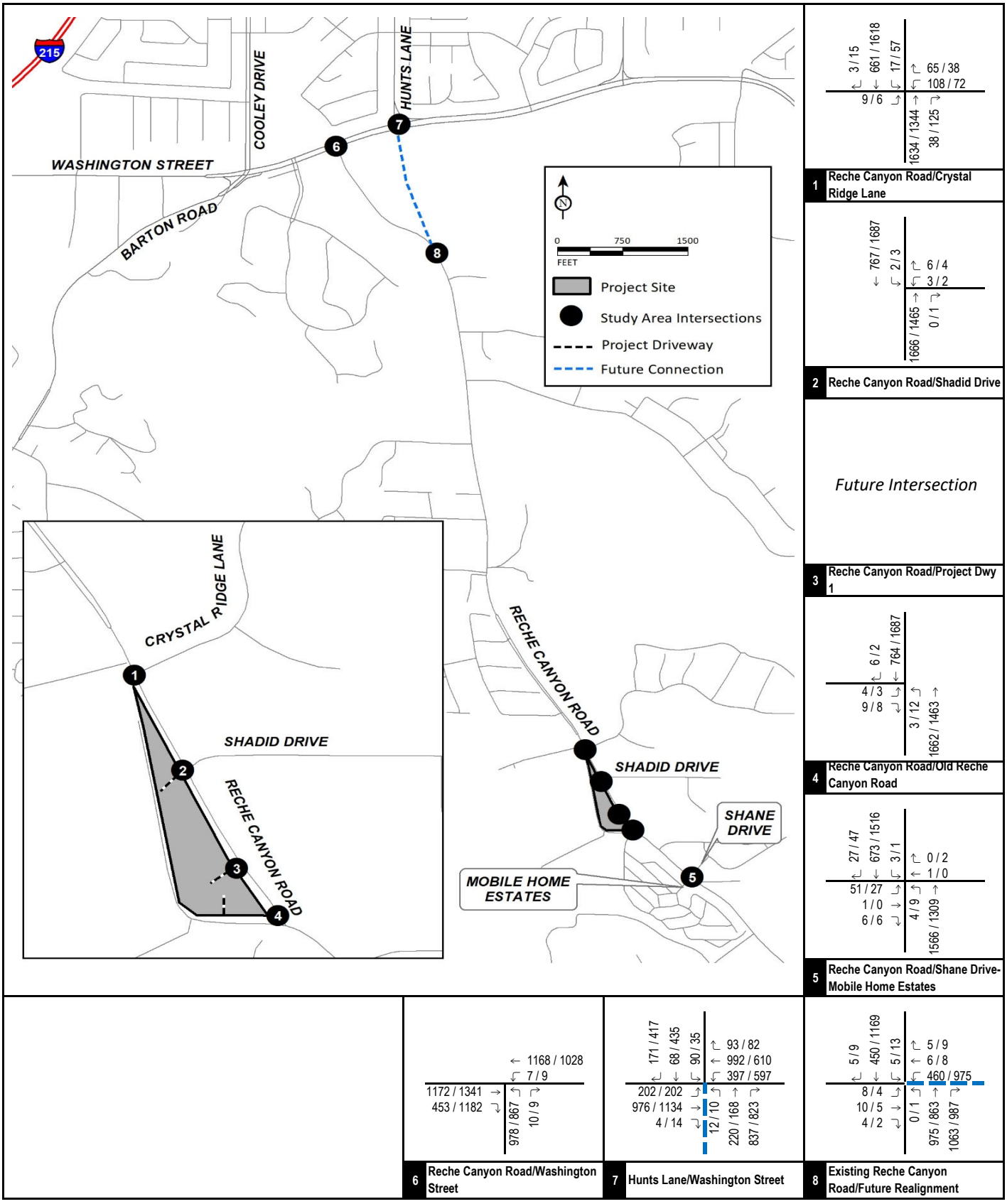

FIGURE 4-5

LSA

XXXX / YYYY

AM / PM Peak Hour Traffic Volumes (In PCE)

----- Project Driveway

----- Future Connection

Reche Canyon Retail Traffic Impact Study

General Plan Buildout Year Peak Hour Traffic Volumes

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Table 4-A - Cumulative Projects Trip Generation

Project No.	Project Name/Land Use/Builder/Applicant	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
R-1 .	**PAR00947**									
	North of the Intersection of Adams Avenue and Scott Street									
	Single-Family Residential	5	DU							
	Trips/Unit[1]			0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation			**1**	**3**	**4**	**3**	**2**	**5**	**47**
R-2 .	**PAR00361**									
	East of Ashley Avenue in the Canyons									
	Single-Family Residential	40	DU							
	Trips/Unit[1]			0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation			**8**	**22**	**30**	**25**	**15**	**40**	**378**
M-1 .	**Lakeshore Village**									
	West of Sunnymead Ranch Parkway, between Village Road and Old Lake Drive									
	Shopping Center	140.00	TSF							
	Trips/Unit[2]			0.58	0.36	0.94	1.83	1.98	3.81	37.75
	Trip Generation			81	50	131	256	277	533	5,285
	Pass-By Trips[3]			0	0	0	(87)	(94)	(181)	(1,797)
	Net Trips			**81**	**50**	**161**	**169**	**183**	**392**	**3,488**
M-2 .	**Ironwood Plaza**									
	Northwest Corner of Heacock Street and Ironwood Avenue									
	Shopping Center	58.50	TSF							
	Trips/Unit[2]			0.58	0.36	0.94	1.83	1.98	3.81	37.75
	Trip Generation			34	21	55	107	116	223	2,208
	Pass-By Trips[3]			0	0	0	(36)	(39)	(75)	(751)
	Net Trips			**34**	**21**	**217**	**71**	**77**	**544**	**1,457**
G-1 .	**Gateway Specific Plan**									
	North of Grand Terrace High School, along eastern side of I-215									
	Multifamily Residential	750	DU							
	Trips/Unit[4]			0.11	0.35	0.46	0.35	0.21	0.56	7.32
	Trip Generation			83	263	346	263	158	421	5,490
	Business Park	87.425	TSF							
	Trips/Unit[5]			0.24	0.16	0.40	0.19	0.23	0.42	12.44
	Trip Generation			21	14	35	17	20	37	1,088
	Commercial	271.793	TSF							
	Trips/Unit[2]			0.58	0.36	0.94	1.83	1.98	3.81	37.75
	Trip Generation			158	98	256	497	538	1,035	10,260
	Pass-By Trips[3]			0	0	0	(169)	(183)	(352)	(3,488)
	Net Trips			158	98	256	328	355	683	6,772
	Gross Trip Generation			262	375	637	777	716	1,493	16,838
	Pass-By Trips			0	0	0	(169)	(183)	(352)	(3,488)
	Net Trip Generation			**262**	**375**	**637**	**608**	**533**	**1,141**	**13,350**
G-2 .	**Golden Star Investments Inc.**									
	22200 Barton Road									
	Fast-Food Restaurant with Drive-through	5.342	TSF							
	Trips/Unit[6]			20.50	19.69	40.19	16.99	15.68	32.67	470.95
	Trip Generation			110	105	215	91	84	175	2,516
	Pass-By Trips[7]			(54)	(51)	(105)	(46)	(42)	(88)	(1,258)
	Net Trips			**56**	**54**	**110**	**45**	**42**	**87**	**1,258**

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Table 4-A - Cumulative Projects Trip Generation

Project No.	Project Name/Land Use/Builder/Applicant	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
G-3 .	**Greens INV**									
	ALTERNATIVE 1/2									
	Hotel	90	RM							
	Trips/Unit[8]			0.28	0.19	0.47	0.31	0.29	0.60	8.36
	Trip Generation			25	17	42	28	26	54	752
	Office	27.7	TSF							
	Trips/Unit[9]			1.00	0.16	1.16	0.18	0.97	1.15	9.74
	Trip Generation			28	4	32	5	27	32	270
	Mulifamily Residential	35	DU							
	Trips/Unit[10]			0.09	0.27	0.36	0.27	0.17	0.44	5.44
	Trip Generation			3	9	12	9	6	15	190
	Sit-Down Restaurant	8.00	TSF							
	Trips/Unit[11]			5.47	4.47	9.94	6.06	3.71	9.77	112.18
	Trip Generation			44	36	80	48	30	78	897
	Pass-By Trips[12]			0	0	0	(21)	(13)	(34)	(386)
	Net Trips			44	36	80	27	17	44	511
	Drive-Through Restaurant	3.00	TSF							
	Trips/Unit[6]			20.50	19.69	40.19	16.99	15.68	32.67	470.95
	Trip Generation			62	59	121	51	47	98	1,413
	Pass-By Trips[7]			(30)	(29)	(59)	(26)	(24)	(50)	(707)
	Net Trips			32	30	62	25	23	48	706
	Commercial	3.30	TSF							
	Trips/Unit[2]			0.58	0.36	0.94	1.83	1.98	3.81	37.75
	Trip Generation			2	1	3	6	7	13	125
	Pass-By Trips[3]			0	0	0	(2)	(2)	(4)	(43)
	Net Trips			2	1	3	4	5	9	82
	Drive-Through Coffee Shop	2.20	TSF							
	Trips/Unit[13]			45.38	43.61	88.99	21.69	21.69	43.38	820.38
	Trip Generation			100	96	196	48	48	96	1,805
	Pass-By Trips[14]			(49)	(47)	(96)	(24)	(24)	(48)	(903)
	Net Trips			51	49	100	24	24	48	902
	Total Gross Trips			**264**	**222**	**486**	**195**	**191**	**386**	**5,452**
	Total Pass-By Trips			**(79)**	**(76)**	**(155)**	**(73)**	**(63)**	**(136)**	**(2,039)**
	Net Trip Generation			**185**	**146**	**331**	**122**	**128**	**250**	**3,413**
G-4 .	**Space Masters**									
	22805 Barton Road									
	Medical Office Building	1.655	TSF							
	Trips/Unit[15]			2.17	0.61	2.78	0.97	2.49	3.46	34.80
	Trip Generation			**4**	**1**	**5**	**2**	**4**	**6**	**58**
G-5 .	**Medical Office Buidling**									
	22881 Barton Road									
	Medical Office Building	4.998	TSF							
	Trips/Unit[15]			2.17	0.61	2.78	0.97	2.49	3.46	34.80
	Trip Generation			**11**	**3**	**14**	**5**	**12**	**17**	**174**

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Table 4-A - Cumulative Projects Trip Generation

Project No.	Project Name/Land Use/Builder/Applicant	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
C-1 .	**Multifamily Housing**								
	1116 Santo Antonio Drive								
	Multifamily Housing	49 DU							
	Trips/Unit[4]		0.11	0.35	0.46	0.35	0.21	0.56	7.32
	Trip Generation		**5**	**17**	**22**	**17**	**10**	**27**	**359**
C-2 .	**Hotel**								
	1395 E Washington Avenue								
	Hotel	73 RM							
	Trips/Unit[8]		0.28	0.19	0.47	0.31	0.29	0.60	8.36
	Trip Generation		**20**	**14**	**34**	**23**	**21**	**44**	**610**
C-3 .	**Residential**								
	1300 Barton Road								
	Single-Family Residential	184 DU							
	Trips/Unit[1]		0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation		**35**	**101**	**136**	**114**	**68**	**182**	**1,737**
C-4 .	**Residential**								
	3003 Shadid Lane								
	Single-Family Residential	1 DU							
	Trips/Unit[1]		0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation		**0**	**1**	**1**	**1**	**0**	**1**	**9**
C-5 .	**Residential**								
	1600 Ridge View Drive								
	Single-Family Residential	20 DU							
	Trips/Unit[1]		0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation		**4**	**11**	**15**	**12**	**7**	**19**	**189**
C-6 .	**Rancho Del Prado**								
	Planning Area 10 in Reche Canyon Specific Plan								
	Single-Family Residential	350 DU							
	Trips/Unit[1]		0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation		**67**	**193**	**260**	**217**	**130**	**347**	**3,304**
L-1 .	**Montecito Memorial Park Expansion**								
	End of Oakwood Street, South of Barton Road								
	Park	18.5 AC							
	Trips/Unit[16]		0.01	0.01	0.02	0.06	0.05	0.11	0.78
	Trip Generation		**0**	**0**	**0**	**1**	**1**	**2**	**14**
L-2 .	**Loma Linda Medical Center**								
	Northwest corner of Anderson Street and Barton Road								
	Medical Center	1060 TSF							
	Trips/Unit[17]		0.61	0.28	0.89	0.31	0.66	0.97	10.72
	Trip Generation		**647**	**297**	**944**	**329**	**700**	**1,029**	**11,363**
L-3 .	**Medical Office Buidling**								
	25915 Barton Road								
	Medical Office Building	16.643 TSF							
	Trips/Unit[15]		2.17	0.61	2.78	0.97	2.49	3.46	34.80
	Trip Generation		**36**	**10**	**46**	**16**	**41**	**57**	**579**

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Table 4-A - Cumulative Projects Trip Generation

Project No.	Project Name/Land Use/Builder/Applicant	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
L-4 .	**Stonebrook Condos**								
	North of Citrus Avenue, West of Bryn Mawr Avenue								
	Multifamily Housing	103 DU							
	Trips/Unit[4]		0.11	0.35	0.46	0.35	0.21	0.56	7.32
	Trip Generation		**11**	**36**	**47**	**36**	**22**	**58**	**754**
L-5 .	**Citrus Trails**								
	South of Redlands Boulevard, West of California Street, North of Mission Road								
	Single-Family Residential	224 DU							
	Trips/Unit[1]		0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation		**43**	**123**	**166**	**139**	**83**	**222**	**2,115**
SB-1 .	**P201700344**								
	South of Fern Lane, West of Reche Canyon Road								
	Residential	28 DU							
	Trips/Unit[1]		0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Trip Generation		**5**	**15**	**20**	**17**	**10**	**27**	**264**
	Total Gross Trip Generation		**1,648**	**1,620**	**3,268**	**2,383**	**2,510**	**4,893**	**54,253**
	Total Pass-By Trips		**(133)**	**(127)**	**(260)**	**(411)**	**(421)**	**(832)**	**(9,333)**
	Total Net Trip Generation		**1,515**	**1,493**	**3,008**	**1,972**	**2,089**	**4,061**	**44,920**

Notes:

DU = Dwelling Units; RM = Rooms;VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; Ac = Acres.

[1] Rates based on Land Use 210 - "Single-Family Detached Housing" from Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[2] Rates based on Land Use 820 - "Shopping Center" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[3] Pass-by rates obtained from the ITE Trip Generation Handbook (3rd Edition) for Land Use 820. A.m. and p.m. peak period pass-by rates for this land use in the ITE handbook are 0 percent and 34 percent respectively. No daily pass-by rates are provided. Therefore, the p.m. peak period pass-by rates was used as the daily pass-by rate.

[4] Rates based on Land Use 220 - "Multifamily Housing (Low-Rise)" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[5] Rates based on Land Use 770 - "Business Park" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[6] Rates based on Land Use 934 - "Fast-Food Restaurant with Drive-Through Window" from ITE *Trip Generation Manual* , 10th Edition. Setting/Location used is General Urban/Suburban.

[7] Pass-by rates obtained from the ITE Trip Generation Handbook (3rd Edition) for Land Use 934. A.m. and p.m. peak period pass-by rates for this land use in the ITE handbook are 49 percent and 50 percent respectively. No daily pass-by rates are provided. Therefore, the daily pass-by rate was obtained as an average of the a.m. and p.m. peak period pass-by rates.

[8] Rates based on Land Use 310 - "Hotel" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[9] Rates based on Land Use 710 - "General Office Building" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[10] Rates based on Land Use 221 - "Multifamily Housing (Mid-Rise)" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[11] Rates based on Land Use 932 - "High-Turnover (Sit-Down) Restaurant" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[12] Pass-by rates obtained from the ITE Trip Generation Handbook (3rd Edition) for Land Use 932. A.m. and p.m. peak period pass-by rates for this land use in the ITE handbook are 0 percent and 43 percent respectively. No daily pass-by rates are provided. Therefore, the p.m. peak period pass-by rates was used as the daily pass-by rate.

[13] Rates based on Land Use 937 - "Coffee/Donut Shop with Drive-Through Window" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[14] Since No pass-by rate is avaliable for Land Use 937 - "Coffee/Donut Shop with Drive-Through Window", Pass-by rates are obtained from the ITE Trip Generation Handbook (3rd Edition) for Land Use 934. A.m. and p.m. peak period pass-by rates for this land use in the ITE handbook are 49 percent and 50 percent respectively. No daily pass-by rates are provided. Therefore, the daily pass-by rate was obtained as an average of the a.m. and p.m. peak period pass-by rates.

[15] Rates based on Land Use 720 - "Medical-Dental Office Building" from ITE *Trip Generation Manual,* 10th Edition. Setting/Location used is General Urban/Suburban.

[16] Rates based on Land Use 411 - "Public Park" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

[17] Rates based on Land Use 610 - "Hospital" from ITE Trip Generation Manual, 10th Edition. Setting/Location used is General Urban/Suburban.

5.0 PROJECT TRAFFIC

5.1 PROJECT TRIP GENERATION

The trip generation for the proposed project was developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) for Land Use 820 – "Shopping Center", and Land Use 945 – "Gasoline/Service Station with Convenience Market". Table 5-A summarizes the daily, a.m., and p.m. peak hour project trip generation. As shown in Table 5-A, the proposed project is estimated to generate 2,822 daily trips, with 158 trips occurring during the a.m. peak hour and 204 trips occurring during the p.m. peak hour.

For retail and gas stations, a certain percentage of external trips are pass-by trips. A pass-by trip is a trip where an intermediate stop is made on the way from the origin to the primary destination of the trip without making a route diversion. For the proposed project, it has been estimated that pass-by trips would occur along Reche Canyon Road, due to the existing northbound and southbound through traffic in the vicinity of the project. Pass-by rates were obtained from the ITE *Trip Generation Handbook*, 3rd Edition for these land uses. As shown in Table 5-A, after accounting for pass-by trips, the proposed project is estimated to generate 1,246 daily trips, with 66 trips occurring during the a.m. peak hour and 98 trips occurring during the p.m. peak hour.

Figure 5-1 illustrates the project pass-by trips.

5.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project trips is based on the regional roadway network and the location of residential, employment and commercial centers in relation to the proposed project. Figure 5-2 illustrates the project trip distribution under Project Opening Year conditions. The project trip generation was applied to the trip distribution patterns to develop the project trip assignment. The project trip assignment for Opening Year is illustrated in Figure 5-3. As described earlier, Reche Canyon Road will be realigned with Hunts Lane prior to General Plan Buildout conditions. Therefore, the project trip distribution and assignment were adjusted to account for this realignment. Corresponding distribution and assignment for General plan Buildout Year is illustrated in Figures 5-4 and 5-5, respectively.

5.3 LIST OF CHAPTER 5.0 FIGURES AND TABLES

- Figure 5-1: Project Pass-By Trip Assignment
- Figure 5-2: Project Trip Distribution – Opening Year
- Figure 5-3: Project Trip Assignment – Opening Year
- Figure 5-4: Project Trip Distribution – General Plan Buildout Year
- Figure 5-5: Project Trip Assignment – General Plan Buildout Year
- Table 5-A: Project Trip Generation

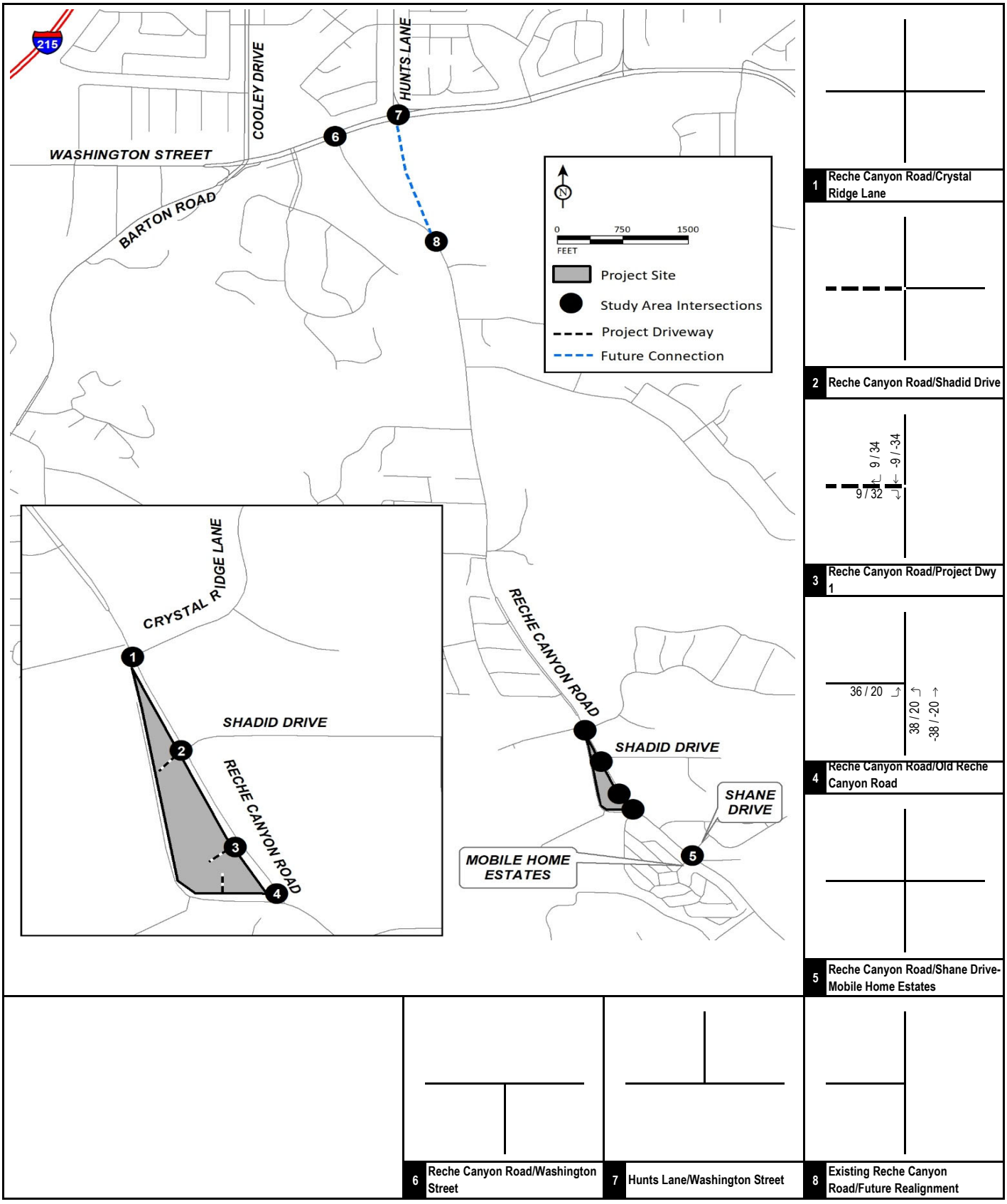

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FIGURE 5-1

XX / YY
AM / PM Peak Hour Trips
----- Project Driveway

Reche Canyon Retail
Traffic Impact Study

Project Pass-by Trip Assignment

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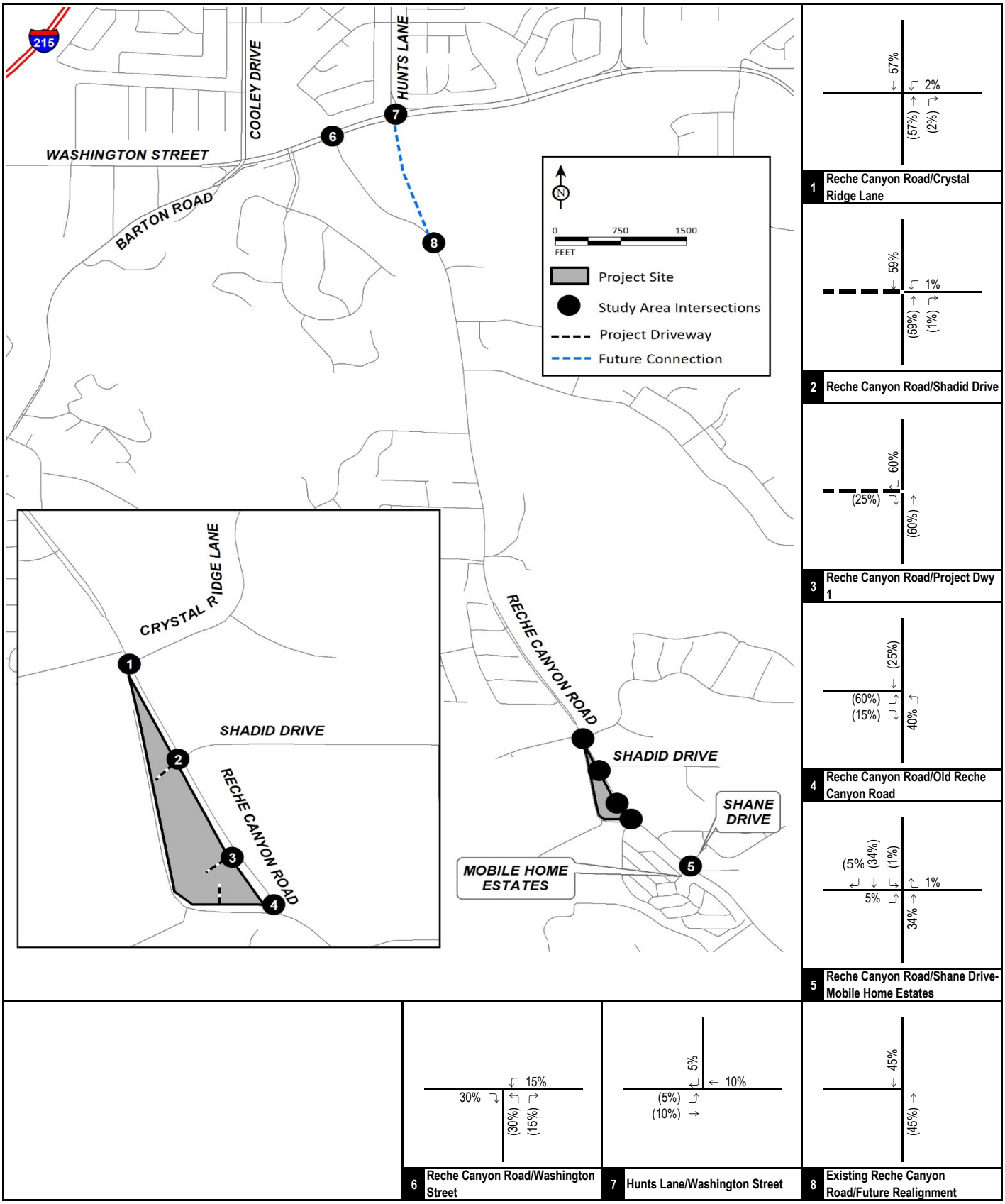

FIGURE 5-2

XX% (YY%)
Inbound (Outbound) Trip Distribution
Project Driveway

Reche Canyon Retail
Traffic Impact Study

Project Trip Distribution - Opening Year

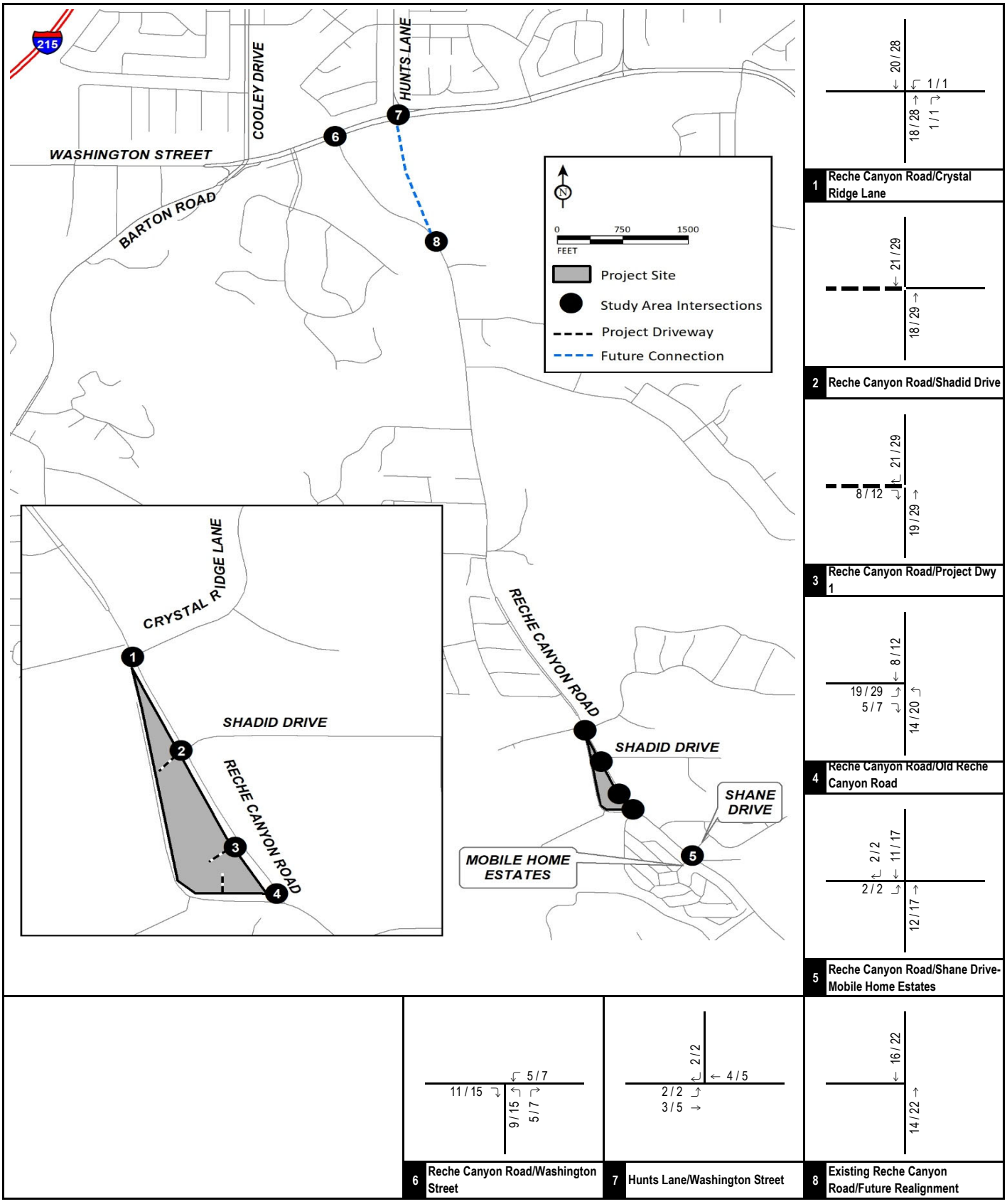

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FIGURE 5-3

XX / YY
AM / PM Peak Hour Trips
----- Project Driveway

Reche Canyon Retail
Traffic Impact Study

Project Trip Assignment - Opening Year

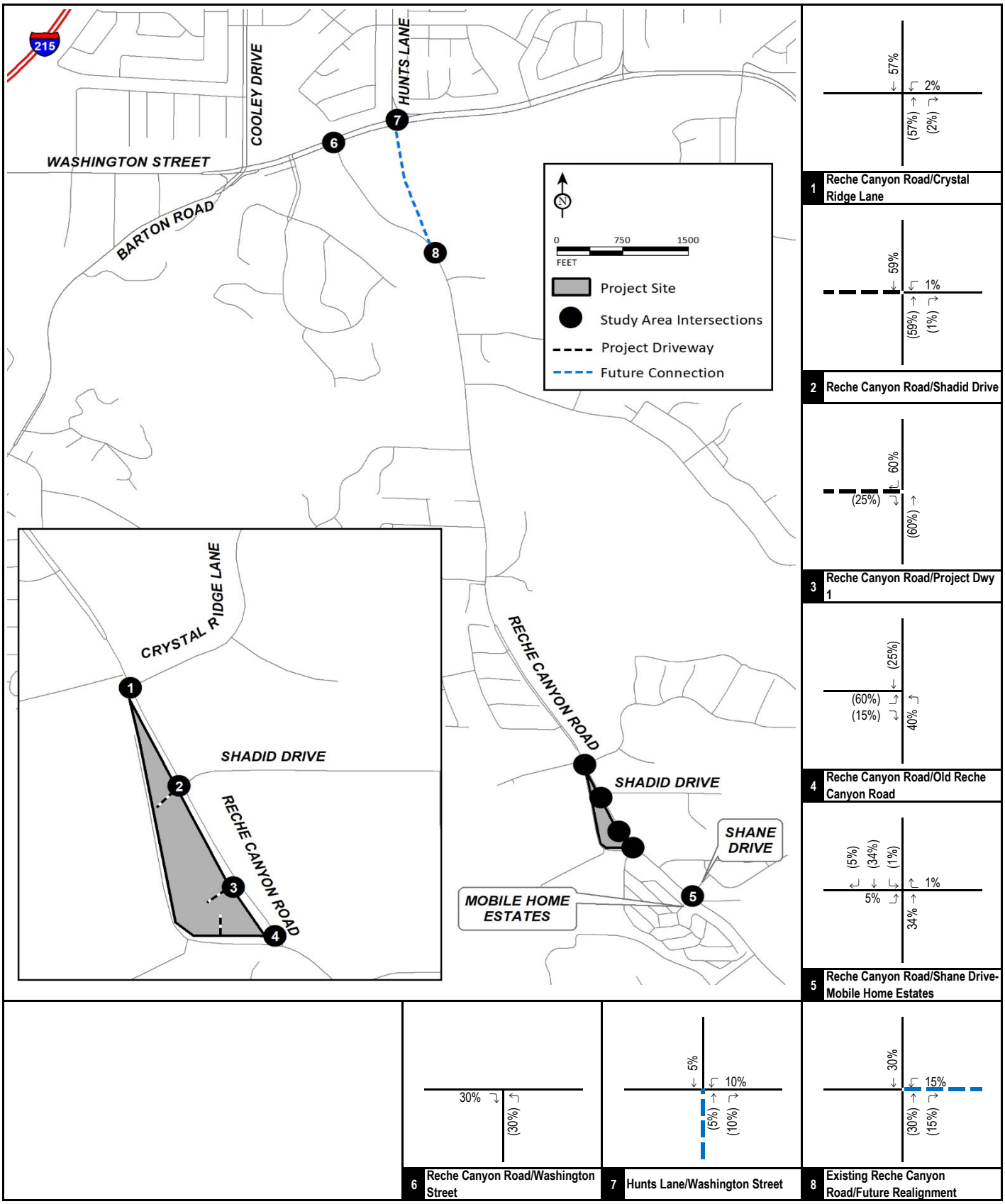

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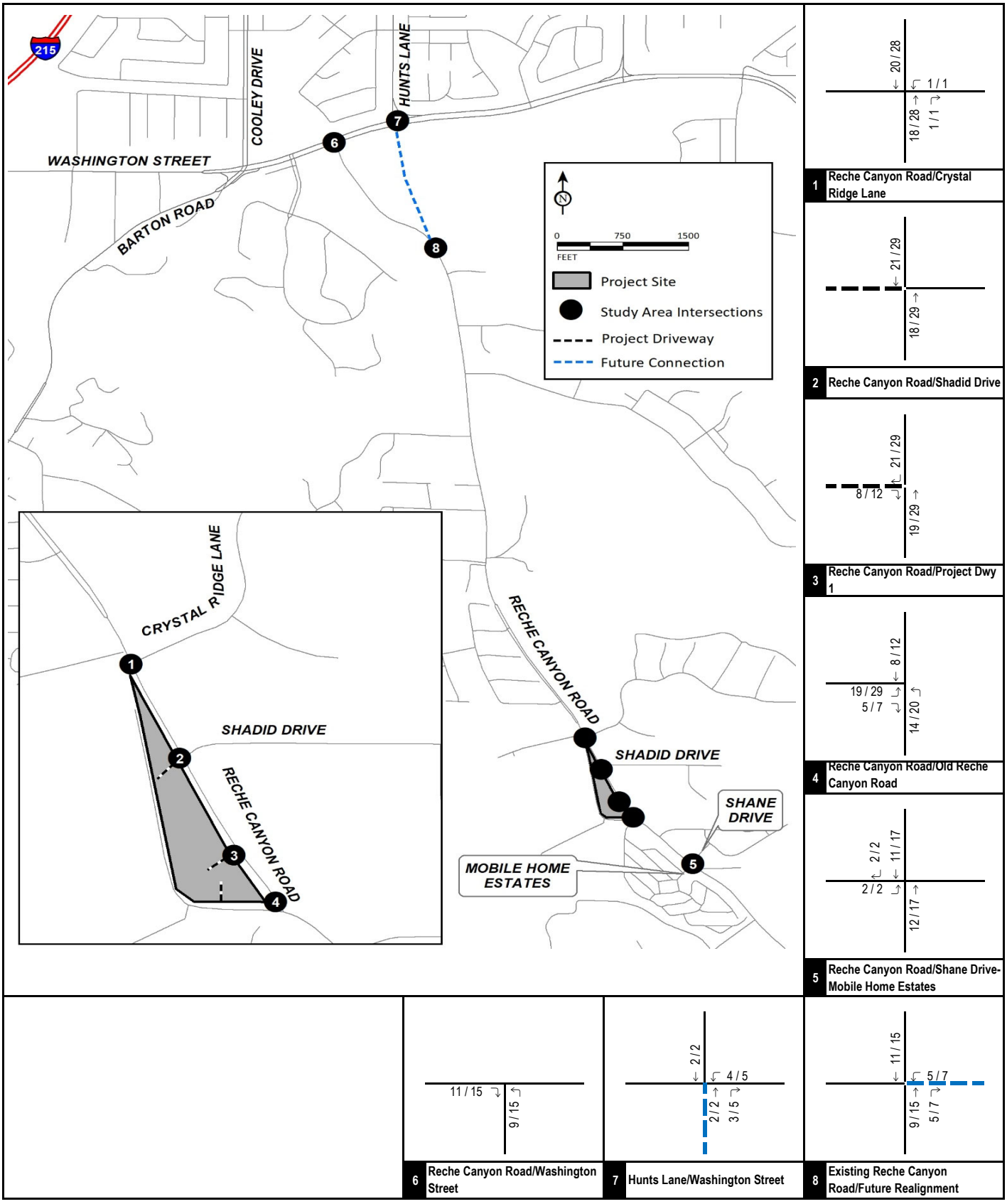
FIGURE 5-4

XX% (YY%)
Inbound (Outbound) Trip Distribution
Project Driveway
Future Connection

Reche Canyon Retail
Traffic Impact Study

Project Trip Distribution - General Plan Buildout Year



1 Reche Canyon Road/Crystal Ridge Lane

2 Reche Canyon Road/Shadid Drive

3 Reche Canyon Road/Project Dwy 1

4 Reche Canyon Road/Old Reche Canyon Road

5 Reche Canyon Road/Shane Drive-Mobile Home Estates

6 Reche Canyon Road/Washington Street

7 Hunts Lane/Washington Street

8 Existing Reche Canyon Road/Future Realignment

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FIGURE 5-5

XX / YY
AM / PM Peak Hour Trips
----- Project Driveway
----- Future Connection

Reche Canyon Retail
Traffic Impact Study

Project Trip Assignment - General Plan Buildout Year

P:\CLT1802.06 Reche Canyon Retail EIR Reinitiation\2.4 Traffic-VMT\z30 - Assn_BO.xlsx\Figure (6/29/2022)

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Table 5-A - Project Trip Generation

Land Use	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Shopping Center	9.48 TSF							
Trips/Unit[1]		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Trip Generation		6	3	9	17	19	36	358
Pass-by Trips[2]		0	0	0	(6)	(6)	(12)	(122)
Net New Trips		6	3	9	11	13	24	236
Gas Station with Convenience Store/Car Wash	12 VFP							
Trips/Unit[3]		6.36	6.11	12.47	7.13	6.86	13.99	205.36
Trip Generation		76	73	149	86	82	168	2,464
Pass-by Trips[4]		(47)	(45)	(92)	(48)	(46)	(94)	(1,454)
Net New Trips		29	28	57	38	36	74	1,010
	Gross New Trips	**82**	**76**	**158**	**103**	**101**	**204**	**2,822**
	Pass-By Trips	(47)	(45)	(92)	(54)	(52)	(106)	(1,576)
	Net New Trips	**35**	**31**	**66**	**49**	**49**	**98**	**1,246**

Notes:

TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

[1] Rates are from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition), Land Use 820 - "Shopping Center", Setting/Location - "General Urban/Suburban."

[2] Pass-by rates are from the ITE *Trip Generation Handbook* , 3rd Edition for Land Use 820 - "Shopping Center." A pass-by rate of 0% was used for the a.m. peak hour and a pass-by rate of 34% was used for the p.m. peak hour. Since there is no data available for daily pass-by trips, the p.m. peak hour pass-by rates was used as the daily pass-by rate.

[3] Rates are from the ITE *Trip Generation Manual* (10th Edition), Land Use 945 - "Gasoline/Service Station with Convenience Market", Setting/Location - "General Urban/Suburban."

[4] Pass-by rates are from the ITE *Trip Generation Handbook* , 3rd Edition for Land Use 945 - "Gasoline/Service Station with Convenience Market." A pass-by rate of 62% was used for the a.m. peak hour and a pass-by rate of 56% was used for the p.m. peak hour. Since there is no data available for daily pass-by trips, the average of a.m. and p.m. pass-by rates was used as the daily pass-by rate.

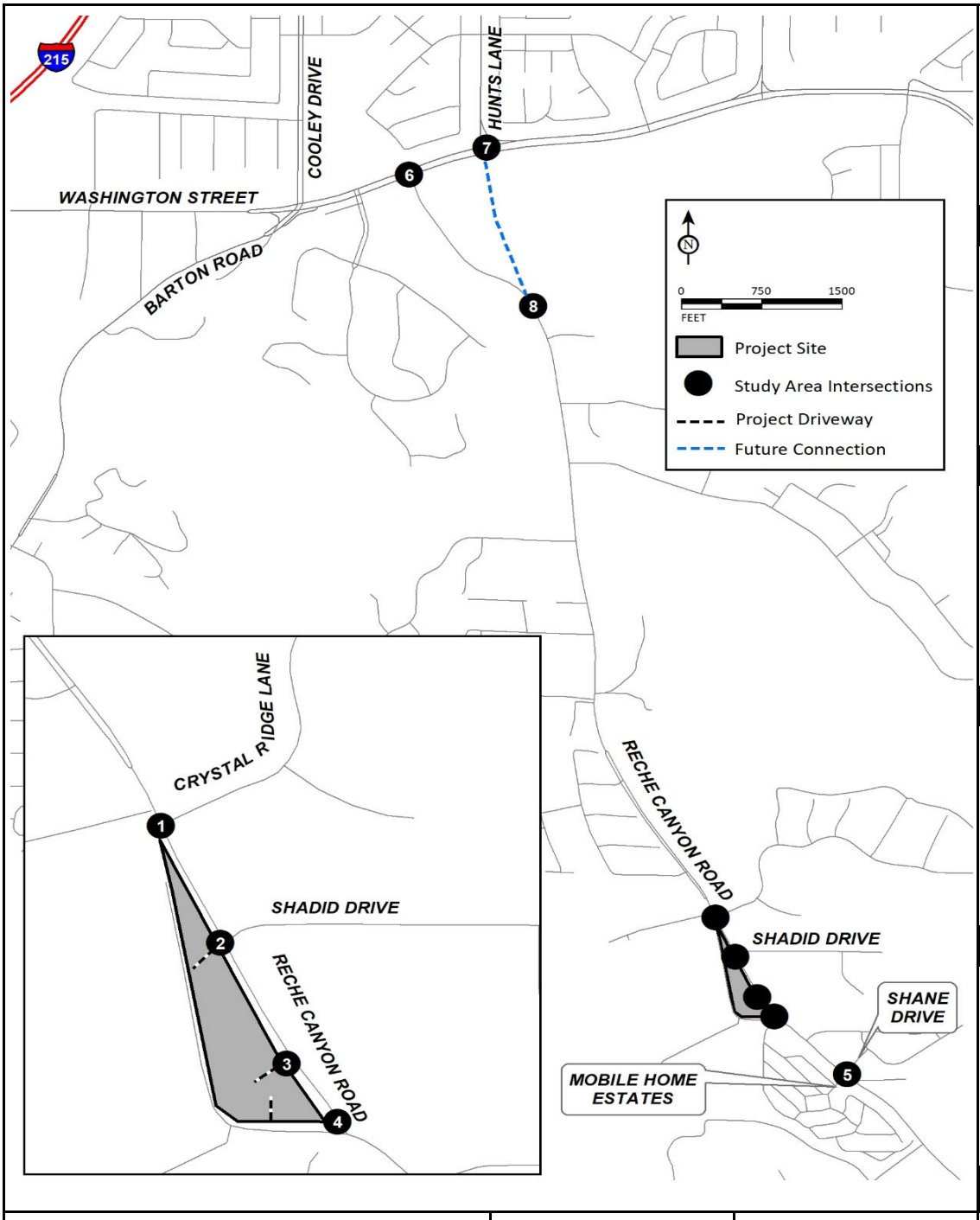
6.0 TRAFFIC VOLUMES FOR WITH PROJECT SCENARIOS

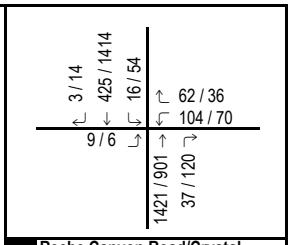
Project Opening Year and General Plan Buildout with project traffic volumes were developed by adding project traffic to the corresponding without project scenarios. Figures 6-1, and 6-2 illustrate "with project" peak hour traffic volumes at study intersections under Project Opening Year, and General Plan Buildout conditions respectively.

Detailed volume development worksheets are included in Appendix C.

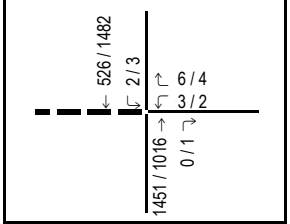
6.1 LIST OF CHAPTER 6.0 FIGURES

- Figure 6-1: Project Opening Year with Project Peak Hour Traffic Volumes
- Figure 6-2: General Plan Buildout with Project Peak Hour Traffic Volumes

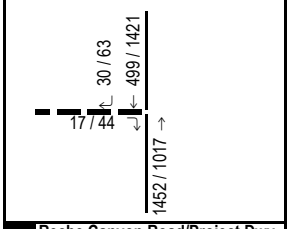




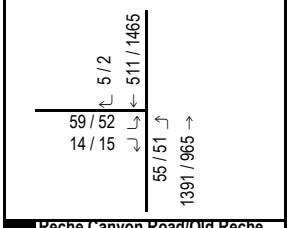
1 Reche Canyon Road/Crystal Ridge Lane



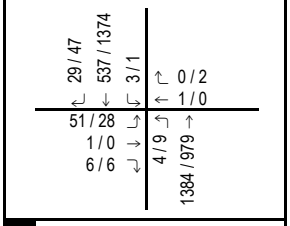
2 Reche Canyon Road/Shadid Drive



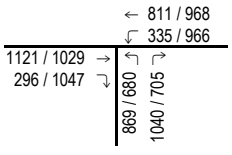
3 Reche Canyon Road/Project Dwy 1



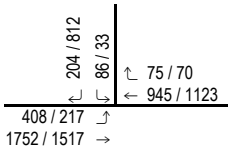
4 Reche Canyon Road/Old Reche Canyon Road



5 Reche Canyon Road/Shane Drive-Mobile Home Estates



6 Reche Canyon Road/Washington Street



7 Hunts Lane/Washington Street

8 Existing Reche Canyon Road/Future Realignment

Future Intersection

FIGURE 6-1

LSA

XXXX / YYYY

AM / PM Peak Hour Traffic Volumes (In PCE)

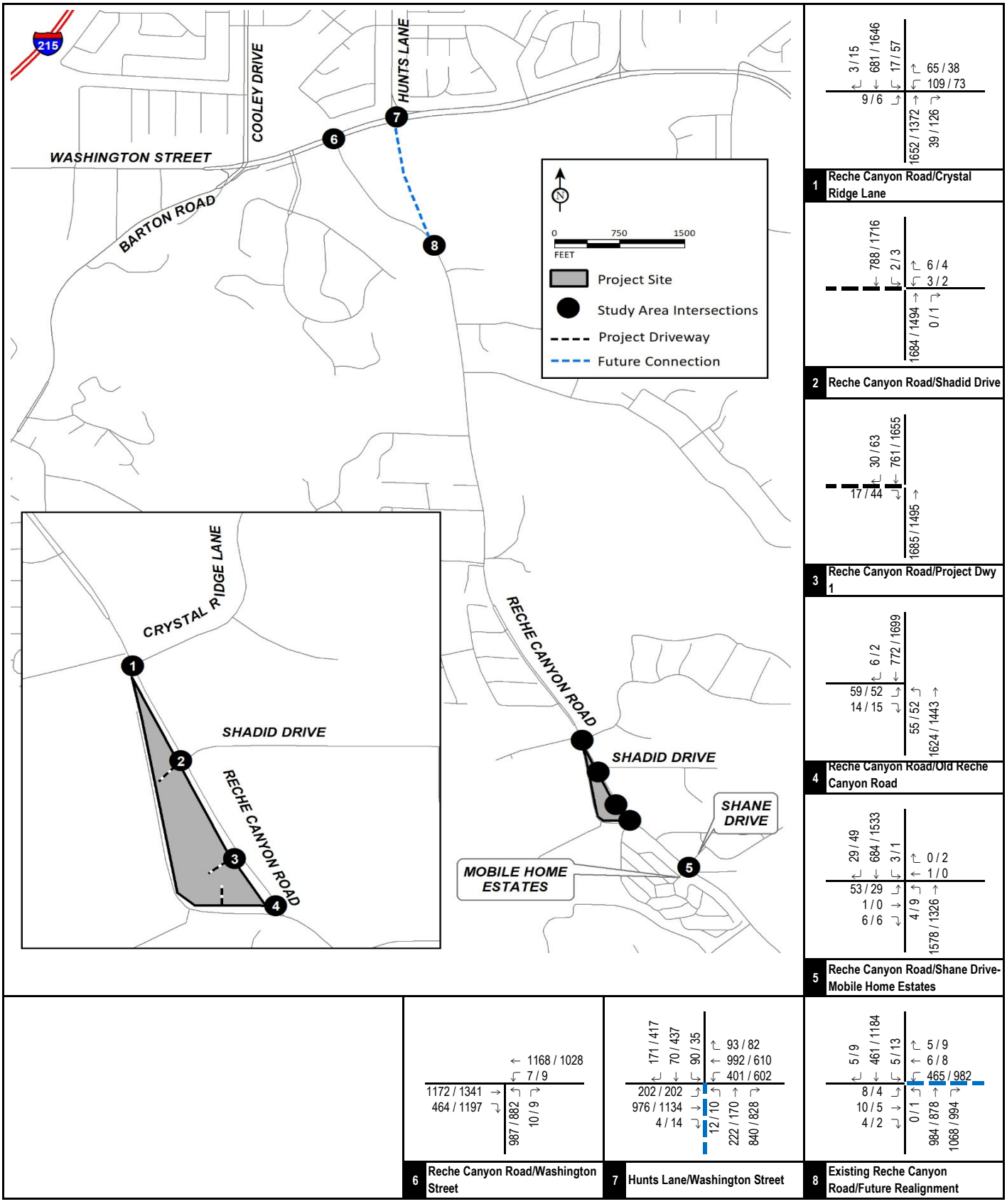
----- Project Driveway

----- Future Connection

Reche Canyon Retail Traffic Impact Study

Project Opening Year with Project Peak Hour Traffic Volumes

P:\CLT1802.06 Reche Canyon Retail EIR Reinitiation\2.4 Traffic-VMT\z30 - OY_P_Vol.xlsx\Figure (6/29/2022)



LSA

FIGURE 6-2

XXXX / YYYY

AM / PM Peak Hour Traffic Volumes (In PCE)

----- Project Driveway

----- Future Connection

Reche Canyon Retail
Traffic Impact Study

General Plan Buildout with Project Peak Hour Traffic Volumes

7.0 INTERSECTION AND ROADWAY SEGMENT LEVELS OF SERVICE

7.1 EXISTING LEVELS OF SERVICE

7.1.1 Study Intersections

Previously referenced Figure 3-1 illustrates existing study intersection geometrics and traffic control. An intersection LOS analysis was conducted for existing conditions using the methodologies previously discussed. Table 7-A summarizes the results of this analysis and shows that all intersections are currently operating at a satisfactory LOS except the following:

- Reche Canyon Road/Crystal Ridge Lane (a.m. and p.m. peak hours);
- Reche Canyon Road/Shadid Drive (p.m. peak hour); and
- Reche Canyon Road/Old Reche Canyon Road (a.m. and p.m. peak hours).

Detailed intersection levels of service worksheets are included in Appendix D.

7.2 PROJECT OPENING YEAR NO PROJECT LEVELS OF SERVICE

7.2.1 Study Intersections

An intersection LOS analysis was conducted for Project Opening Year no project conditions using the methodologies previously discussed. Table 7-B summarizes the results of this analysis and shows that all intersections are forecast to operate at a satisfactory LOS under Project Opening Year no project conditions with the exception of the following:

- Reche Canyon Road/Crystal Ridge Lane (a.m. and p.m. peak hours);
- Reche Canyon Road/Shadid Drive (a.m. and p.m. peak hours); and
- Reche Canyon Road/Old Reche Canyon Road (a.m. and p.m. peak hours).

Detailed intersection levels of service worksheets are included in Appendix D.

7.3 PROJECT OPENING YEAR WITH PROJECT LEVELS OF SERVICE

7.3.1 Study Intersections

An intersection LOS analysis was conducted for Project Opening Year with project conditions using the methodologies previously discussed. Table 7-B summarizes the results of this analysis and shows that all intersections are forecast to operate at a satisfactory LOS under Project Opening Year with project conditions with the exception of the following:

- Reche Canyon Road/Crystal Ridge Lane (a.m. and p.m. peak hours); and
- Reche Canyon Road/Old Reche Canyon Road (a.m. and p.m. peak hours).

It should be noted that these intersections are also forecasted to operate at a deficient LOS under project opening year no project conditions. Therefore, the project would contribute to those

deficiencies. Additionally, the intersection of Reche Canyon Road/Shadid Drive is forecast to operate at a deficient LOS under Project Opening Year no project scenario. However, implementation of project design features at this intersection eliminates the operational deficiency. As such, no further improvement is required for this intersection under the Project Opening Year Scenario.

Detailed intersection levels of service worksheets are included in Appendix D.

7.4 GENERAL PLAN BUILDOUT YEAR NO PROJECT LEVELS OF SERVICE

7.4.1 Study Intersections

An intersection LOS analysis was conducted under General Plan Buildout year no project conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that all of the study intersections are forecast to operate at a satisfactory LOS under General Plan Buildout year no project conditions with the exception of the following:

- Reche Canyon Road/Crystal Ridge Lane (a.m. and p.m. peak hours);
- Reche Canyon Road/Shadid Drive (a.m. and p.m. peak hours);
- Reche Canyon Road/Old Reche Canyon Road (a.m. and p.m. peak hours); and
- Hunts Lane/Washington Street (a.m. and p.m. peak hours) and
- Existing Reche Canyon Road/Future Realignment (a.m. and p.m. peak hours).

Detailed intersection levels of service worksheets are included in Appendix D.

7.5 GENERAL PLAN BUILDOUT YEAR WITH PROJECT LEVELS OF SERVICE

7.5.1 Study Intersections

An intersection LOS analysis was conducted under General Plan Buildout year no project conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that all of the study intersections are forecast to operate at a satisfactory LOS under General Plan Buildout year no project conditions with the exception of the following:

- Reche Canyon Road/Crystal Ridge Lane (a.m. and p.m. peak hours);
- Reche Canyon Road/Shadid Drive (a.m. and p.m. peak hours);
- Reche Canyon Road/Old Reche Canyon Road (a.m. and p.m. peak hours);
- Hunts Lane/Washington Street (a.m. and p.m. peak hours); and
- Existing Reche Canyon Road/Future Realignment (a.m. and p.m. peak hours).

It should be noted that these intersections are also forecasted to operate at a deficient LOS under General Plan buildout year no project conditions. Therefore, the project would contribute to those deficiencies. Detailed intersection levels of service worksheets are included in Appendix D.

7.5 LIST OF CHAPTER 7.0 TABLES

- Table 7-A: Existing Intersection Levels of Service

- Table 7-B: Project Opening Year Intersection Levels of Service
- Table 7-C: General Plan Buildout Year Intersection Levels of Service

LSA

Table 7-A - Existing Intersection Levels of Service

Intersection	Control	Without Project					
		AM Peak Hour			PM Peak Hour		
		Delay (sec.)	LOS		Delay (sec.)	LOS	
1 . Reche Canyon Road/Crystal Ridge Lane	TWSC	81.6	F	*	>100	F	*
2 . Reche Canyon Road/Shadid Drive	OWSC	31.9	D		39.1	E	*
3 . Reche Canyon Road/Project Dwy 1	OWSC	*Future Intersection*			*Future Intersection*		
4 . Reche Canyon Road/Old Reche Canyon Road	OWSC	46.0	E	*	85.2	F	*
5 . Reche Canyon Road/Shane Drive-Mobile Home Estates	Signal	9.4	A		5.4	A	
6 . Reche Canyon Road/Washington Street	Signal	21.0	C		32.3	C	
7 . Hunts Lane/Washington Street	Signal	14.5	B		22.4	C	
8 . Existing Reche Canyon Road/Future Realignment	-	*Future Intersection*			*Future Intersection*		

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control.

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

LOS = Level of Service

* Exceeds LOS Standard

LSA

Table 7-B - Project Opening Year Intersection Levels of Service

Intersection	Control	Without Project				With Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS
1 . Reche Canyon Road/Crystal Ridge Lane	TWSC	>100	F *	>100	F *	>100	F *	>100	F *
2 . Reche Canyon Road/Shadid Drive[1]	OWSC/TWSC	43.5	E *	59.8	F *	29.6	D	22.0	C
3 . Reche Canyon Road/Project Dwy 1	OWSC	*Future Intersection*		*Future Intersection*		10.1	B	17.2	C
4 . Reche Canyon Road/Old Reche Canyon Road	OWSC	66.2	F *	>100	F *	>100	F *	>100	F *
5 . Reche Canyon Road/Shane Drive-Mobile Home Estates	Signal	11.7	B	8.4	A	12.3	B	9.0	A
6 . Reche Canyon Road/Washington Street	Signal	23.4	C	49.8	D	23.5	C	51.6	D
7 . Hunts Lane/Washington Street	Signal	15.5	B	24.3	C	15.5	B	24.4	C
8 . Existing Reche Canyon Road/Future Realignment	-	*Future Intersection*		*Future Intersection*		*Future Intersection*		*Future Intersection*	

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control.

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

LOS = Level of Service

* Exceeds LOS Standard

[1] The project will add a Two Way Left Turn Lane (TWLTL) median at this intersection with provision of merging lane for the westbound left-turn traffic from Shadid Drive. Because of tis project design feature, the with project LOS at this location is better than the without project LOS.

LSA

Table 7-C - General Plan Buildout (2040) Intersection Levels of Service

Intersection	Control	Without Project				With Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS
1 . Reche Canyon Road/Crystal Ridge Lane	TWSC	>100	F *	>100	F *	>100	F *	>100	F *
2 . Reche Canyon Road/Shadid Drive[1]	OWSC/TWSC	81.9	F *	>100	F *	39.8	E *	35.6	E *
3 . Reche Canyon Road/Project Dwy 1	OWSC	*Future Intersection*		*Future Intersection*		11.3	B	20.1	C
4 . Reche Canyon Road/Old Reche Canyon Road	OWSC	>100	F *	>100	F *	>100	F *	>100	F *
5 . Reche Canyon Road/Shane Drive-Mobile Home Estates	Signal	23.1	C	16.4	B	24.9	C	18.3	B
6 . Reche Canyon Road/Washington Street	Signal	23.5	C	29.5	C	23.6	C	29.9	C
7 . Hunts Lane/Washington Street	Signal	>100	F *	>100	F *	>100	F *	>100	F *
8 . Existing Reche Canyon Road/Future Realignment	Signal	66.2	E *	>100	F *	66.8	E *	>100	F *

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control.

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

LOS = Level of Service

* Exceeds LOS Standard

[1] The project will add a Two Way Left Turn Lane (TWLTL) median at this intersection with provision of merging lane for the westbound left-turn traffic from Shadid Drive. Because of tis project design feature, the with project LOS at this location is better than the without project LOS.

8.0 SIGNAL WARRANT ANALYSIS

As recommended in the scoping letter, a peak hour signal warrant analysis was conducted at the intersection of Reche Canyon Road/Crystal Ridge Lane and Reche Canyon Road/Old Reche Canyon Road. Additionally, since the intersection of Reche Canyon Road/Shadid Drive is currently operating and forecast to operate at a deficient LOS, a signal warrant analysis was also conducted for this intersection to evaluate the potential to install a signal as an operational improvement. Peak hour approach volumes for these study intersections was examined to determine whether signalization may be warranted per the criteria defined in the California supplement of the *Manual on Uniform Traffic Control Devices* (CA-MUTCD). Intersection approach volumes for the study intersections was examined to determine whether signalization is warranted per the criteria defined in the California supplement of the *Manual on Uniform Traffic Control Devices* (CA-MUTCD). Specifically, an analysis with signal warrant 3 was conducted for these unsignalized intersections under Project Opening Year and General Plan Buildout Year scenarios. Following is a brief summary for each intersection of this analysis:

8.1 OPENING YEAR SCENARIO

Figure 8-1 illustrates the peak hour signal warrant for the intersection of Reche Canyon Road/Crystal Ridge Lane under Project Opening year scenario. Figure 8-2 and 8-3 illustrates the peak hour signal warrant for the intersections of Reche Canyon Road/Shadid Drive, and Reche Canyon Road/Old Reche Canyon Road, under the Project Opening year scenario, respectively. As shown in these figures, the intersections of Reche Canyon Road/Crystal Ridge Lane meets the signal warrant criteria under both no project and with project conditions. The intersection of Reche Canyon Road/Old Reche Canyon Road meets the signal warrant criteria only under Project Opening Year with project conditions. The intersection of Reche Canyon Road/Shadid Drive does not meet the signal warrant criteria under Project Opening year no project and with project scenarios.

8.2 GENERAL PLAN BUILDOUT SCENARIO

Figure 8-4 illustrates the peak hour signal warrant for the intersection of Reche Canyon Road/Crystal Ridge Lane under General Plan Buildout scenario. Figure 8-5 and 8-6 illustrates the peak hour signal warrant for the intersections of Reche Canyon Road/Shadid Drive, and Reche Canyon Road/Old Reche Canyon Road, under General Plan Buildout scenario, respectively. As shown in these figures, the intersection of Reche Canyon Road/Crystal Ridge Lane meets the signal warrant criteria under both no project and with project conditions. The intersection of Reche Canyon Road/Old Reche Canyon Road meets the signal warrant criteria under only with project conditions. The intersection of Reche Canyon Road/Shadid Drive does not meet the signal warrant criteria under the no project and with project scenarios.

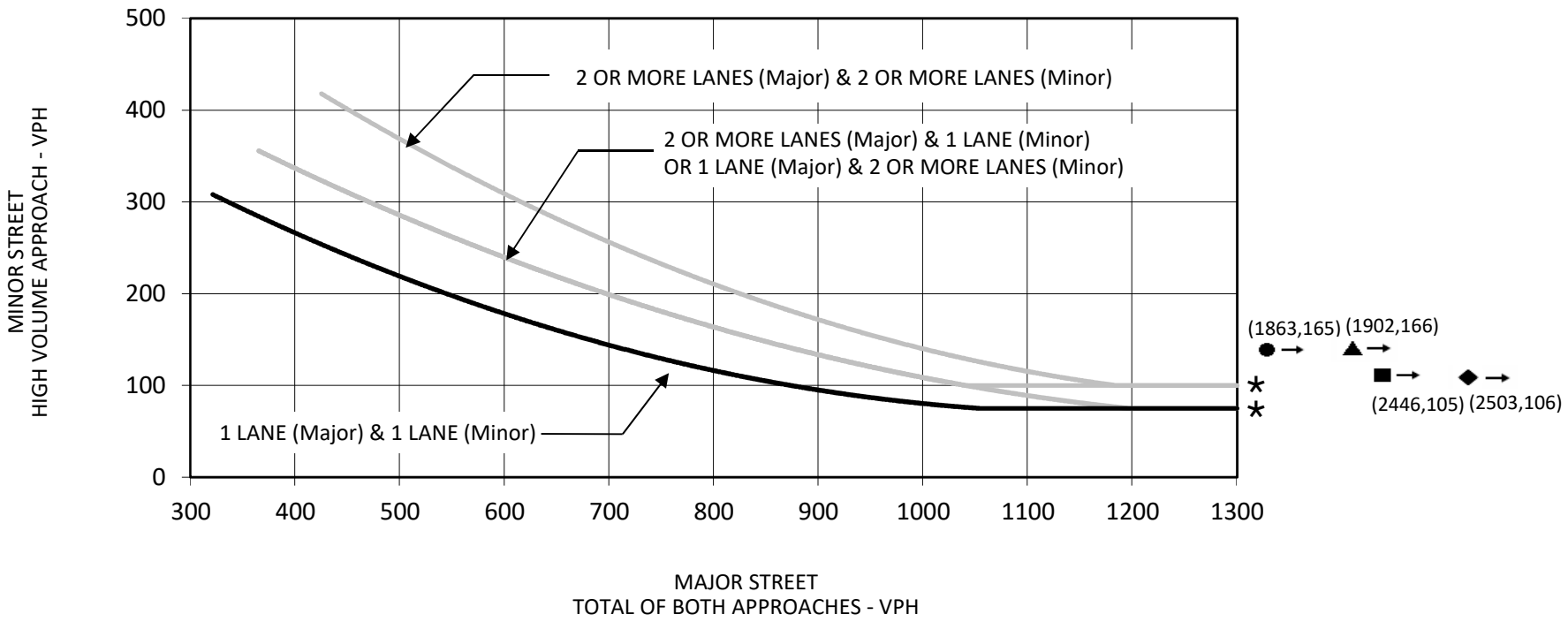
8.3 LIST OF CHAPTER 8.0 FIGURES

- Figure 8-1: Warrant 3: Peak Hour - Reche Canyon Road/Crystal Ridge Lane – Project Opening Year Conditions
- Figure 8-2: Warrant 3: Peak Hour - Reche Canyon Road/Shadid Drive – Project Opening Year Conditions

- Figure 8-3: Warrant 3: Peak Hour - Reche Canyon Road/Old Reche Canyon Road – Project Opening Year Conditions
- Figure 8-4: Warrant 3: Peak Hour - Reche Canyon Road/Crystal Ridge Lane – General Plan Buildout Year Conditions
- Figure 8-5: Warrant 3: Peak Hour - Reche Canyon Road/Shadid Drive – General Plan Buildout Year Conditions
- Figure 8-6: Warrant 3: Peak Hour - Reche Canyon Road/Old Reche Canyon Road – General Plan Buildout Year Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-1

● No Project AM Peak Hour
▲ With Project AM Peak Hour
■ No Project PM Peak Hour
◆ With Project PM Peak Hour

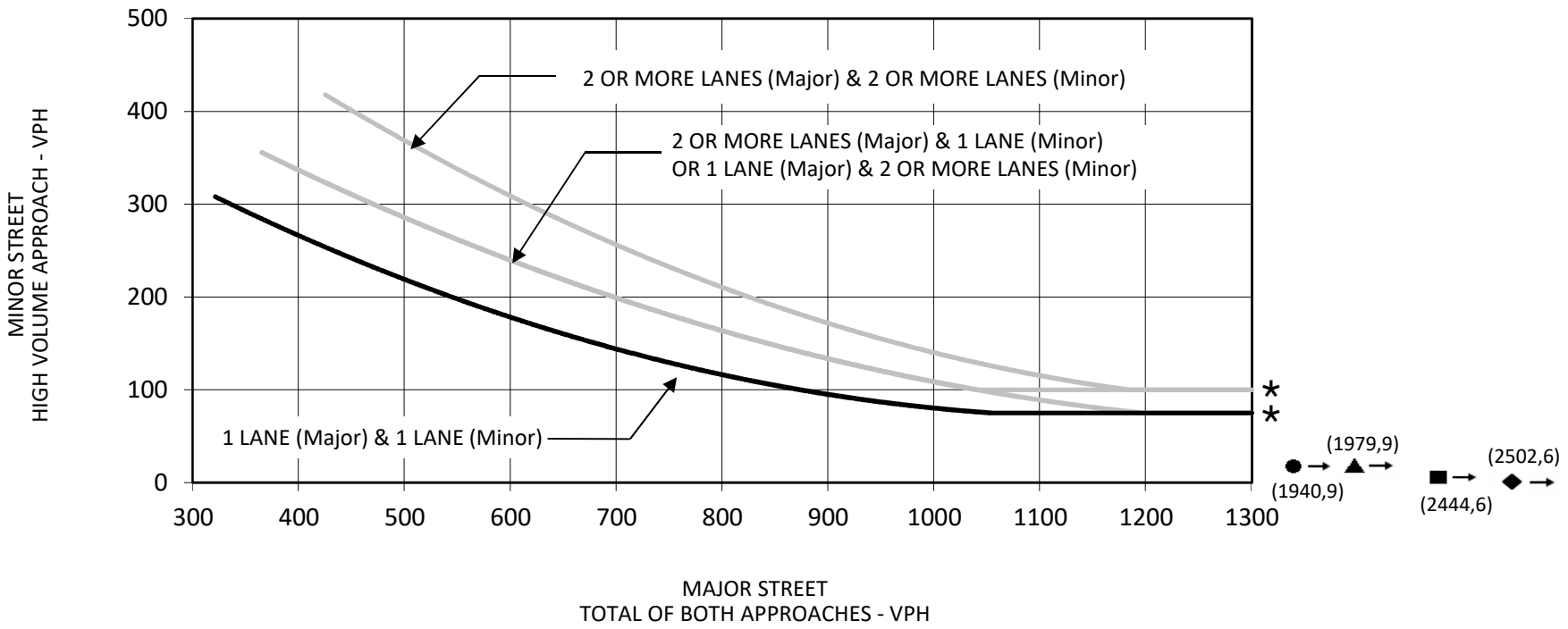
Reche Canyon Retail
Traffic Impact Study

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Warrant 3: Peak Hour - Reche Canyon Road/Crystal Ridge Lane – Project Opening Year Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-2

● No Project AM Peak Hour
▲ With Project AM Peak Hour
■ No Project PM Peak Hour
◆ With Project PM Peak Hour

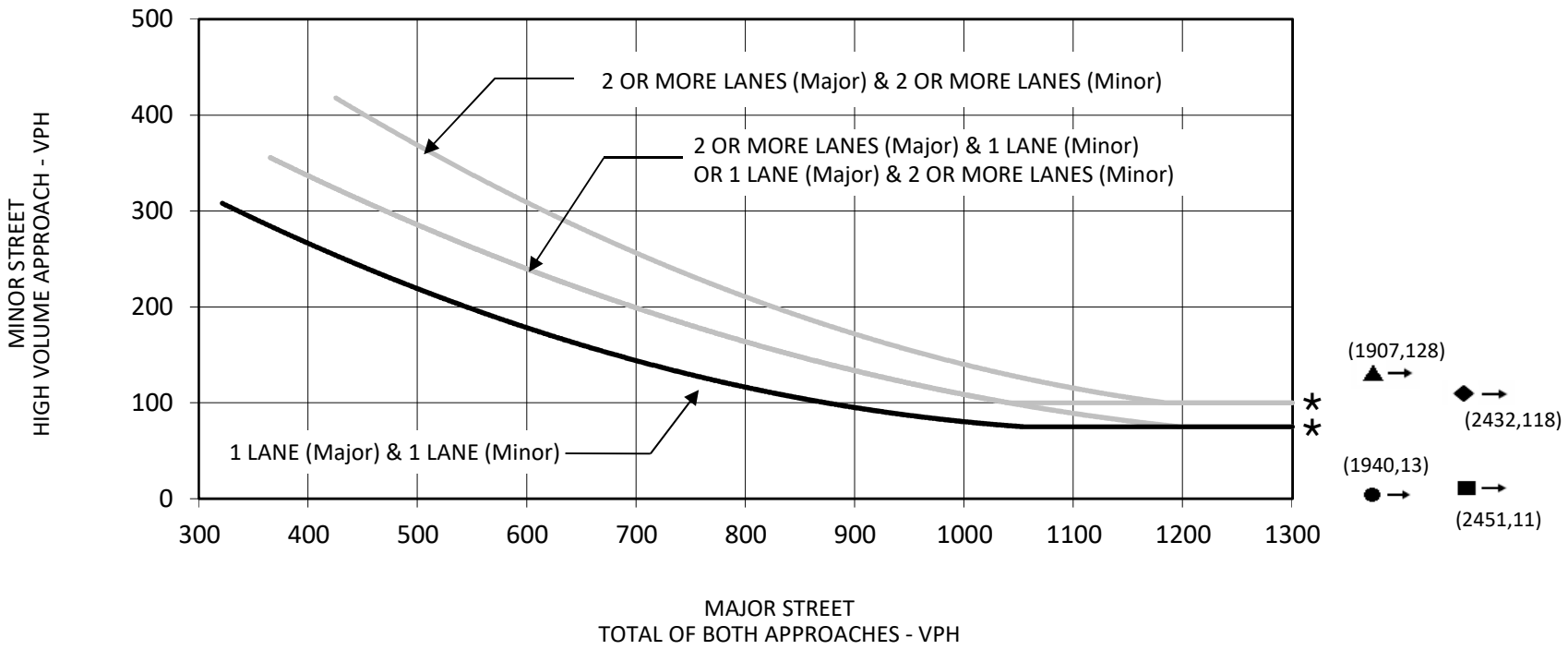
Reche Canyon Retail
Traffic Impact Study

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Warrant 3: Peak Hour - Reche Canyon Road/Shadid Drive – Project Opening Year Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-3

● No Project AM Peak Hour
▲ With Project AM Peak Hour
■ No Project PM Peak Hour
◆ With Project PM Peak Hour

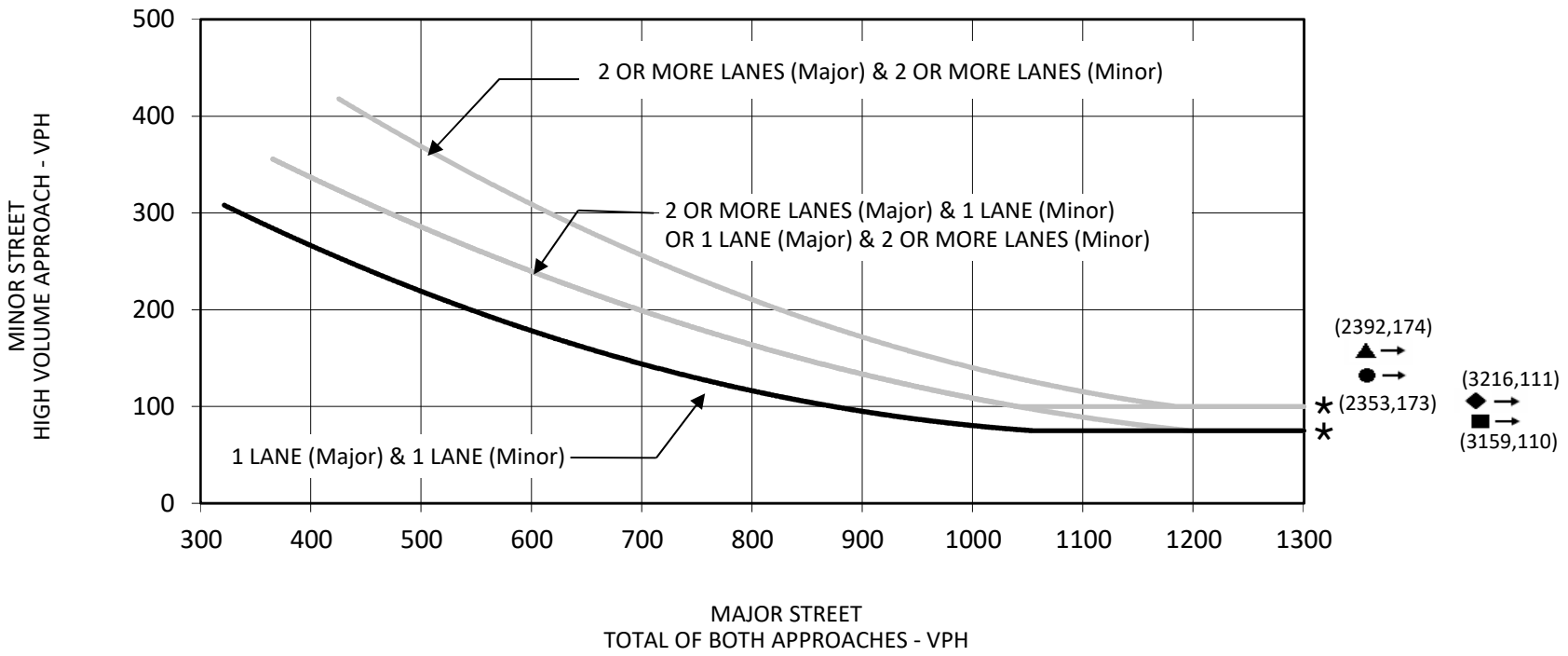
Reche Canyon Retail
Traffic Impact Study

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Warrant 3: Peak Hour - Reche Canyon Road/Old Reche Canyon Road – Project Opening Year Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-4

● No Project AM Peak Hour
▲ With Project AM Peak Hour
■ No Project PM Peak Hour
◆ With Project PM Peak Hour

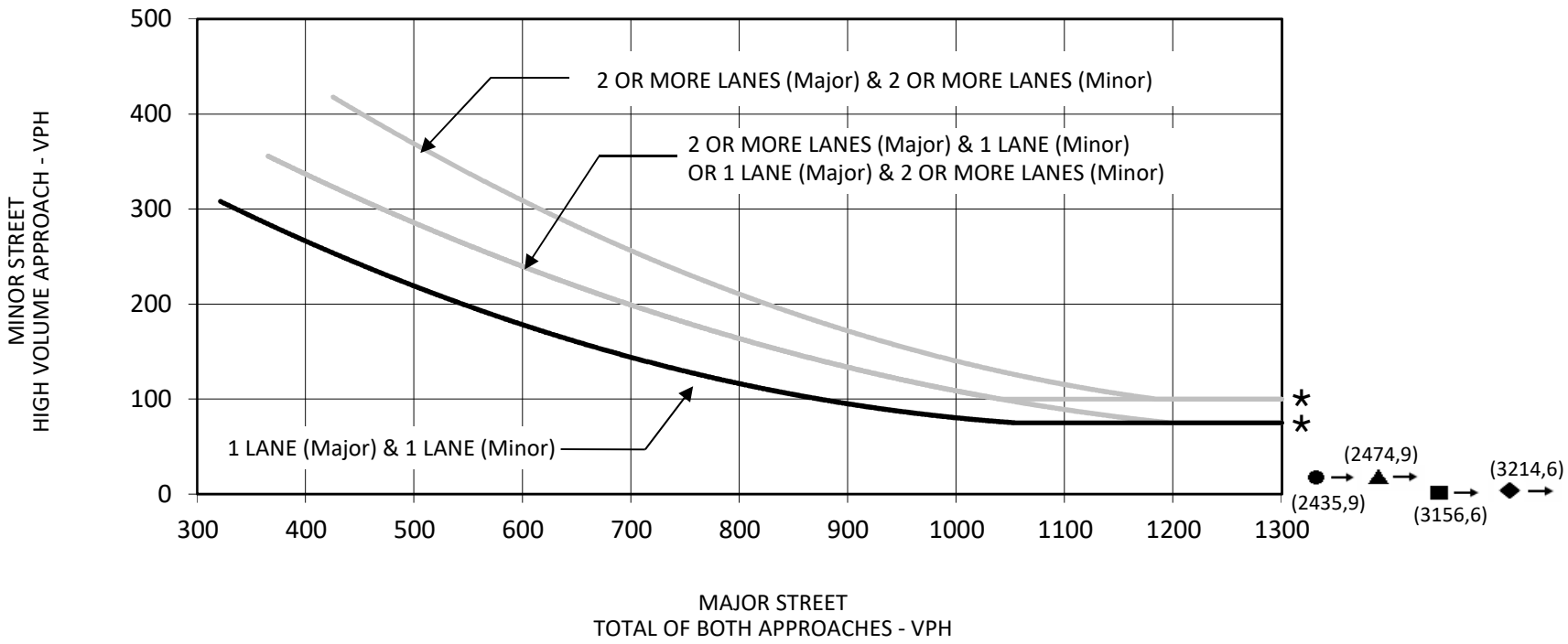
Reche Canyon Retail
Traffic Impact Study

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Warrant 3: Peak Hour - Reche Canyon Road/Crystal Ridge Lane – General Plan Buildout Year Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-5

● No Project AM Peak Hour
▲ With Project AM Peak Hour
■ No Project PM Peak Hour
◆ With Project PM Peak Hour

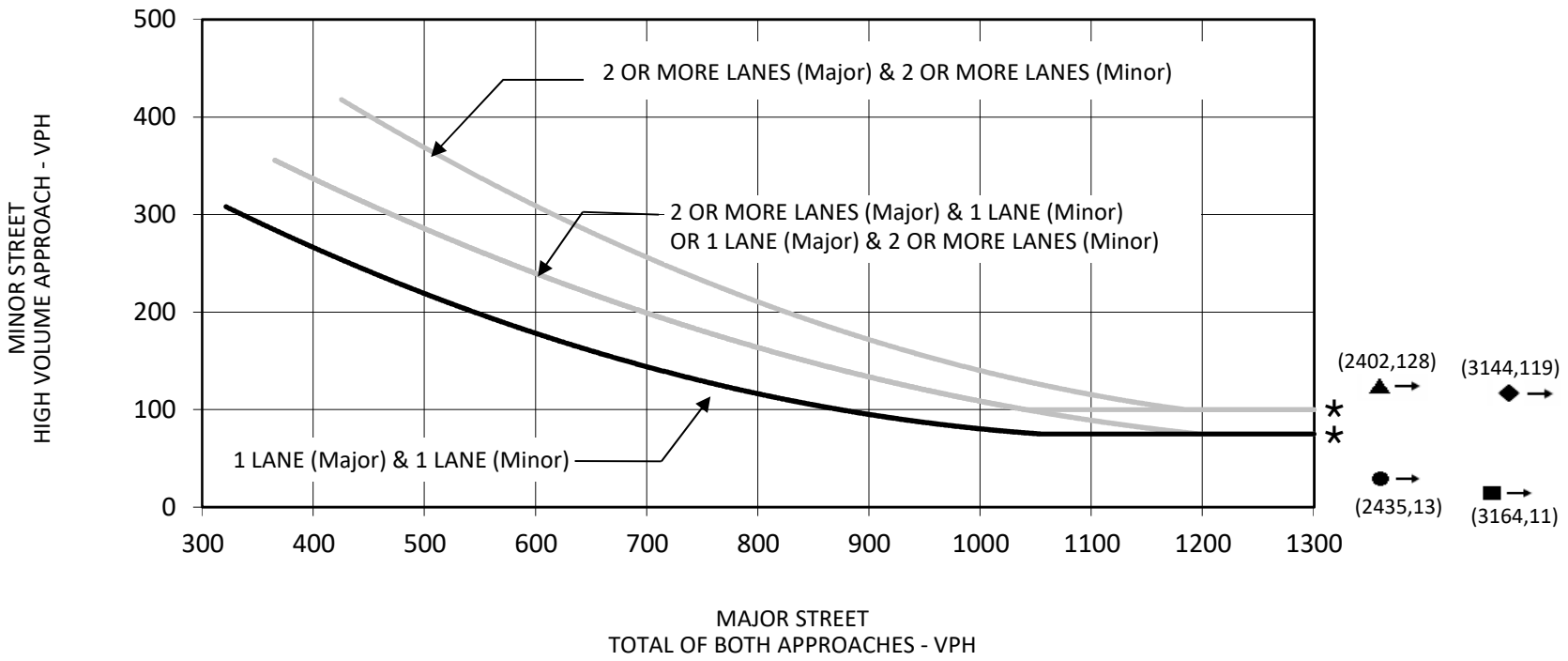
Reche Canyon Retail
Traffic Impact Study

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Warrant 3: Peak Hour - Reche Canyon Road/Shadid Drive – General Plan Buildout Year Conditions

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-6

● No Project AM Peak Hour
▲ With Project AM Peak Hour
■ No Project PM Peak Hour
◆ With Project PM Peak Hour

Reche Canyon Retail
Traffic Impact Study

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Warrant 3: Peak Hour - Reche Canyon Road/Old Reche Canyon Road – General Plan Buildout Year Conditions

9.0 CIRCULATION IMPROVEMENTS AND FUNDING SOURCES

9.1 RECOMMENDED IMPROVEMENTS

Improvements have been recommended at study intersections where an operational deficiency has been identified or where the project contributes to an unsatisfactory LOS. The recommended improvements are as follows:

9.1.1 Project Opening Year with Project with Improvements

- Reche Canyon Road/Crystal Ridge Lane: Install a Signal. This intersection currently operates at deficient LOS and is forecast to worsen. Additionally, this intersection meets signal warrant criteria under project opening year, as summarized in section 8.1. Installing a signal at this intersection along with restriping of the existing TWLTL to a southbound left turn lane with storage length of 100 ft. eliminates the operational deficiency.

- Reche Canyon Road/Old Reche Canyon Road: Install a Signal. This intersection currently operates at deficient LOS and is forecast to worsen. Additionally, this intersection meets signal warrant criteria under project opening year, as summarized in section 8.1. Installing a signal at this intersection eliminates the operational and queuing related deficiency at this intersection.

Table 9-A illustrate the post-improvement intersection levels of service under project opening year. As shown in these tables, all intersections are forecast to operate at a satisfactory LOS with the implementation of the proposed improvement.

9.1.2 General Plan Buildout Year with Project with Improvements

- Reche Canyon Road/Crystal Ridge Lane: Install a Signal. This intersection meets signal warrant criteria under project opening year and General Plan Buildout Year, as summarized in section 8.1, and 8.2. Installing a signal at this intersection along with restriping of the existing TWLTL to a southbound left turn lane with storage length of 100 ft. eliminates the operational deficiency.

- Reche Canyon Road/Shadid Drive: This intersection is forecast to operate at deficient LOS even without the project. Though this intersection is forecast to operate at a deficient LOS under the with project scenario, it should be noted that installing the project design features at this intersection improves the operational deficiency to less than no project conditions. No further improvement is feasible at this intersection, and it is forecast to operate at a deficient LOS with implementation of all the project design features.

- Reche Canyon Road/Old Reche Canyon Road: Install a Signal. This intersection meets signal warrant criteria under project opening year and General Plan Buildout Year, as summarized in Sections 8.1 and 8.2. Installing a signal at this intersection eliminates the operational and queuing related deficiency at this intersection.

- Hunts Lane/Washington Street: As part of the Reche Canyon realignment project, this intersection will be modified with addition of the south leg. Therefore, as part of redesigning

this intersection, the following improvements will help achieve a satisfactory LOS at this location:

  - Modify the north leg by adding a southbound left turn lane and convert the existing southbound through-left and through-right lane into a dedicated southbound through lane and a dedicated southbound right turn lane.

  - Modify the south leg by adding one northbound left turn lane, two northbound through lane and one northbound right-turn lane.

  - Modify the east leg by adding two westbound left turn lanes with 370 ft. storage length by removing the existing median.

  - Add an eight-phase signal with protected left turn phasing and northbound right overlap phasing.

- Existing Reche Canyon Road/Future Realignment: As part of the Reche Canyon realignment project, this intersection will be modified with addition of the east leg. Therefore, as part of redesigning this intersection, the following improvements will help achieve a satisfactory LOS at this location:

  - Modify the south leg of this intersection with one northbound left turn lane, two northbound through lane and one northbound free right turn lane. Install a second southbound through receiving lane by removing the hatched area south of the intersection.

  - Modify the north leg with one southbound left turn lane, one southbound through lane, and one southbound through-right-lane. Install a second northbound receiving lane.

  - Modify the east leg with one westbound left turn lane with 325 ft storage length, one westbound through-left lane and one westbound right turn lane.

  - The proposed signal should have protected phasing for north-south direction and split phasing for east-west directions.

Table 9-B illustrate the post-improvement intersection levels of service under General Plan Buildout Year. Figure 9-1 illustrates the General Plan Buildout year with improvements intersection Geometrics and Traffic Control.

Detailed intersection levels of service worksheets are included in Appendix D.

9.2 FUNDING SOURCES AND MECHANISMS

Where there is a funding mechanism (fee program) for the recommended improvements, payment into the fee program would be considered sufficient project obligation to alleviate project impacts. At study intersections where the project adds to or creates a forecast deficiency and there is no

funding mechanism in place, the project is responsible for its fair-share payment toward the implementation of the improvements.

As previously mentioned, the project will be developing the project frontage including addition of the second southbound through lane along the project frontage, which will taper back to one lane south of Old Reche Canyon Road. The project will also install a TWLTL at the intersection of Reche Canyon Road/Shadid Drive by removing the existing southbound left turn lane and partially removing the raised median south of this intersection. Figure 9-2 illustrates a striping plan along project frontage illustrating the project design features and other recommended improvements.

As summarized above, the project proposes operational improvements at four intersections, including installing or contributing its fair share towards installation of signals at the intersections of Reche Canyon Road/Crystal Ridge Lane, and Reche Canyon Road/Old Reche Canyon Road. No funding mechanism is in place for these two improvements. As summarized in Chapter 7, these intersections operate at a deficient LOS even without the project. Additionally, the intersection of Reche Canyon Road/Crystal Ridge Lane meets the signal warrant criteria for both no project and with project conditions under Project Opening Year and General Plan Buildout year conditions. Since this intersection is forecast to operate at a deficient LOS without the project, the project adds to the forecasted operational deficiencies while the intersection warrants a signal. Therefore, the project will be paying its fair-share for this improvement. Table 9-C illustrates the project fair-share at this intersection.

The intersection of Reche Canyon Road/Old Reche Canyon Road meets the signal warrant criteria for only the Project Opening Year with project conditions and General Plan Buildout year with project conditions. As such, though this intersection is forecast to operate at a deficient LOS under both Project Opening Year no project and General Plan Buildout year no project scenarios, it does not meet the signal warrant criteria under these scenarios. This intersection meets the signal warrant criteria only with addition of the project traffic. Therefore, the project will be entirely responsible for this improvement.

The Reche Canyon Road Realignment with Hunts Lane Project is still in a design and conceptual level. Also, there is secured funding mechanism in place for this project. As such, the modification of the intersection of Hunts Lane/Washington Street, as well as the intersection of existing Reche Canyon Road/Future Realignment will be part of this realignment project.

9.3 LIST OF CHAPTER 9.0 FIGURES AND TABLES

- Figure 9-1: General Plan Buildout Year Conditions With Improvements Intersection Geometrics and Traffic Control
- Figure 9-2: Proposed Striping Plan at the Project Frontage
- Table 9-A: Project Opening Year with Project with Improvements Intersection Levels of Service
- Table 9-B: General Plan Buildout Year with Project with Improvements Intersection Levels of Service
- Table 9-C: Project Fair Share

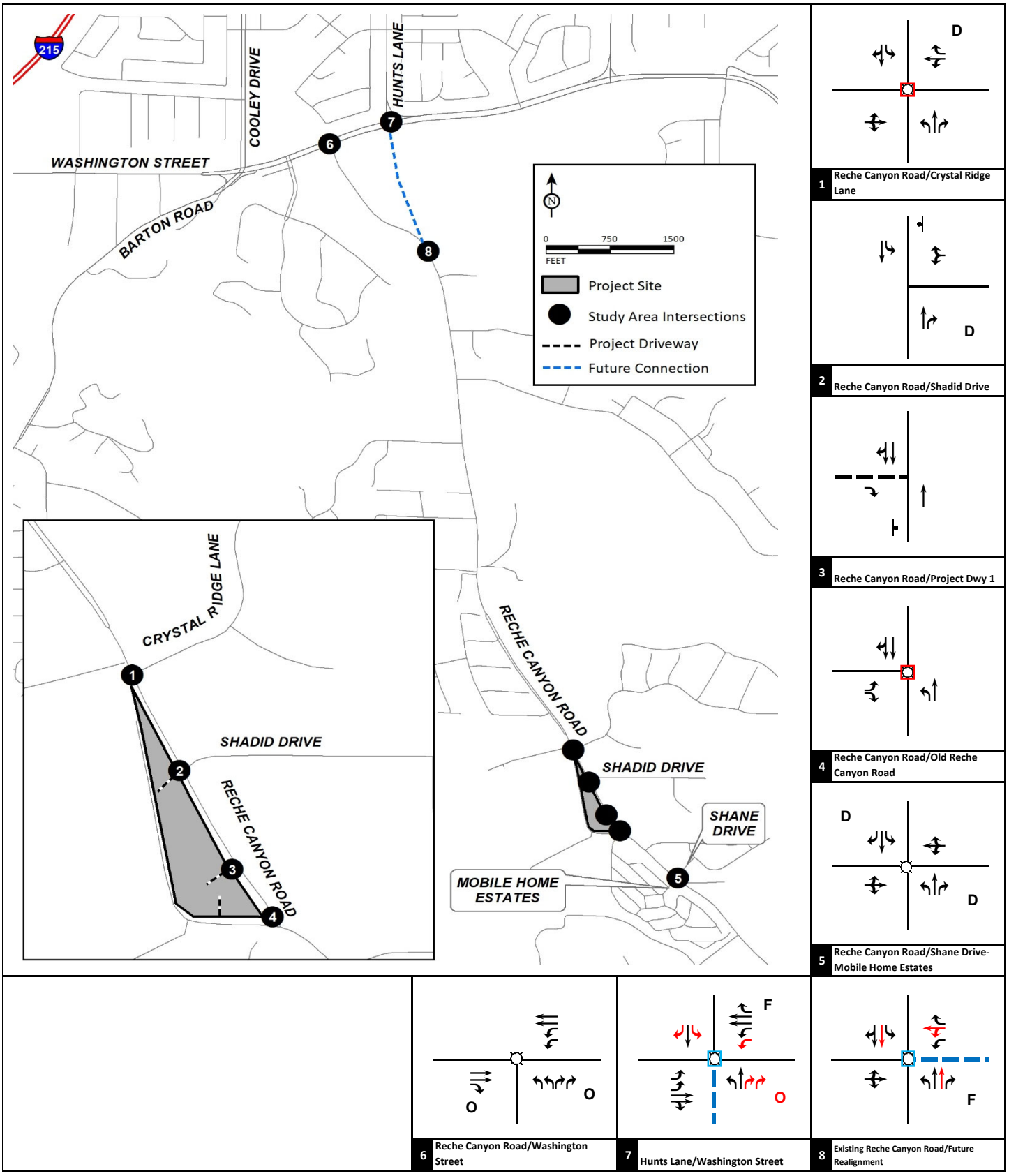


FIGURE 9-1

LSA

Legend

Signal

Stop Sign

Future Connection

Project Driveway

D De-facto Right Turn

F Free Right Turn

O Overlap Phasing

Recommended Improvements

Proposed New Signal

Optimize Signal Timing and Phasing

Reche Canyon Retail Traffic Impact Study

General Plan Buildout with Project with Improvements Study Intersection Geometrics and Traffic Control

LSA

FIGURE 9-2

LEGEND

- Existing Lane
- Proposed Lane
- TS Proposed Signal

N

0 85 170

FEET

SOURCE: Google Earth, 2019.

P:\CLT1802.06 Reche Canyon Retail EIR Reinitiation\2.4 Traffic-VMT\GIS\Reports\Striping Plan\Striping_Plan.dwg (05/17/2022)

Reche Canyon Retail
Traffic Impact Study

Proposed Striping Plan at Project Frontage

LSA

Table 9-A - Project Opening Year with Project with Recommended Improvements Intersection Levels of Service

Intersection	With Project Without Improvements						With Project With Improvements				
		A.M. Peak Hour			P.M. Peak Hour			A.M. Peak Hour		P.M. Peak Hour	
	Control	Delay (sec.)	LOS		Delay (sec.)	LOS	Control	Delay (sec.)	LOS	Delay (sec.)	LOS
1 . Reche Canyon Road/Crystal Ridge Lane	TWSC	>100	F	*	>100	F	*	Signal	23.2	C	13.2	B
4 . Reche Canyon Road/Old Reche Canyon Road	OWSC	>100	F	*	>100	F	*	Signal	11.8	B	7.2	A

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

LOS = Level of Service

* Exceeds LOS Standard

LSA

Table 9-B - General Plan Buildout (2040) with Project Recommended Improvements Intersection Levels of Service

Intersection	With Project Without Improvements						With Project With Improvements					
		A.M. Peak Hour			P.M. Peak Hour			A.M. Peak Hour			P.M. Peak Hour	
	Control	Delay (sec.)	LOS		Delay (sec.)	LOS	Control	Delay (sec.)	LOS		Delay (sec.)	LOS
1 . Reche Canyon Road/Crystal Ridge Lane	TWSC	>100	F	*	>100	F	*	Signal	53.4	D		33.2	C	
2 . Reche Canyon Road/Shadid Drive	TWSC	39.8	E	*	35.6	E	*	TWSC	39.8	E	*	35.6	E	*
4 . Reche Canyon Road/Old Reche Canyon Road	OWSC	>100	F	*	>100	F	*	Signal	25.5	C		10.5	B	
7 . Hunts Lane/Washington Street	Signal	>100	F	*	>100	F	*	Signal	31.8	C		47.4	D	
8 . Existing Reche Canyon Road/Future Realignment	Signal	66.8	E	*	>100	F	*	Signal	23.8	C		41.5	D	

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

LOS = Level of Service

* Exceeds LOS Standard

LSA

Table 9-C - Project Fair Share

Intersection	A.M. Peak Hour					P.M. Peak Hour					
	Total Volume					Total Volume					
	Existing	General Plan Buildout + Project	Total Growth	Project Trips	AM Fair Share %	Existing	General Plan Buildout + Project	Total Growth	Project Trips	PM Fair Share %	Project Fair Share %
1 . Reche Canyon Road/Crystal Ridge Lane	1,753	2,575	822	40	4.87%	2,184	3,333	1,149	58	5.05%	**5.05%**

Notes:

Bold = Project Fair Share Percentage is the highest fair share value of the AM and PM peak hour when both peak hours are affected by the project, or only in the peak hour where the project creates an operational deficiency or adds to the existing operational deficiency.

10.0 VEHICLE MILES TRAVELED ANALYSIS

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled (VMT).

The City adopted the *City of Colton VMT (Vehicle Miles Traveled) Guidelines* (VMT Guidelines) on June 2, 2020, which includes the screening criteria, VMT analysis methodology, VMT impact thresholds, and VMT mitigation measures. Therefore, the City's VMT Guidelines was used in the evaluation of the project's VMT analysis.

The VMT Guidelines provides multiple screening criteria for land use projects within section 2.1-Screening Analysis of the VMT Guidelines. As recommended under the subsection 'Land Use Type' of the project screening criteria, Local-serving retail projects with an area of less than 50,000 SF are assumed to have a negligible impact upon the City's VMT profile. Since the project is a local-serving retail project, having an area of less than 50,000 SF, the project could be estimated to have a negligible impact on the City's VMT and could be screened out. As such, a detailed VMT analysis will not be required for this project.

11.0 QUEUING ANALYSIS

As recommended by the City staff during the scoping agreement process, a queuing analysis was performed at the study intersections for all analysis scenarios.

Table 11-A lists the available turn-pocket storage lengths and summarize the 95th percentile back-of-queue lengths at the study intersections under existing, Project Opening Year, and General Plan Buildout year. The queues for signalized intersections have been reported from Synchro, whereas queues at unsignalized intersections were reported from SimTraffic. As shown in Table 11-A, queues for some of the movements are projected to exceed the existing available turn-pocket storage lengths under existing, Project Opening Year, and General Plan Buildout year.

Following are the recommended storage lengths to accommodate projected queues for the movements where the queues exceed the available existing turn pocket storage lengths:

- Reche Canyon Road/Crystal Ridge Lane: As described in section 9.1, restriping of the existing TWLTL to a southbound left turn lane with storage length of 100 ft. along with installation of a traffic signal would alleviate queuing issues at this intersection.
- Reche Canyon Road/Old Reche Canyon Road: Installing a signal at this intersection as recommended in Chapter 9 of this report also eliminates queuing related deficiencies at this intersection. As such, no further improvement is required at this intersection to accommodate projected queues.
- Reche Canyon Road/Washington Street: Restripe south leg approach to create 500 ft storage length for the dual northbound left turn lanes and maintain existing 150 ft storage length for the dual northbound right turn lanes. It should be noted that while the projected queues at this intersection are estimated to exceed recommended storage lengths under Project Opening Year, the Reche Canyon Road realignment project will help alleviate the forecasted queueing deficiencies for some movements. As such, no further improvement will be required for this intersection other than the above recommended improvement.
- Hunts Lane/Washington Street: Modify the east leg approach of this intersection as part of the Reche Canyon realignment by adding dual westbound left turn lane with a storage length of 370 ft. by removing part of the existing raised median.
- Existing Reche Canyon Road/Future Realignment: Design the east leg of this intersection with a 325 ft storage length for the dedicated westbound left turn lane.

Table 11-B lists the recommended turn-pocket storage lengths and summarize the 95th percentile back-of-queue lengths at the study intersections under Project Opening Year, and General Plan Buildout year after recommended improvements. As shown in Table 11-B, the recommended turn pocket storage lengths will be adequate to accommodate projected queues for the General Plan Buildout year with the ultimate intersection configuration.

Detailed queuing analysis worksheets are included in Appendix E.

11.1 LIST OF CHAPTER 11.0 TABLES

- Table 11-A: Intersection Queuing Analysis
- Table 11-B: Intersection Queuing Analysis with Recommended Turn Pocket Storage Lengths

LSA

Table 11-A - Intersection Queuing Analysis

Intersection	Movement	Storage Length[1] (ft/ln)	Queue Lengths[2]										Queue Lengths With Improvements[2]				
			Existing		Opening Year				General Plan Build Out				Storage Length[1] (ft/ln)	Opening Year		General Plan Build Out	
			No Project		No Project		With Project		No Project		With Project			With Project		With Project	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		AM	PM	AM	PM
1. Reche Canyon Road/Crystal Ridge Lane	**NBL**	55	0	0	0	0	0	0	0	0	0	0	55	0	0	0	0
	NBR	50	0	0	0	10	0	0	**60**	20	0	15	50	5	25	0	5
TWSC/Signal	**SBL**	85	30	35	30	45	65	45	40	70	35	60	85	40	**95**	45	65
2. Reche Canyon Road/Shadid Drive OWSC	**SBL**	55	0	0	0	0	0	25	15	15	15	20	55	0	15	0	20
4. Reche Canyon Road/Old Reche Canyon Road	**NBL**	125	0	20	20	30	45	75	65	30	55	65	125	65	90	50	70
	EBR	50	0	0	0	0	**125**	**105**	0	0	**155**	**105**	50	25	25	25	25
OWSC/Signal																	
5. Reche Canyon Road/Shane Drive-Mobile Home Estates	**NBL**	55	5	5	5	10	5	10	5	15	5	15	55	5	10	5	10
	SBL	50	5	5	5	5	5	5	5	0	5	0	50	5	5	5	0
Signal																	
6. Reche Canyon Road/Washington Street	**NBL**	150	**250**	**220**	**280**	**245**	**285**	**250**	**375**	**415**	**365**	**415**	150	**285**	**250**	**330**	**500**
	NBR	150	**220**	125	**260**	145	**265**	150	5	5	5	5	150	**265**	150	5	10
Signal	**EBR**	280	40	**820**	55	**940**	55	**960**	15	50	15	55	280	55	**960**	15	55
	WBL	225	70	**350**	75	**435**	75	**440**	5	5	5	5	225	75	**440**	10	10
7. Hunts Lane/Washington Street	**NBL**	100	N/A	N/A	N/A	N/A	N/A	N/A	15	15	15	15	100	N/A	N/A	25	15
Signal	**EBL**	175	120	65	125	65	125	65	120	125	120	125	175	125	65	100	100
	WBL	230	N/A	N/A	N/A	N/A	N/A	N/A	**560**	**920**	**565**	**930**	230	N/A	N/A	170	**370**
	WBR	300	0	0	0	0	0	0	0	35	0	35	300	0	0	0	0
8. Existing Reche Canyon Road/Future Realignment	**NBL**	85	*Future Intersection*						0	5	0	5	85	*Future Intersection*		0	5
	NBR	310							0	0	0	0	310			0	0
Signal	**SBL**	70							15	15	15	15	70			15	15
	WBL	85							**430**	**910**	**425**	**915**	85			**275**	**310**

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

N/A = Not Applicable or no movement present under the scenario.

[1] Storage length for all movements obtained from Google Earth measurements.

[2] All queues reported are 95th percentile queues. All queues for signalized intersections have been reported from Synchro. Queues for unsignalized intersections have been reported from Simtraffic.

LSA

Table 11-B - Intersection Queuing Analysis with Recommended Turn Pocket Lengths

Intersection	Movement	Existing Storage Length[1] (ft/ln)	Queue Lengths With Improvements[2]				
			Recommended Storage Length (ft/ln)	Opening Year With Project		General Plan Build Out With Project	
				AM	PM	AM	PM
1. Reche Canyon Road/Crystal Ridge Lane	**NBL**	55	55	0	0	0	0
	NBR	50	75	5	25	0	5
TWSC/Signal	**SBL**	85	100	40	95	45	65
2. Reche Canyon Road/Shadid Drive OWSC	**SBL**	55	55	0	15	0	20
4. Reche Canyon Road/Old Reche Canyon Road	**NBL**	125	125	65	90	50	70
	EBR	50	50	25	25	25	25
OWSC/Signal							
5. Reche Canyon Road/Shane Drive-Mobile Home Estates	**NBL**	55	55	5	10	5	10
	SBL	50	50	5	5	5	0
Signal							
6. Reche Canyon Road/Washington Street	**NBL**	150	500	285	250	370	500
	NBR	150	150	**265**	150	5	10
Signal	**EBR**	280	280	55	**960**	15	55
	WBL	225	225	75	**440**	10	10
7. Hunts Lane/Washington Street	**NBL**	100	100	N/A	N/A	30	15
	EBL	175	175	125	65	110	100
Signal	**WBL**	230	370	N/A	N/A	220	370
	WBR	300	300	0	0	0	0
8. Existing Reche Canyon Road/Future Realignment	**NBL**	85	85	*Future Intersection*		0	5
	NBR	310	310			0	0
Signal	**SBL**	70	70			15	15
	WBL	85	325			285	310

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

N/A = Not Applicable or no movement present under the scenario.

[1] Storage length for all movements obtained from Google Earth measurements.

[2] All queues reported are 95th percentile queues. All queues for signalized intersections have been reported from Synchro. Queues for unsignalized intersections have been reported from Simtraffic.

12.0 SAFETY ANALYSIS

As recommended by the City staff during the scoping agreement process, a safety analysis was performed in the vicinity of the project area. As such, a speed survey analysis was conducted along Reche Canyon Road along the project frontage, and a collision analysis was conducted for intersections and roadway segments within the project frontage where accidents occurred in recent times, were evaluated to estimate the accident rates at those locations.

12.1 SPEED SURVEY ANALYSIS

The posted speed limit on Reche Canyon Road along the project frontage is 45 miles per hour (mph) The operating speeds within this segment were obtained based on speed surveys conducted by Counts Unlimited in October 2021. Table 12-A summarizes the speed survey for the roadway segment of Reche Canyon Road, between Shadid Drive and Old Reche Canyon Road. Detailed speed survey sheets are included in Appendix B. The speed survey results are summarized as follow:

- **Reche Canyon Road, between Shadid Drive and Old Reche Canyon Road:** As summarized in Table 12-A, the average speed is 43 mph along both the northbound and southbound directions. The 85th percentile speed for this segment is 51 mph in the northbound direction and 48 mph in the southbound direction. As such, the average speed of the traffic along this segment does not exceed the posted speed limit, and the 85th percentile speed of the daily traffic does not differ significantly from the posted speed limit. Additionally, as recommended in the Recommended Improvements section of this report, installation of signals are being proposed at the intersection of Reche Canyon Road/Crystal Ridge Lane and Reche Canyon Road/Old Reche Canyon Road. It is anticipated that installing signals at the two ends of the project frontage will significantly reduce the average and 85th percentile speed along the project frontage. As such, although the project will be adding new trips along this segment, no additional traffic calming measures may be required for reducing speed along Reche Canyon Road.

12.2 COLLISION ANALYSIS

12.2.1 Methodology

For the arterial roadway network system in the vicinity of the project, Statewide Integrated Traffic Records System (SWITRS) collision data between January 2018 and December 2020 were obtained from the Transportation Injury Mapping System (TIMS) database. The SWIRTS data summary is included in Appendix F.

Based on the SWIRTS data summary, within the project vicinity during the same time period, one collision occurred at the intersection of Reche Canyon Road/Crystal Ridge Lane, and three collisions occurred at the intersection of Reche Canyon Road/Shane Drive-Mobile Homes Estate. Similarly, another two collisions occurred along the roadway segment of Reche Canyon Road, between Crystal Ridge Lane and Shadid Drive, and one each within the roadway segments of Reche Canyon Road between Shadid Drive and Old Reche Canyon Road, and Reche Canyon Road between Old Reche Canyon Road and Shane Drive.

For the intersections analyzed, rates per million entering vehicle (RMEV) was calculated to develop the accident rate at the aforementioned intersection. Similarly, for the roadway segments, rates per

million vehicle miles (MVM) was calculated to determine the accident rate. Roadway segment lengths were determined from Google Earth aerial imagery. Additionally, only the intersections and roadway segments where accidents occurred were evaluated. These rates were compared against corresponding countywide and statewide rates to identify their performance. The statewide and countywide rates were obtained or derived from the data published in Caltrans *2018 Crash Data on California State Highways (Caltrans Crash Data).*

12.2.2 Intersections Collision Analysis Summary

Table 12-B summarizes the accident ratio for the intersections of Reche Canyon Road/Crystal Ridge Lane and Reche Canyon Road/Shane Drive-Mobile Homes Estate. As shown in Table 12-B, the accident rate at the intersections of Reche Canyon Road/Crystal Ridge Lane is 0.046 per million entering vehicle, which is substantially lower than the statewide average for such intersections. The accident rate for such intersections (Four-legged intersections with Stop and Yield signs under suburban setting) is 0.24 as per the Caltrans Crash Data. Relevant pages from the Caltrans Crash Data summary is included in Appendix F. As such, the intersection currently operates within the safety limits.

It should also be noted that a signal is recommended at this intersection. Installing a signal at this intersection is expected to further lower the accident rate at this intersection. This is because all the movements will have dedicated phases for safe maneuver. As such no further safety related improvements would be required at this intersection.

As shown in Table 12-B, the accident rate at the intersections of Reche Canyon Road/ Shane Drive-Mobile Homes Estate is 0.145 per million entering vehicle, which is substantially lower than the statewide average for such intersections (Four-legged signalized intersections under suburban setting). The average accident rate for such intersections is 0.42 as per the Caltrans Crash Data. Relevant pages from the Caltrans Crash Data summary is included in Appendix F. As such, the intersection currently operates within the safety limits and no safety related improvements would be required at this intersection.

12.2.3 Roadway Segment Collision Analysis Summary

Table 12-C summarizes the accident rate for the roadway segments analyzed. As shown in Table 14-B, the accident rate at the segment of Reche Canyon Road, between Crystal Ridge Lane and Shadid Drive is 1.018 per million vehicle miles traveled, which is slightly lower than statewide average for non-freeway facilities. The average accident rate for roadway segments (non-freeway facilities) is 1.02 for the state based on the Caltrans Crash Data. Additionally, as per the Caltrans Crash Data, the statewide accident rate for two-lane undivided roadways with a speed limit of 45-55 mph and in a suburban setting is 1.32 which is substantially higher than the accident rate at this segment. Relevant pages from the Caltrans Crash Data summary is included in Appendix F. Therefore, this segment currently operates within acceptable safety limits.

Similarly, for the roadway segments of Reche Canyon Road between Shadid Drive and Old Reche Canyon Road, and Reche Canyon Road between Old Reche Canyon Road and Shane Drive, the accident rate is 0.312 and 0.255, respectively. Accident rates at both these segments are substantially lower than the statewide average for non-freeway facility, or the statewide average for

2-lane undivided roadways. Therefore, this segment currently operates within acceptable safety limits.

As previously mentioned, installing signal have been proposed at the intersections of Reche Canyon Road/Crystal Ridge Lane, and Reche Canyon Road/Old Reche Canyon Road. It is expected that installing signals at these intersections will help reduce the traffic speed, as well as collisions in the project vicinity since the movements will get dedicated phases for safe maneuvers in the project frontage. As such, no further safety improvements are necessary at these segments.

12.3 CONCLUSION

Based on the results of these analyses, no improvement is necessary along the project frontage with the exception of installation of sidewalk along the project frontage on Reche Canyon Road. Though the project will be adding new trips within the study area, it is not estimated that the project traffic will be significantly changing the traffic flow pattern within the neighborhood. It should also be noted that as summarized in Chapter 9, installing signals have been recommended at two intersections along the project frontage. As such, it is expected that the recommended improvements and project design features will help enhance safety along the project frontage and the project traffic would not potentially increase traffic collision rate within the study area.

12.4 LIST OF CHAPTER 12.0 TABLES

- Table 12-A: Speed Survey Analysis
- Table 12-B: Intersection Accident Rate per RMEV
- Table 12-C: Roadway Segment Accident Rate per MVM

LSA

Table 12-A - Speed Survey Analysis

Roadway	Segment	Direction	Posted Speed Limit (mph)	Average Speed (mph)	85th Percentile Speed (mph)
Reche Canyon Road	between Shadid Drive and Old Reche Canyon Road	Northbound	45	43	51
		Southbound	45	43	48

Notes:
Source: Speed surveys conducted by Counts Unlimited; October, 2021.

LSA

Table 12-B - Intersection Accident Rate per RMEV

	Intersection	# of Crashes	Existing Daily Approach Volumes	Years of Data	Accident Ratio
		C	V	N	R
1 .	Reche Canyon Road/Crystal Ridge Lane	1	19,685	3	0.046
5 .	Reche Canyon Road/Shane Drive	3	18,940	3	0.145

Notes:

RMEV= Rate per Million Entering Vehicle

LSA

Table 12-C - Roadway Segment Accident Rate per MVM

Roadway	#	Segment	# of Crashes C	Existing ADT V	Years of Data N	Length of Segment (ft)[1] L	Accident Ratio R
Reche Canyon Road	**1**	between Crystal Ridge Lane and Shadid Drive	2	21,683	3	437	1.018
	2	between Shadid Drive and Old Reche Canyon Road	1	22,095	3	700	0.312
	3	south of Old Reche Canyon Road	1	21,386	3	885	0.255

Notes:

MVM = Million Vehicle Miles Traveled.

13.0 SUMMARY AND CONCLUSION

The project will include 9,484 square feet (sf) retail space, and a gas station with convenience store and car wash. The project will be located along the Reche Canyon Road, between Crystal Ridge Lane and Old Reche Canyon Road within the City. Access to the project will be provided via one right-in right-out (RIRO) driveway on Reche Canyon Road and one full access driveway on Old Reche Canyon Road. The project will also have an emergency exit at the intersection of Reche Canyon Road/Shadid Drive.

13.1 EXISTING CONDITIONS SUMMARY

All but three study intersections operate at a satisfactory LOS under existing conditions.

13.2 PROJECT OPENING YEAR (2023) CONDITIONS SUMMARY

All but two study intersections are forecast to operate at a satisfactory LOS under Project Opening year without and with project conditions.

13.3 GENERAL PLAN BUILDOUT YEAR CONDITIONS SUMMARY

All but five study intersections are forecast to operate at a satisfactory LOS under General Plan Buildout Year without and with project conditions.

13.4 SIGNAL WARRANT ANALYSIS SUMMARY

The intersection of Reche Canyon Road/Crystal Ridge Lane meets the peak hour signal warrant for both Project Opening Year and General Plan Buildout Year conditions under both no project and with project scenarios. The intersection of Reche Canyon Road/Old Reche Canyon Road meets the peak hour signal warrant for both Project Opening Year and General Plan Buildout Year conditions under only the with project scenarios. Therefore, a signal installation could be recommended at these two intersections as operational improvements. The intersection of Reche Canyon Road/Shadid Drive does not meet a signal warrant under either of the scenarios.

13.5 CIRCULATION IMPROVEMENTS SUMMARY

Based on the improvements discussed in Section 9.1 “Recommended Improvements” of this report, the recommended improvements include installing signals at the intersections of Reche Canyon Road/Crystal Ridge Lane and Reche Canyon Road/Old Reche Canyon Road. Since the intersection of Reche Canyon Road/Crystal Ridge Lane meets the peak hour signal warrant under both no project and with project scenarios, the project will be paying its fair share for this improvement. The intersection of Reche Canyon Road/Old Reche Canyon Road meets the peak hour signal warrant for only under the with project scenarios. Therefore, the project will be responsible for installing a signal at this intersection.

Additionally, alternative intersection geometrics have been recommended at the intersection of Hunts Lane/Washington Street and the Existing Reche Canyon Road/Future Realignment. These improvements will be part of the Hunts Lane realignment project.

13.6 CEQA VMT ANALYSIS SUMMARY

The project could be screened out as a local-serving retail of area less than 50,000 SF and therefore, a detailed VMT analysis will not be required.

13.7 QUEUING ANALYSIS SUMMARY

The queues for some of the movements at the study intersections are projected to exceed the available turn-pocket storage lengths under all scenarios. With proposed improvements regarding turn pocket storage lengths at these locations the queuing issue would be alleviated.

13.8 SAFETY ANALYSIS SUMMARY

The average traffic speed along the project frontage is below the posted speed limit. The 85th percentile seed is slightly higher than the posted speed limit. Accident ratio within the study area is lower than the corresponding statewide average and no improvement is necessary to enhance safety within the project vicinity. Additionally, it is estimated that due to the project design feature and recommended improvements, the project will enhance safety at the project frontage.

APPENDIX A:

SCOPING AGREEMENT

BERKELEY
CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO

April 7, 2022

Mr. Fred Minagar
City Traffic Engineer, City of Colton
160 S 10th Street
Colton, CA 92324

Subject: Scope of Work for the Reche Canyon Retail Project Traffic Impact Study (LSA Project No. CLT1802.06; City Case No. DAP-001-453)

Dear Mr. Minagar:

LSA has prepared this scoping agreement for the Reche Canyon Retail Project Traffic Impact Study (TIS) within the City of Colton (City). The project will include 9,484 square feet (sf) retail space, and a gas station with convenience store and car wash. The project will be located along the Reche Canyon Road, between Crystal Ridge Lane and Old Reche Canyon Road within the City. Access to the project will be provided via one full access driveway at the intersection of Reche Canyon Road/Shadid Drive, one right-in right-out (RIRO) driveway on Reche Canyon Road and one full access driveway on Old Reche Canyon Road. Attached is the "Scoping Agreement for Traffic Impact Study" form of the City. Figure 1 (all figures attached) illustrates the regional and project location. Figure 2 illustrates the conceptual site plan.

LSA anticipates that the following scope of work will be required to conduct traffic impact analysis for the proposed project. The City adopted its *Vehicle Miles Traveled Guidelines* on June 16, 2020, which includes the project screening criteria, VMT analysis methodologies, and VMT thresholds for projects under the City's jurisdiction. The CEQA VMT analysis scope has been prepared based on the City's VMT Guidelines. The City does not have its own Levels of Service (LOS) Analysis guidelines. Therefore, it follows the San Bernardino County Transportation Authority (SBCTA) Congestion Management Program (CMP) TIA Guidelines (dated June 2016) for LOS analysis purposes.

SCOPE OF WORK: CEQA VMT ANALYSIS

Senate Bill 743 (SB 743) required changes be made to CEQA regulations introducing Vehicle Miles Traveled (VMT) as the new metric for determining project traffic impacts. Based on the project description, it is our understanding that the project could be screened out from detailed VMT analysis as a local-serving retail. Therefore, a qualitative VMT analysis will be prepared based on the City's VMT Guidelines to establish that the project is eligible to be screened out and a detailed VMT analysis will not be required.

SCOPE OF WORK: LEVELS OF SERVICE ANALYSIS

Study Intersection Analysis

All study intersections will be analyzed during the a.m. and p.m. peak hours. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. while the

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

p.m. peak hour is defined as the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m. Intersection levels of service (LOS) will be calculated using the *Highway Capacity Manual 6* (HCM 6) analysis methodologies and using Synchro 10 software. Based on anticipated preliminary trip generation and trip distribution, and discussion with the City, the TIS will examine the following intersections:

1. Reche Canyon Road/Crystal Ridge Lane;
2. Reche Canyon Road/Shadid Drive-Project Driveway 1;
3. Reche Canyon Road/Project Driveway 2;
4. Reche Canyon Road/Old Reche Canyon Road;
5. Reche Canyon Road/Shane Drive-Mobile Home Estates;
6. Reche Canyon Road/Washington Street;
7. Hunts Lane/Washington Street; and
8. Existing Reche Canyon Road/Future Realignment (Future Intersection).

Figure 3 illustrates the study area intersections.

It should also be noted that Reche Canyon Road is proposed to be realigned with Hunts Lane in the future, with the estimated completion date as 2025. As such, project trips accessing Hunts Lane or moving eastwards towards Loma Linda will be using this new connection, once the realignment is completed. Since the project opening year is 2023, two separate project trip distributions are provided for this analysis to demonstrate project trip distributions under project opening year and build-out conditions. Detailed description of project trip distribution and assignment is summarized in Trip Generation Section of this letter.

Trip Generation

The trip generation for the proposed project was developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) for Land Use 820 – "Shopping Center", and Land Use 945 – "Gasoline/Service Station with Convenience Market". Table A summarizes the daily, a.m., and p.m. peak hour project trip generation. As shown in Table A, the proposed project is estimated to generate 2,822 daily trips, with 158 trips occurring during the a.m. peak hour and 204 trips occurring during the p.m. peak hour.

For retail and gas stations, a certain percentage of external trips are pass-by trips. A pass-by trip is a trip where an intermediate stop is made on the way from the origin to the primary destination of the trip without making a route diversion. Pass-by rates were obtained from the ITE *Trip Generation Handbook*, 3rd Edition for these land uses. As shown in Table A, after accounting for pass-by trips, the proposed project is estimated to generate 1,246 daily trips, with 66 trips occurring during the a.m. peak hour and 98 trips occurring during the p.m. peak hour.

The distribution of project trips is based on the regional roadway network and the location of residential, employment and commercial centers in relation to the proposed project. Figure 4

illustrates the project trip distribution under opening year conditions. The project trip generation was applied to the trip distribution patterns to develop the project trip assignment. The project trip assignment for opening year is illustrated in Figure 5. As described earlier, Reche Canyon Road will be realigned with Hunts Lane prior to General Plan Buildout conditions. Therefore, the project trip distribution and assignment were adjusted to account for this realignment. Corresponding distribution and assignment for General plan Buildout Year is illustrated in Figures 6 and 7, respectively.

Analysis Scenarios

The TIS LOS analysis will satisfy the requirements established in the SBCTA TIA Guidelines as well as the requirements for the disclosure of potential impacts and mitigation measures pursuant to the California Environmental Quality Act (CEQA). The project opening year is anticipated to be 2023. As such, the LOS Analysis will examine traffic conditions and traffic operational characteristics under the following scenarios:

- Existing conditions;
- Project Opening Year no project conditions;
- Project Opening Year plus project conditions;
- General Plan Buildout no project conditions; and
- General Plan Buildout plus project conditions.

Volume Development and Analysis Methodology

Traffic volumes for existing year traffic conditions are usually based on existing a.m. and p.m. peak hour traffic counts collected for the intersections and daily traffic conditions for roadway segments identified for the analysis. However, due to the statewide school and office closures as a result of COVID-19, LSA proposes to use recent historical counts available from traffic counters, and from the previous traffic study prepared for this project. The existing year volumes will be obtained by applying an annual growth rate of 1 percent to the historical counts.

Traffic volumes for the opening year no project traffic conditions will be developed by applying a 1% per annum growth rate to existing traffic volumes and by adding trips from other projects in the vicinity. LSA has contacted the City and other neighborhood jurisdictions to obtain information of approved and pending projects near the project study area. Attached Table B summarizes the recently approved and pending projects that are estimated to influence the study area.

Traffic volumes for the General Plan Buildout without project conditions will be developed using San Bernardino County Travel Analysis Model (SBTAM). LSA has this model in-house and will run it to obtain the required model plots. The methodology to develop year General Plan Buildout without project traffic volumes at study intersections will be consistent with the SBCTA procedures for post-processing of modeled traffic volumes. It should also be noted that Reche Canyon Road is proposed to be aligned with Hunts Lane in the future, with the estimated completion date as 2025. Therefore, General Plan Buildout year volume will be adjusted to account for this re-alignment.

Project opening year and General Plan Buildout plus project volumes will be developed by adding project traffic to the corresponding no project scenario traffic volumes.

As previously stated, the TIS will analyze study intersections during the a.m. and p.m. peak hours. Intersection LOS will be calculated using HCM 6 analysis methodologies by using the Synchro 11 software.

Analysis of Traffic Operations and Recommended Circulation Improvements

Intersection LOS without the project will be compared to the intersection LOS with the project for each of the analysis scenarios to determine potential operational deficiencies based on the LOS standards as applicable for the City. Necessary improvement measures will be recommended to improve intersection and roadway segment performance to conform to the City's General Plan LOS standards. Improvements may include intersection turn lanes, signalization, and restriping. The LOS with recommended improvements will be calculated and summarized, along with a comparison of the LOS without improvements.

Signal Warrant Analysis

A signal warrant analysis would be conducted at the intersection of Reche Canyon Road/Crystal Ridge Lane and Reche Canyon Road/Old Reche Canyon Road. Peak hour approach volumes for the study intersections will be examined to determine whether signalization may be warranted per the criteria defined in the California supplement of the Manual on Uniform Traffic Control Devices (CA-MUTCD).

Fee Plans/Fair-Share Contributions

A fair share percentage will be calculated for intersection improvements recommended in the TIA that are not included in any of the adopted fee plans for the City or the San Bernardino City Transportation Authority (SBCTA) Nexus Study Fee program. The percentage of fair share for the project will be calculated at each location using the total trips generated by the project divided by the total "new" traffic, which is the net increase in traffic volumes from existing to cumulative conditions.

Queuing Analysis

A queuing analysis will be performed to determine the 95th percentile queues at the study intersections to identify the adequacy of turn pocket lengths.

Speed Survey Analysis

LSA will conduct a speed survey analysis along Reche Canyon Road between Shadid Drive and Old Reche Canyon Road.

Collision Analysis

A collision analysis will be performed within the study area obtaining the recent accident history along Reche Canyon Road near the project.

Should you have any questions, please do not hesitate to contact me at (951) 781-9310 or email me at Ambarish.Mukherjee@lsa.net.

Sincerely,

LSA ASSOCIATES, INC.

Ambarish Mukherjee, AICP, PE
Principal

Attachments:

Scoping Agreement for Traffic Impact Study
Table A: Project Trip Generation
Table B: Cumulative Projects
Figure 1: Regional and Project Location
Figure 2: Conceptual Site Plan
Figure 3: Study Area Intersections
Figure 4: Project Trip Distribution – Opening Year
Figure 5: Project Trip Assignment– Opening Year
Figure 6: Project Trip Distribution – General Plan Buildout Year
Figure 7: Project Trip Assignment– General Plan Buildout Year

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This form acknowledges the City of Colton Engineering Division requirements for traffic impact analysis of the following project. The analysis must comply with SBCTA CMP TIA Guidelines, as applicable.

Case No. DAP-001-453

Related Cases:

APN(S): 0284-211-70, 71, 72 and 1178-371-27

Project Name: Reche Canyon Plaza

Project Address: West of Reche Canyon Road between Crystal Ridge Lane and Old Reche Canyon Road

Project Description: 9,484 square feet retail, and gas station with convenience store and car wash

Project Size: 2.6 Acres

	Traffic Consultant	Developer
Name:	Ambarish Mukherjee	Fahim Tanios
Address:	1500 Iowa Avenue, Suite 200 Riverside, CA, 92507	1518 Cascante Court Redlands,CA, 92373
Telephone:	951-781-9310	
e-mail:	ambarish.mukherjee@lsa.net	

A. Technical Methodology

Technical methodology to comply with SBCTA CMP guidelines. However, mitigation on nonstate facilities to maintain Vehicle Miles Traveled (VMT) threshold.

Traffic count data must be current or within previous 12 months. Provide traffic count dates. Due to current conditions, LSA proposes to use historic counts wherever available, Please see attached for detailed volume development proposal

B. Trip Generation

Source: ITE Trip Generation Manual, 10th Edition

Current GP Land Use: RCSP- RES Estate Proposed Land Use: Commercial/Retail

Current Zoning: RES Estate Density Proposed Zoning: General Commercial

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips:	0	0	0	82	76	158
PM Trips:	0	0	0	103	101	204

Internal Trip Allowance: No

Pass-By Trip Allowance: Retail A.M. : 0%; P.M. : 34%

Gas Station A.M. : 62%; P.M. : 56%

Traffic impact study to quantify change in project trip generation in comparison with pre-existing uses on project site when fully occupied.

C. Trip Geographic Distribution: To be submitted for approval by city staff. Cite source.Attach exhibit of detailed assignment. Please see attached Figure 4

D. Scenario Analysis

Project year of completion: 2023

Phase Year(s) N/A

Annual Ambient Growth rate: 1.0%

City staff to provide cumulative background projects list. Please see attached Table B

Scenarios:

Existing Conditions
Year of project completion: 1) No Project; 2) With Project.
Twenty-year forecast: 1) No Project; 2) With Project.

E. Preliminary Study Intersections: (See SBCTA CMP guidelines or comments from other agencies.)

1. Reche Canyon Road/Crystal Ridge Lane
2. Reche Canyon Road/Shadid Drive-Project Dwy 1
3. Reche Canyon Road/Project Dwy 2
4. Reche Canyon Road/ Old Reche Canyon Road
5. Reche Canyon Road/Shane Drive-Mobile Home Estates
6. Reche Canyon Road/Washington Street
7. Hunts Lane/Washington Street
8. Existing Reche Canyon Road/Future Realignment
9.
10.

F. Preliminary Study Roadway Segments: (See SBCTA CMP guidelines or comments from other agencies.)

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

G. Freeways - See SBCTA CMP guidelines. N/A

H. Other Jurisdictional Impacts

Is this project within a one-mile radius of City or County boundaries? ☒ Yes ☐ No

If so, name of City Jurisdiction: Grand Terrace, Riverside County, Loma Linda, Moreno Valley, San Bernardino County

I. Site Plan (please attach reduced copy) Please see attached Figure 2

J. Specific issues to be addressed in the Study

- Signal Warrant Analysis for Reche Canyon Road/Crystal Ridge Lane and Reche Canyon Road/Old Reche Canyon Road
- Speed Survey Analysis of Reche Canyon Road between Shadid Drive and Old Reche Canyon Road
- CEQA VMT Screening Analysis
- Collision Analysis for Reche Canyon Road in the Project Vicinity

Recommended by:		Approved Scoping Agreement:	
Ambarish Mukherjee	04/07/2022		
Consultant's Representative	Date	City of Colton Engineering Division	Date

LSA

Table A - Project Trip Generation

Land Use	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Shopping Center	9.48 TSF							
Trips/Unit[1]		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Trip Generation		6	3	9	17	19	36	358
Pass-by Trips[2]		0	0	0	(6)	(6)	(12)	(122)
Net New Trips		6	3	9	11	13	24	236
Gas Station with Convenience Store/Car Wash	12 VFP							
Trips/Unit[3]		6.36	6.11	12.47	7.13	6.86	13.99	205.36
Trip Generation		76	73	149	86	82	168	2,464
Pass-by Trips[4]		(47)	(45)	(92)	(48)	(46)	(94)	(1,454)
Net New Trips		29	28	57	38	36	74	1,010
	Gross New Trips	**82**	**76**	**158**	**103**	**101**	**204**	**2,822**
	Pass-By Trips	(47)	(45)	(92)	(54)	(52)	(106)	(1,576)
	Net New Trips	**35**	**31**	**66**	**49**	**49**	**98**	**1,246**

Notes:

TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

[1] Rates are from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition), Land Use 820 - "Shopping Center", Setting/Location - "General Urban/Suburban."

[2] Pass-by rates are from the ITE *Trip Generation Handbook* , 3rd Edition for Land Use 820 - "Shopping Center." A pass-by rate of 0% was used for the a.m. peak hour and a pass-by rate of 34% was used for the p.m. peak hour. Since there is no data available for daily pass-by trips, the p.m. peak hour pass-by rates was used as the daily pass-by rate.

[3] Rates are from the ITE *Trip Generation Manual* (10th Edition), Land Use 945 - "Gasoline/Service Station with Convenience Market", Setting/Location - "General Urban/Suburban."

[4] Pass-by rates are from the ITE *Trip Generation Handbook* , 3rd Edition for Land Use 945 - "Gasoline/Service Station with Convenience Market." A pass-by rate of 62% was used for the a.m. peak hour and a pass-by rate of 56% was used for the p.m. peak hour. Since there is no data available for daily pass-by trips, the average of a.m. and p.m. pass-by rates was used as the daily pass-by rate.

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FIGURE 1

N

0 1000 2000

FEET

Reche Canyon Retail
Traffic Impact Study

Regional and Project Location

SOURCE: ESRI Streetmap, 2013; Google Earth, 2018.

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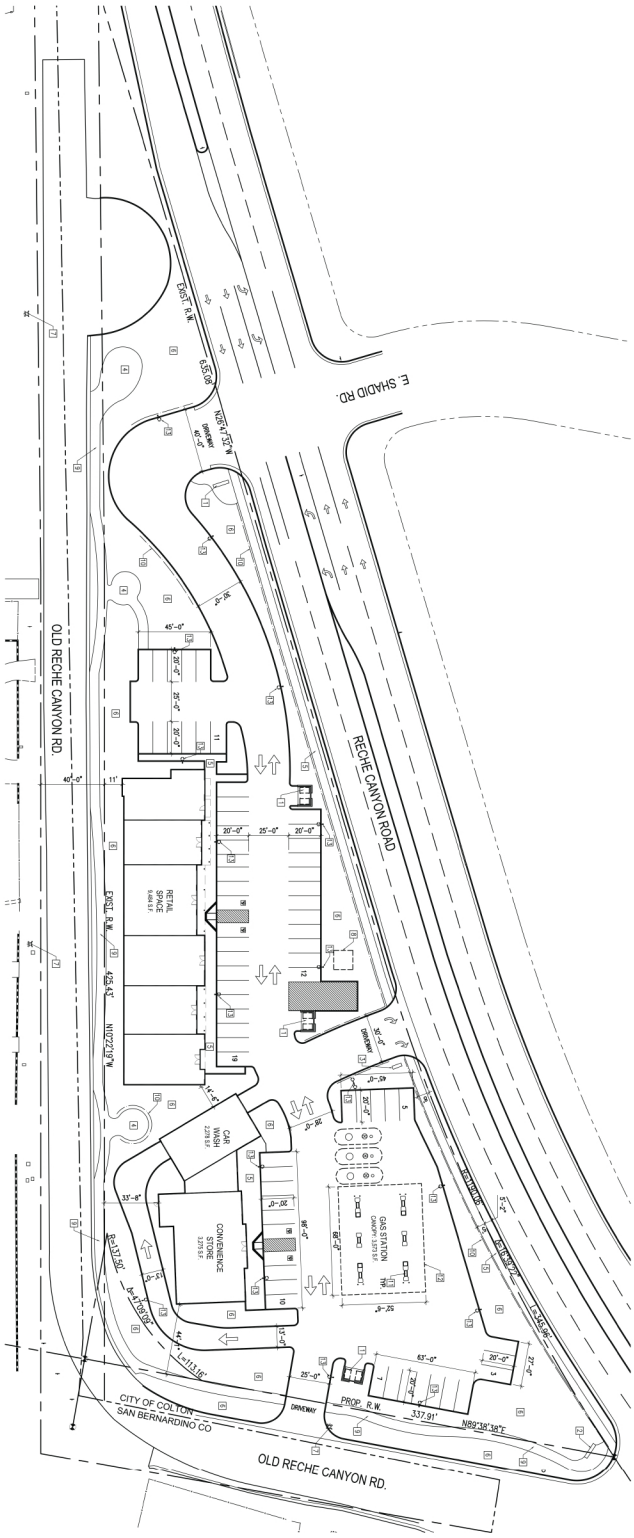

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FIGURE 2

N

0 75 150

FEET

Reche Canyon Retail
Traffic Impact Study

Conceptual Site Plan

SOURCE: J.E Armstrong Architects, March 2021

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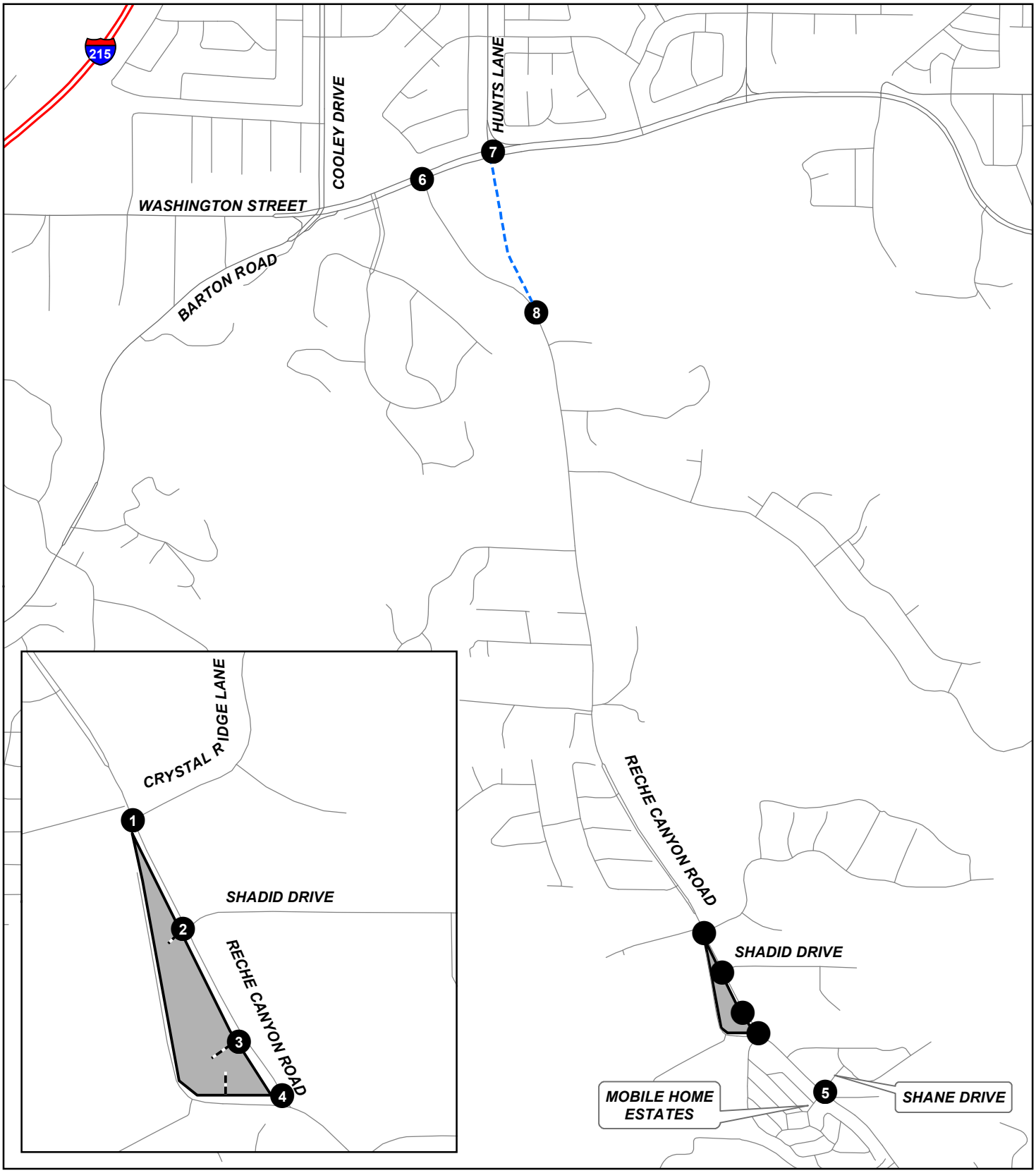

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LEGEND

- Project Site
- Study Area Intersections
- Project Driveway
- Future Connection

0 625 1250
FEET

FIGURE 3

Reche Canyon Retail
Traffic Impact Study
Study Area Intersections

SOURCE: ESRI Streetmap, 2018.

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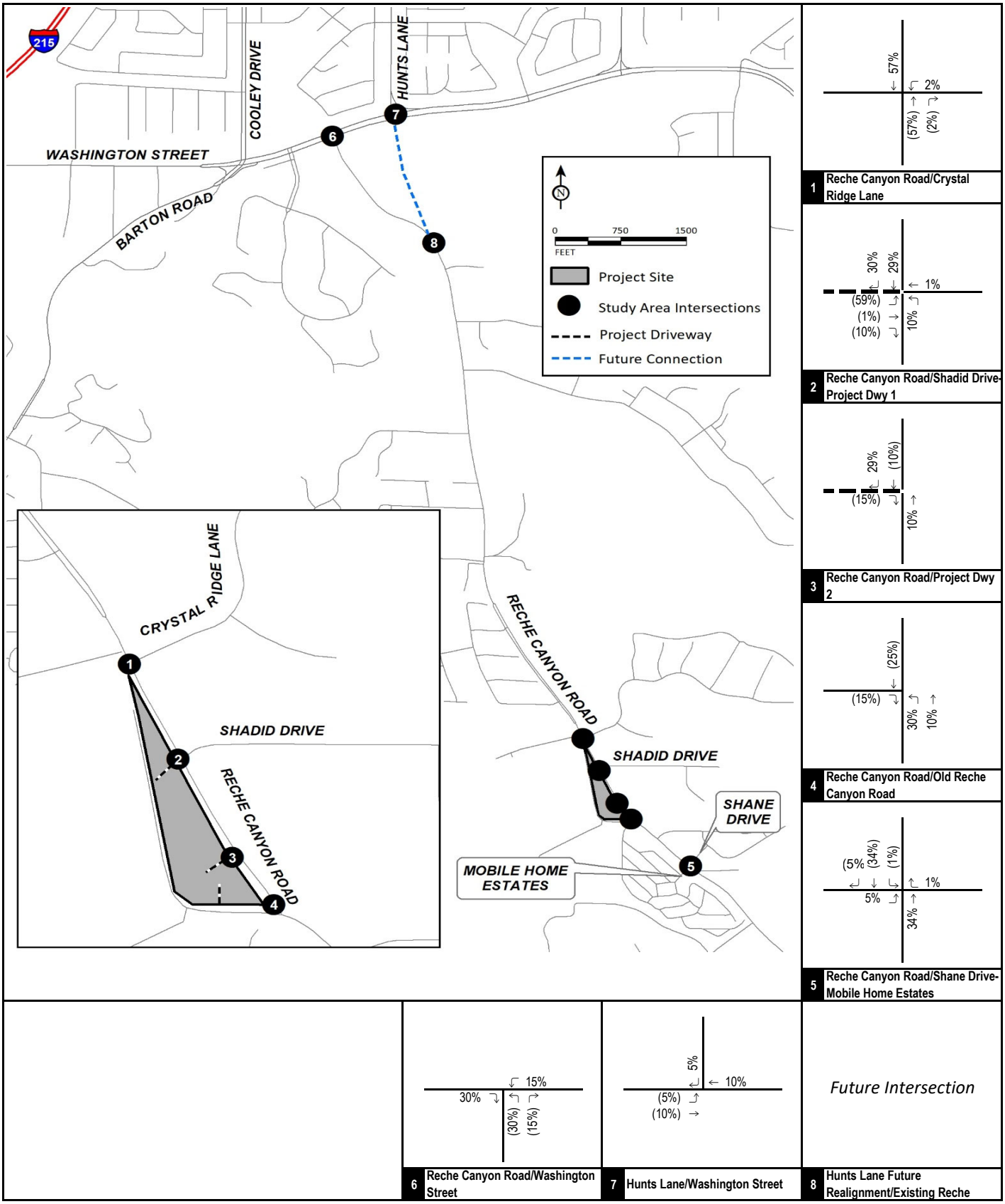

FIGURE 4

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XX% (YY%)
Inbound (Outbound) Trip Distribution
Project Driveway

Reche Canyon Retail
Traffic Impact Study

Project Trip Distribution - Opening Year

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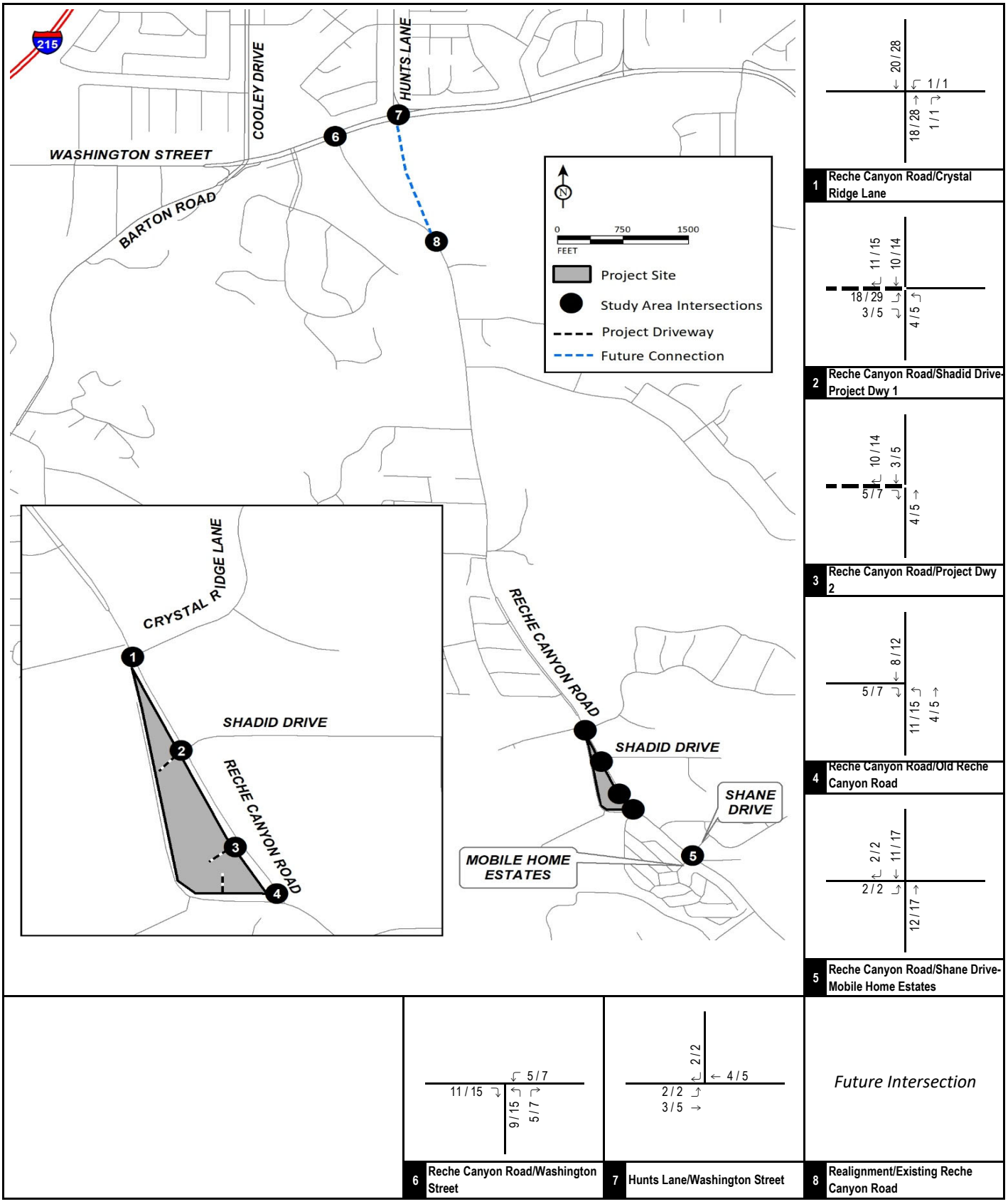

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FIGURE 5

XX / YY
AM / PM Peak Hour Trips
----- Project Driveway

Reche Canyon Retail
Traffic Impact Study

Project Trip Assignment - Opening Year

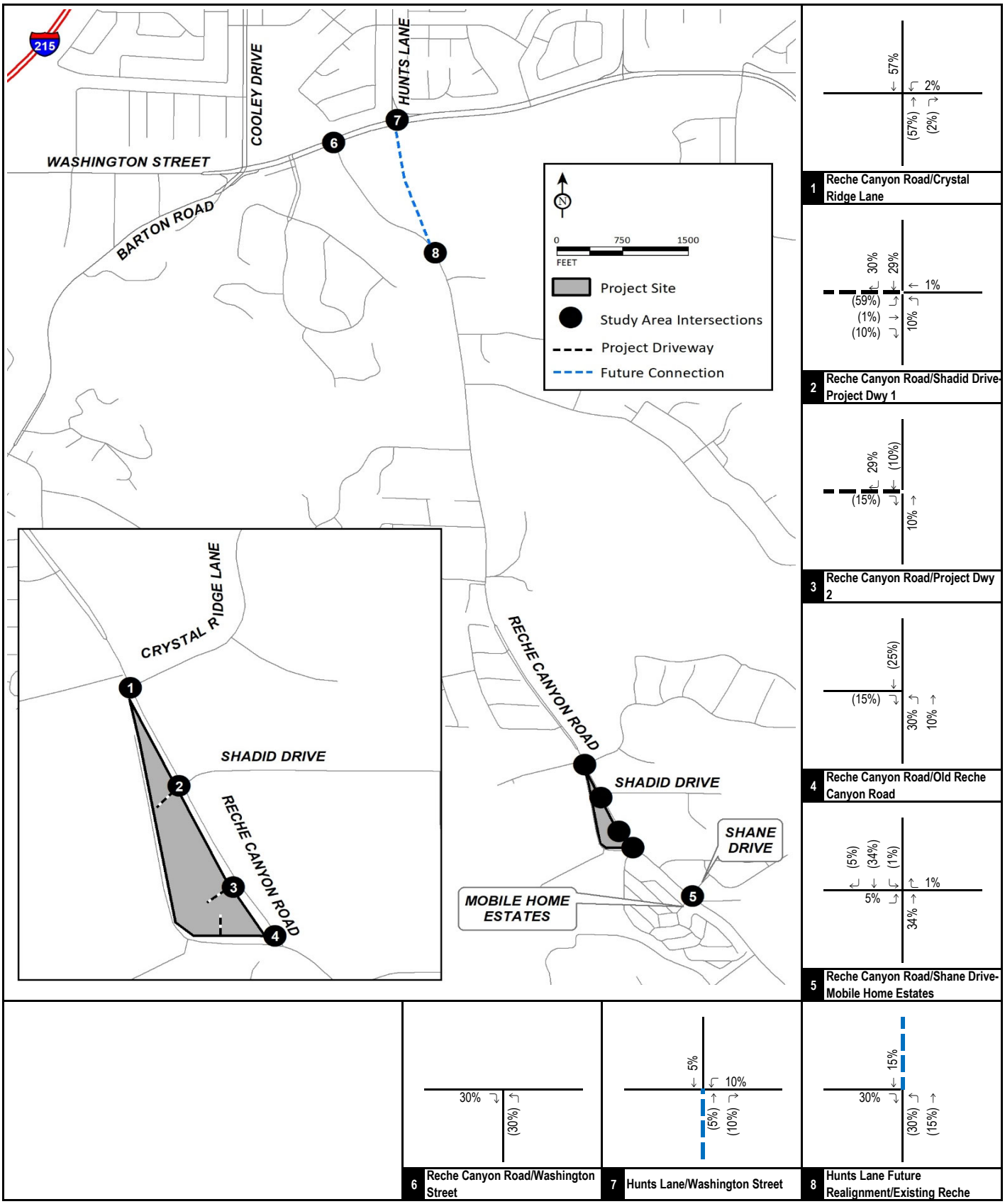

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FIGURE 6

XX% (YY%)
Inbound (Outbound) Trip Distribution
Project Driveway
Future Connection

Reche Canyon Retail
Traffic Impact Study

Project Trip Distribution - General Plan Buildout Year

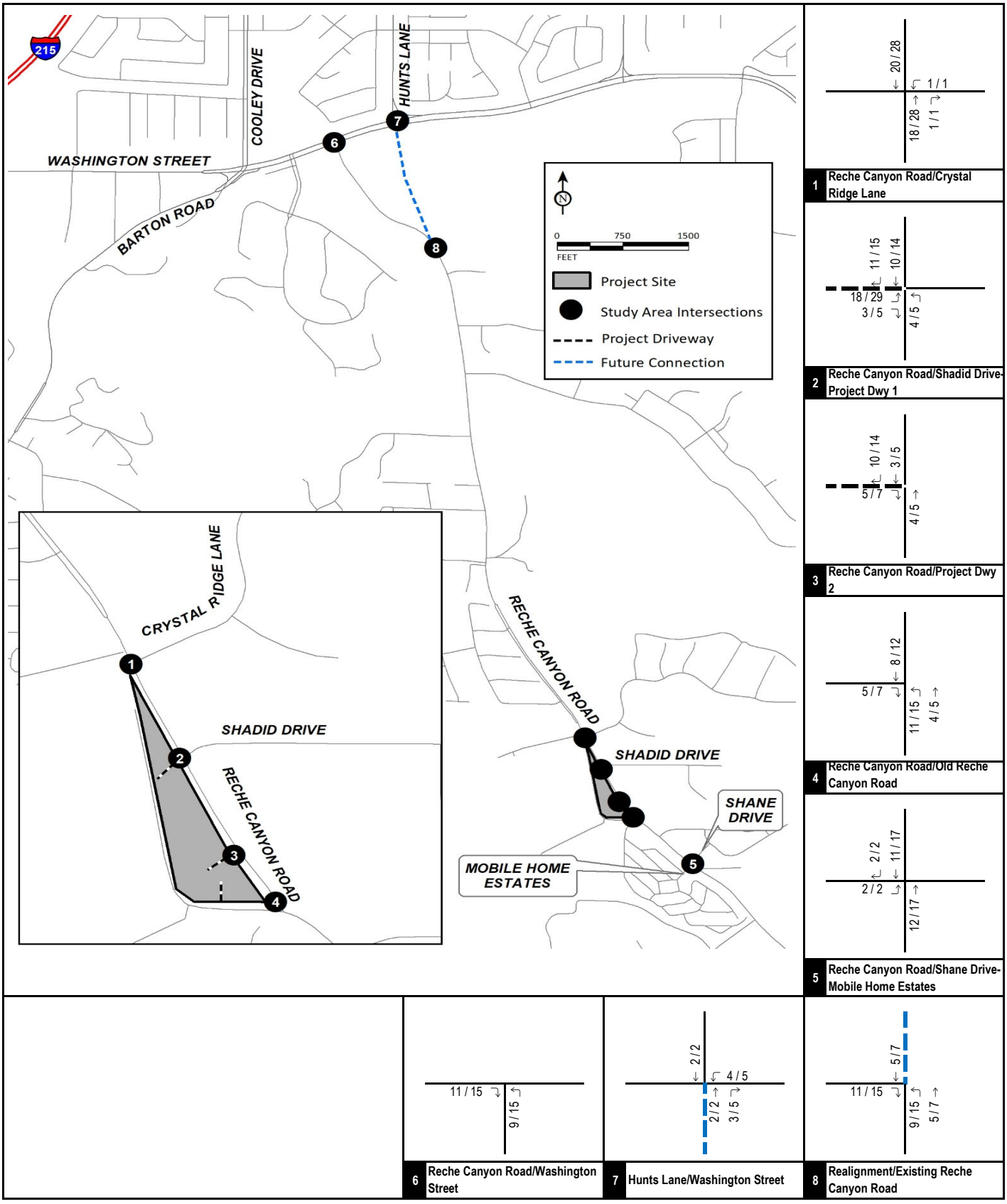

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FIGURE 7

XX / YY
AM / PM Peak Hour Trips
----- Project Driveway
----- Future Connection

Reche Canyon Retail
Traffic Impact Study

Project Trip Assignment - General Plan Buildout Year

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Table B - Cumulative Projects

Project No.	Jurisdiction	Project Name	Address/Location	Project Description	Building Total Square Feet/Dwelling Units/Other
R-1	Riverside County	PAR00947	North of the Intersection of Adams Avenue and Scott Street	5 Single Family Residential Units	5 SFDU
R-2	Riverside County	PAR00361	East of Ashley Avenue in the Canyons	40 Single Family Residential Units	40 SFDU
M-1	Moreno Valley	Lakeshore Village	West of Sunnymead Ranch Parkway, between Village Road and Old Lake Drive	140, 000 square feet commercial center	140 TSF
M-2	Moreno Valley	Ironwood Plaza	Northwest Corner of Heacock Street and Ironwood Avenue	58, 500 square feet commercial center	58.5 TSF
G-1	Grand Terrace	Gateway Specific Plan	East of I-215, between Barton Road and Main Street	Residential and non-residential uses on 132 Acres	Specific Plan
G-2	Grand Terrace	Golden Star Investments Inc.	22200 Barton Road	5,342 square feet shopping center with drive-through-only restaurants	5.342 TSF
G-3	Grand Terrace	Greens INV	22317, 22273, 22293 Barton Road	7 Multifamily Residential Units, Hotel, Restaurant	Mixed-use
G-4	Grand Terrace	Space Masters	22805 Barton Road	1,655 square feet addition to medical office building	1.655 TSF
G-5	Grand Terrace	Medical Office Buidling	22881 Barton Road	4,998 square feet addition	4.998 TSF
C-1	Colton	Multifamily Housing	1116 Santo Antonio Drive	49 Multifamily Residential Units	49 DU
C-2	Colton	Hotel	1395 E Washington Avenue	73 Room Hotel	73 RM
C-3	Colton	Residential	1300 Barton Road	184 Single-Family Residential	184 SFDU
C-4	Colton	Residential	3003 Shadid Lane	1 Single-Family Residential	1 SFDU
C-5	Colton	Residential	1600 Ridge View Drive	20 Single-Family Residential	20 SFDU
C-6	Colton	Rancho Del Prado	Planning Area 10 in Reche Canyon Specific Plan	350 Single-Family Residential	350 SFDU
L-1	Loma Linda	Montecito Memorial Park Expansion	End of Oakwood Street, South of Barton Road	18.5 Acres on 51 Acres site	18.5 AC
L-2	Loma Linda	Loma Linda Medical Center	Northwest corner of Anderson Street and Barton Road	1,060,000 square feet medical center	1,060 TSF
L-3	Loma Linda	Medical Office Buidling	25915 Barton Road	16,643 square feet	16.643 TSF
L-4	Loma Linda	Stonebrook Condos	North of Citrus Avenue, West of Bryn Mawr Avenue	103 Multifamily housing	103 DU
L-5	Loma Linda	Citrus Trails	South of Redlands Boulevard, West of California Street, North of Mission Road	224 Single-Family Residential	224 SFDU
SB-1	San Bernardino County	P201700344	South of Fern Lane, West of Reche Canyon Road	3 parcels on 4.56 Acres	3 parcels

Notes:
SFDU = Single-Family Dwelling Units; TSF = Thousand Square Feet; DU = Dwelling Units; RM = Rooms; AC = Acres.

APPENDIX B:

TRAFFIC COUNT SHEETS AND SIGNAL TIMING SHEETS

APPENDIX B-1:

HISTORICAL TRAFFIC COUNT SHEETS

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

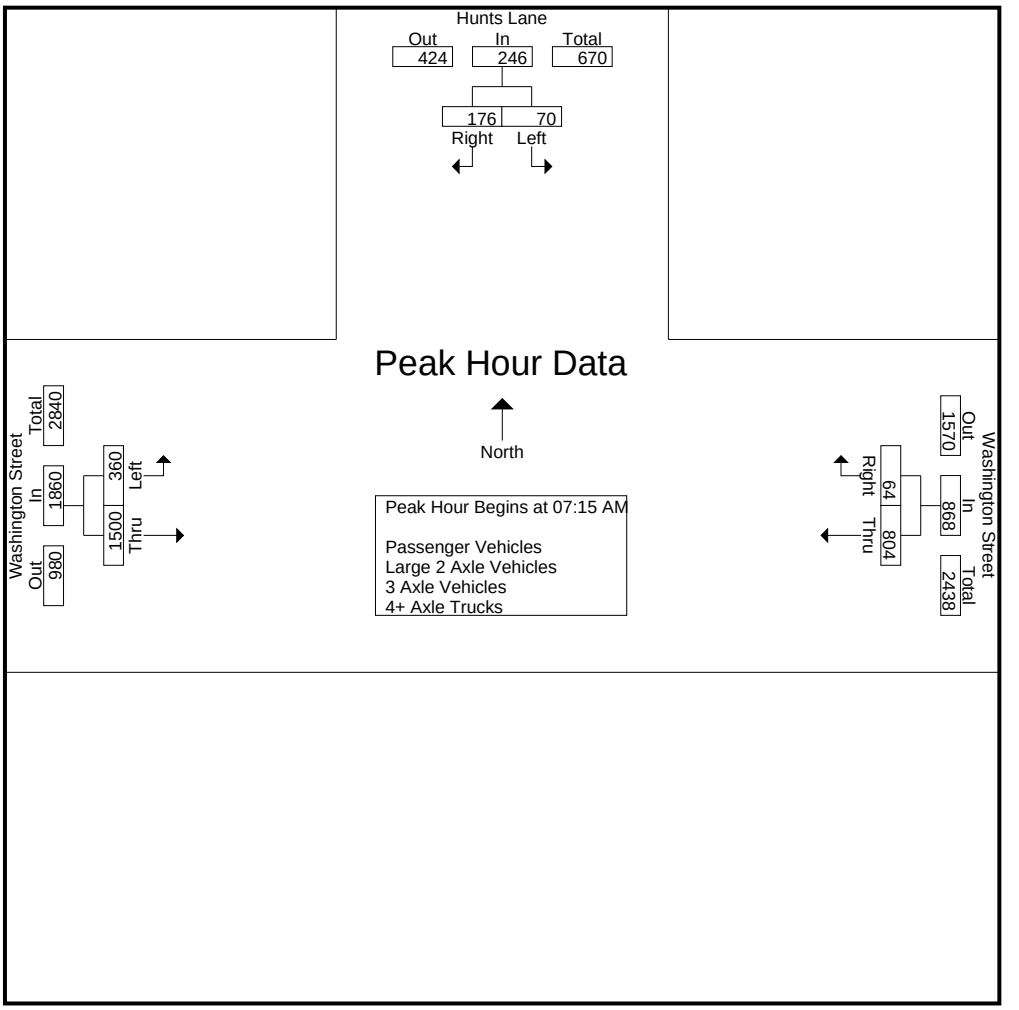
	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	9	44	53	151	11	162	78	265	343	558
07:15 AM	15	43	58	185	15	200	89	323	412	670
07:30 AM	22	49	71	200	15	215	93	420	513	799
07:45 AM	18	50	68	232	23	255	95	408	503	826
Total	64	186	250	768	64	832	355	1416	1771	2853
08:00 AM	15	34	49	187	11	198	83	349	432	679
08:15 AM	9	54	63	150	22	172	76	304	380	615
08:30 AM	11	36	47	164	11	175	56	300	356	578
08:45 AM	7	46	53	130	13	143	47	262	309	505
Total	42	170	212	631	57	688	262	1215	1477	2377
Grand Total	106	356	462	1399	121	1520	617	2631	3248	5230
Apprch %	22.9	77.1		92	8		19	81		
Total %	2	6.8	8.8	26.7	2.3	29.1	11.8	50.3	62.1	
Passenger Vehicles	105	338	443	1355	120	1475	608	2590	3198	5116
% Passenger Vehicles	99.1	94.9	95.9	96.9	99.2	97	98.5	98.4	98.5	97.8
Large 2 Axle Vehicles	0	15	15	41	0	41	9	36	45	101
% Large 2 Axle Vehicles										
3 Axle Vehicles	0	1	1	2	0	2	0	2	2	5
% 3 Axle Vehicles	0	0.3	0.2	0.1	0	0.1	0	0.1	0.1	0.1
4+ Axle Trucks	1	2	3	1	1	2	0	3	3	8
% 4+ Axle Trucks	0.9	0.6	0.6	0.1	0.8	0.1	0	0.1	0.1	0.2

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	15	43	58	185	15	200	89	323	412	670
07:30 AM	**22**	49	**71**	200	15	215	93	**420**	**513**	799
07:45 AM	18	**50**	68	**232**	**23**	**255**	**95**	408	503	**826**
08:00 AM	15	34	49	187	11	198	83	349	432	679
Total Volume	70	176	246	804	64	868	360	1500	1860	2974
% App. Total	28.5	71.5		92.6	7.4		19.4	80.6		
PHF	.795	.880	.866	.866	.696	.851	.947	.893	.906	.900

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:15 AM		
+0 mins.	**22**	49	**71**	185	15	200	89	323	412
+15 mins.	18	50	68	200	15	215	93	**420**	**513**
+30 mins.	15	34	49	**232**	**23**	**255**	**95**	408	503
+45 mins.	9	**54**	63	187	11	198	83	349	432
Total Volume	64	187	251	804	64	868	360	1500	1860
% App. Total	25.5	74.5		92.6	7.4		19.4	80.6	
PHF	.727	.866	.884	.866	.696	.851	.947	.893	.906

Counts Unlimited
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City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
Site Code : 05718426
Start Date : 5/31/2018
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Groups Printed- Passenger Vehicles

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	8	43	51	148	11	159	78	262	340	550
07:15 AM	15	40	55	182	15	197	88	317	405	657
07:30 AM	22	46	68	193	15	208	91	415	506	782
07:45 AM	18	50	68	220	22	242	94	403	497	807
Total	63	179	242	743	63	806	351	1397	1748	2796
08:00 AM	15	32	47	185	11	196	82	343	425	668
08:15 AM	9	53	62	147	22	169	74	301	375	606
08:30 AM	11	32	43	158	11	169	55	291	346	558
08:45 AM	7	42	49	122	13	135	46	258	304	488
Total	42	159	201	612	57	669	257	1193	1450	2320
Grand Total	105	338	443	1355	120	1475	608	2590	3198	5116
Apprch %	23.7	76.3		91.9	8.1		19	81		
Total %	2.1	6.6	8.7	26.5	2.3	28.8	11.9	50.6	62.5	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	15	40	55	182	15	197	88	317	405	657
07:30 AM	**22**	46	**68**	193	15	208	91	**415**	**506**	782
07:45 AM	18	**50**	68	**220**	**22**	**242**	**94**	403	497	**807**
08:00 AM	15	32	47	185	11	196	82	343	425	668
Total Volume	70	168	238	780	63	843	355	1478	1833	2914
% App. Total	29.4	70.6		92.5	7.5		19.4	80.6		
PHF	.795	.840	.875	.886	.716	.871	.944	.890	.906	.903

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City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
Site Code : 05718426
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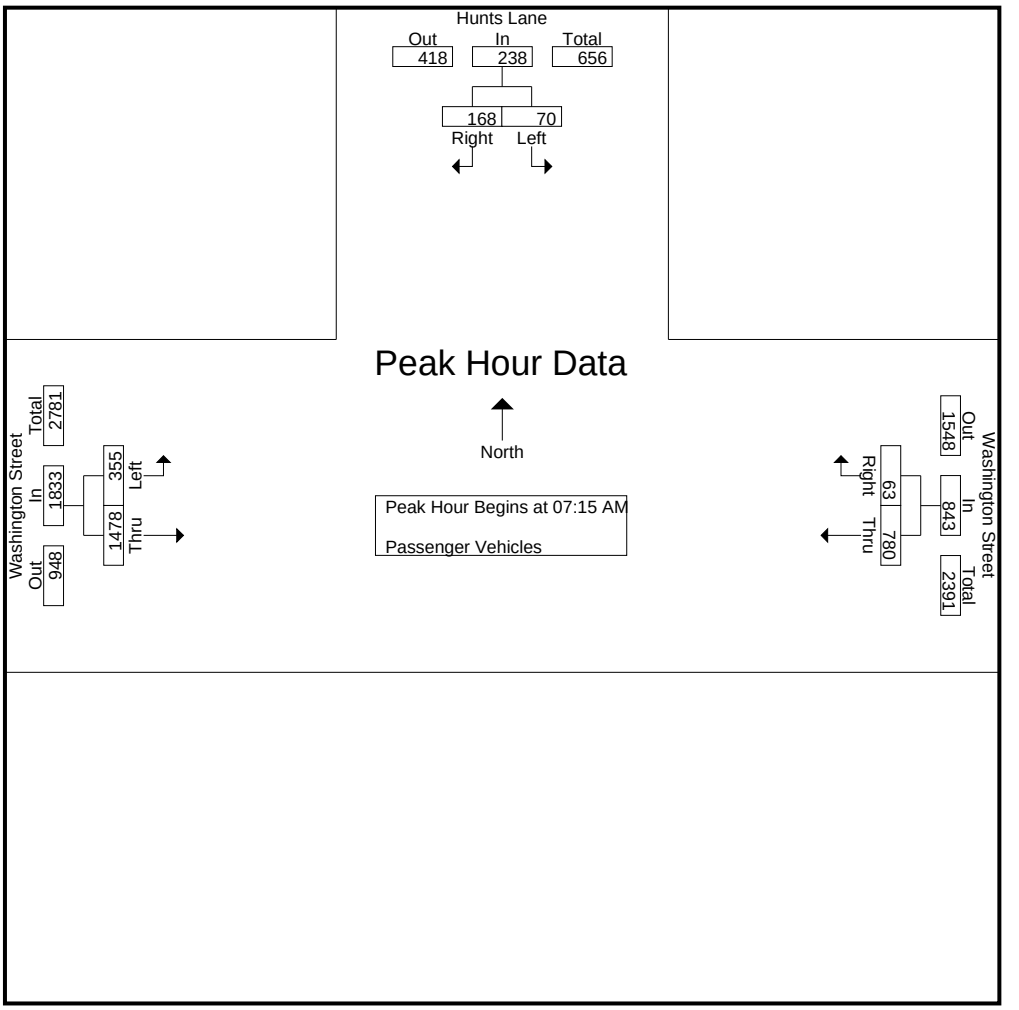

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	15	40	55	182	15	197	88	317	405
+15 mins.	**22**	46	**68**	193	15	208	91	**415**	**506**
+30 mins.	18	**50**	68	**220**	**22**	**242**	**94**	403	497
+45 mins.	15	32	47	185	11	196	82	343	425
Total Volume	70	168	238	780	63	843	355	1478	1833
% App. Total	29.4	70.6		92.5	7.5		19.4	80.6	
PHF	.795	.840	.875	.886	.716	.871	.944	.890	.906

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City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
Site Code : 05718426
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Groups Printed- Large 2 Axle Vehicles

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	1	1	3	0	3	0	3	3	7
07:15 AM	0	2	2	3	0	3	1	5	6	11
07:30 AM	0	2	2	7	0	7	2	5	7	16
07:45 AM	0	0	0	11	0	11	1	4	5	16
Total	0	5	5	24	0	24	4	17	21	50
08:00 AM	0	2	2	2	0	2	1	5	6	10
08:15 AM	0	1	1	2	0	2	2	2	4	7
08:30 AM	0	4	4	6	0	6	1	8	9	19
08:45 AM	0	3	3	7	0	7	1	4	5	15
Total	0	10	10	17	0	17	5	19	24	51
Grand Total	0	15	15	41	0	41	9	36	45	101
Apprch %	0	100		100	0		20	80		
Total %	0	14.9	14.9	40.6	0	40.6	8.9	35.6	44.6	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**2**	**2**	3	0	3	1	**5**	6	11
07:30 AM	0	2	2	7	0	7	**2**	5	**7**	**16**
07:45 AM	0	0	0	**11**	0	**11**	1	4	5	16
08:00 AM	0	2	2	2	0	2	1	5	6	10
Total Volume	0	6	6	23	0	23	5	19	24	53
% App. Total	0	100		100	0		20.8	79.2		
PHF	.000	.750	.750	.523	.000	.523	.625	.950	.857	.828

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City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
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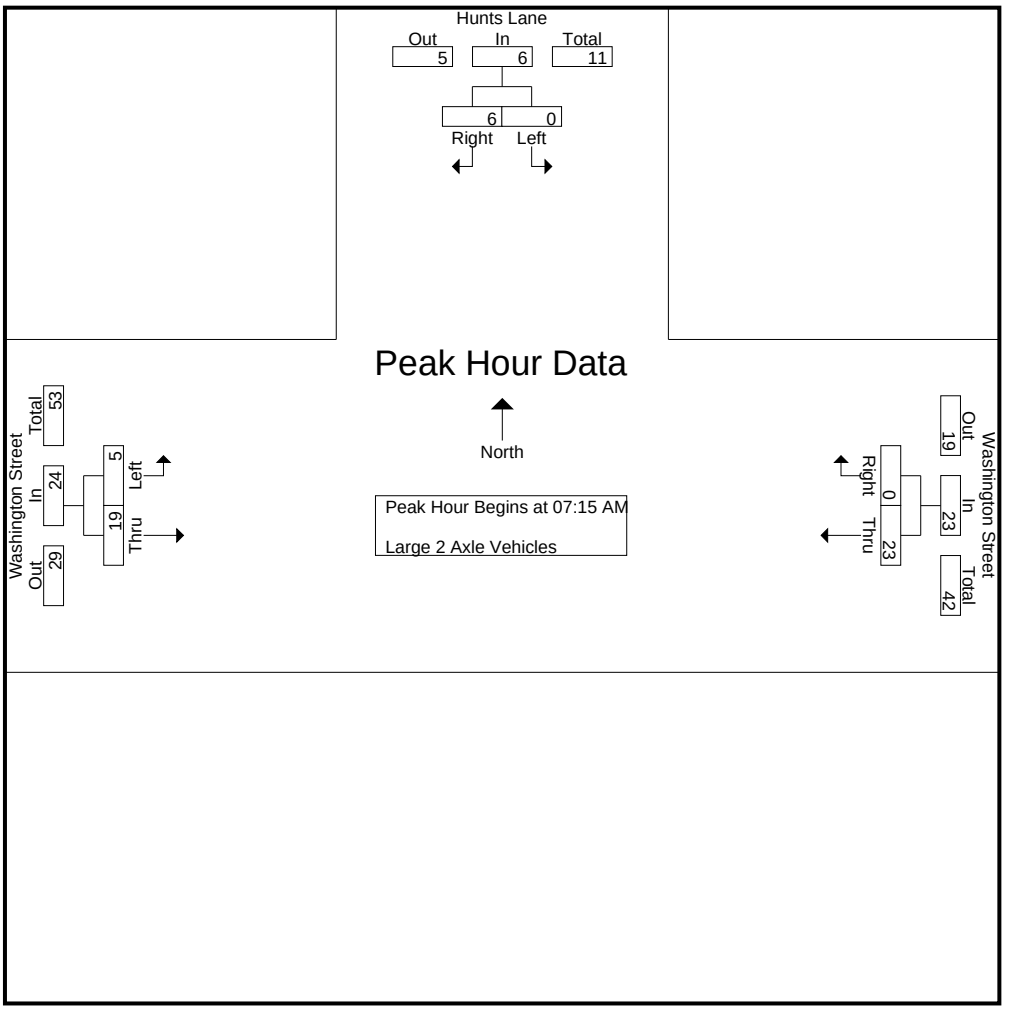

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	**2**	**2**	3	0	3	1	**5**	6
+15 mins.	0	2	2	7	0	7	**2**	5	**7**
+30 mins.	0	0	0	**11**	0	**11**	1	4	5
+45 mins.	0	2	2	2	0	2	1	5	6
Total Volume	0	6	6	23	0	23	5	19	24
% App. Total	0	100		100	0		20.8	79.2	
PHF	.000	.750	.750	.523	.000	.523	.625	.950	.857

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City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
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Groups Printed- 3 Axle Vehicles

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	1	0	1	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	1	0	1	0	1	1	2
08:30 AM	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	1	1	1	0	1	0	2	2	4
Grand Total	0	1	1	2	0	2	0	2	2	5
Apprch %	0	100		100	0		0	100		
Total %	0	20	20	40	0	40	0	40	40	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	**1**	0	**1**	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	0	0	1
% App. Total	0	0		100	0		0	0		
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.000	.250

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City of San Bernardino
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Weather: Clear

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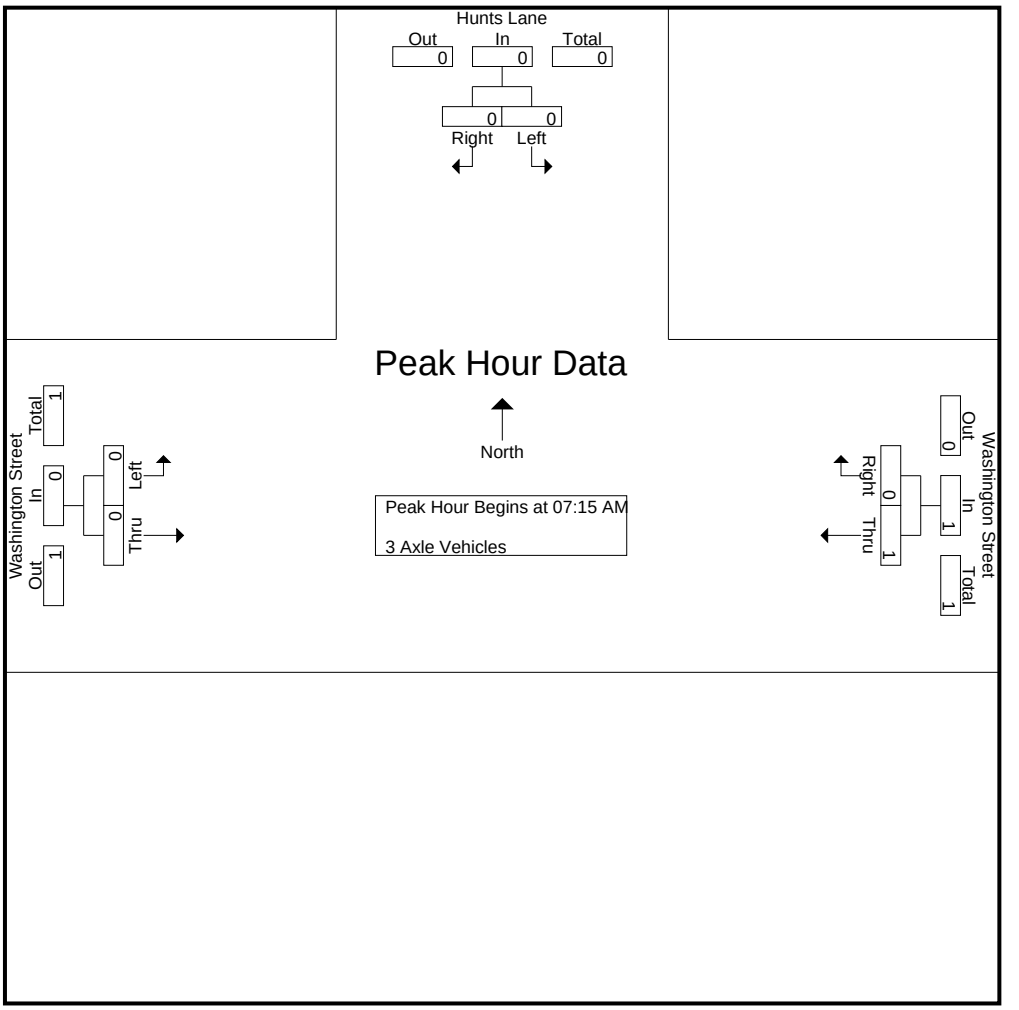

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	**1**	0	**1**	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	0	0
% App. Total	0	0		100	0		0	0	
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.000

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City of San Bernardino
N/S: Hunts Lane
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Weather: Clear

File Name : 09_SBC_Hunts_Washington AM
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Groups Printed- 4+ Axle Trucks

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	0	1	0	0	0	0	0	0	1
07:15 AM	0	1	1	0	0	0	0	1	1	2
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	1	1	0	1	1	2
Total	1	2	3	0	1	1	0	2	2	6
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	1	0	1	0	1	1	2
Grand Total	1	2	3	1	1	2	0	3	3	8
Apprch %	33.3	66.7		50	50		0	100		
Total %	12.5	25	37.5	12.5	12.5	25	0	37.5	37.5	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**1**	**1**	0	0	0	0	**1**	**1**	**2**
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	**1**	**1**	0	1	1	2
08:00 AM	0	0	0	0	0	0	0	1	1	1
Total Volume	0	2	2	0	1	1	0	3	3	6
% App. Total	0	100		0	100		0	100		
PHF	.000	.500	.500	.000	.250	.250	.000	.750	.750	.750

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City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
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File Name : 09_SBC_Hunts_Washington AM
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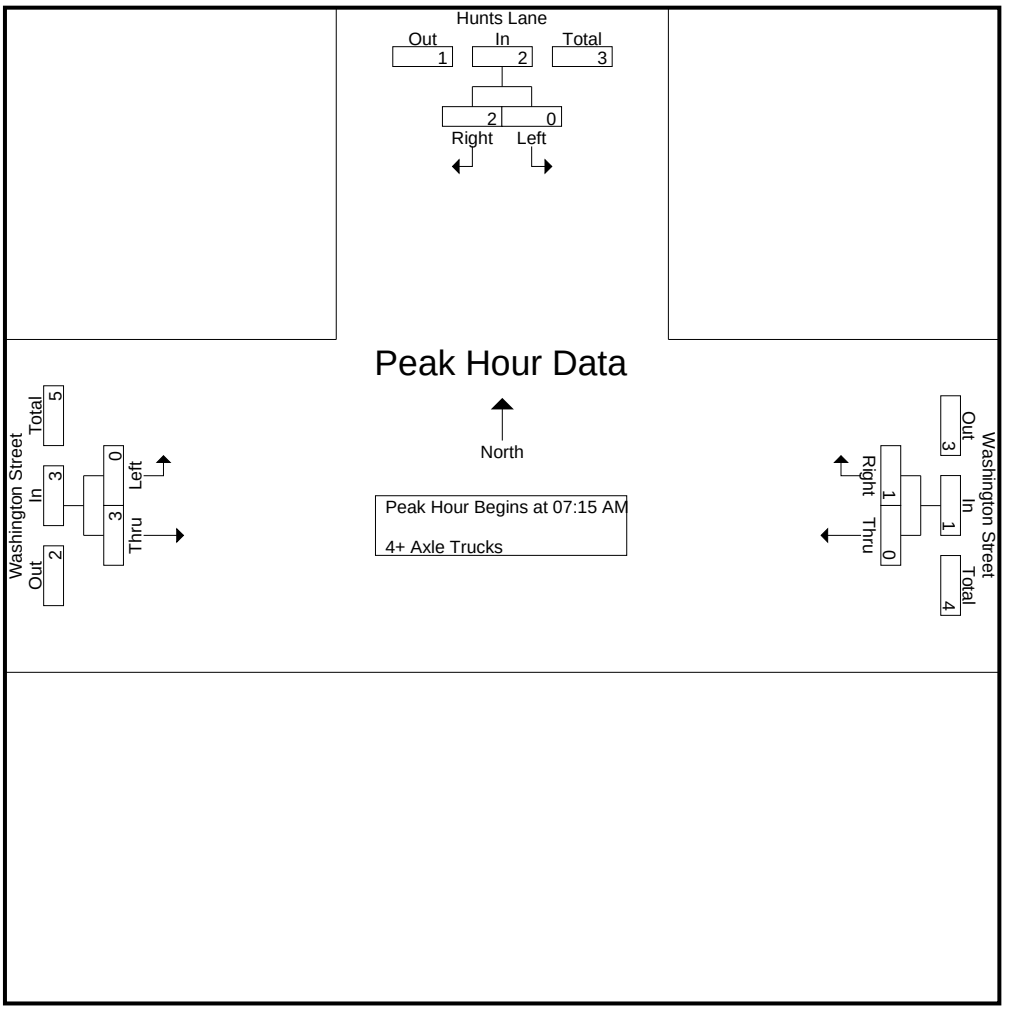

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	**1**	**1**	0	0	0	0	**1**	**1**
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	**1**	**1**	0	1	1
+45 mins.	0	0	0	0	0	0	0	1	1
Total Volume	0	2	2	0	1	1	0	3	3
% App. Total	0	100		0	100		0	100	
PHF	.000	.500	.500	.000	.250	.250	.000	.750	.750

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City of San Bernardino
N/S: Hunts Lane
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	14	156	170	257	12	269	47	242	289	728
04:15 PM	13	134	147	246	4	250	47	231	278	675
04:30 PM	6	134	140	189	16	205	48	274	322	667
04:45 PM	8	132	140	147	7	154	55	252	307	601
Total	41	556	597	839	39	878	197	999	1196	2671
05:00 PM	2	168	170	219	9	228	39	260	299	697
05:15 PM	6	141	147	165	18	183	45	281	326	656
05:30 PM	8	170	178	175	12	187	39	309	348	713
05:45 PM	8	142	150	191	14	205	35	276	311	666
Total	24	621	645	750	53	803	158	1126	1284	2732
Grand Total	65	1177	1242	1589	92	1681	355	2125	2480	5403
Apprch %	5.2	94.8		94.5	5.5		14.3	85.7		
Total %	1.2	21.8	23	29.4	1.7	31.1	6.6	39.3	45.9	
Passenger Vehicles	64	1165	1229	1564	92	1656	344	2103	2447	5332
% Passenger Vehicles	98.5	99	99	98.4	100	98.5	96.9	99	98.7	98.7
Large 2 Axle Vehicles	1	9	10	25	0	25	9	18	27	62
% Large 2 Axle Vehicles										
3 Axle Vehicles	0	1	1	0	0	0	1	0	1	2
% 3 Axle Vehicles	0	0.1	0.1	0	0	0	0.3	0	0	0
4+ Axle Trucks	0	2	2	0	0	0	1	4	5	7
% 4+ Axle Trucks	0	0.2	0.2	0	0	0	0.3	0.2	0.2	0.1

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	2	168	170	**219**	9	**228**	39	260	299	697
05:15 PM	6	141	147	165	**18**	183	**45**	281	326	656
05:30 PM	**8**	**170**	**178**	175	12	187	39	**309**	**348**	**713**
05:45 PM	8	142	150	191	14	205	35	276	311	666
Total Volume	24	621	645	750	53	803	158	1126	1284	2732
% App. Total	3.7	96.3		93.4	6.6		12.3	87.7		
PHF	.750	.913	.906	.856	.736	.880	.878	.911	.922	.958

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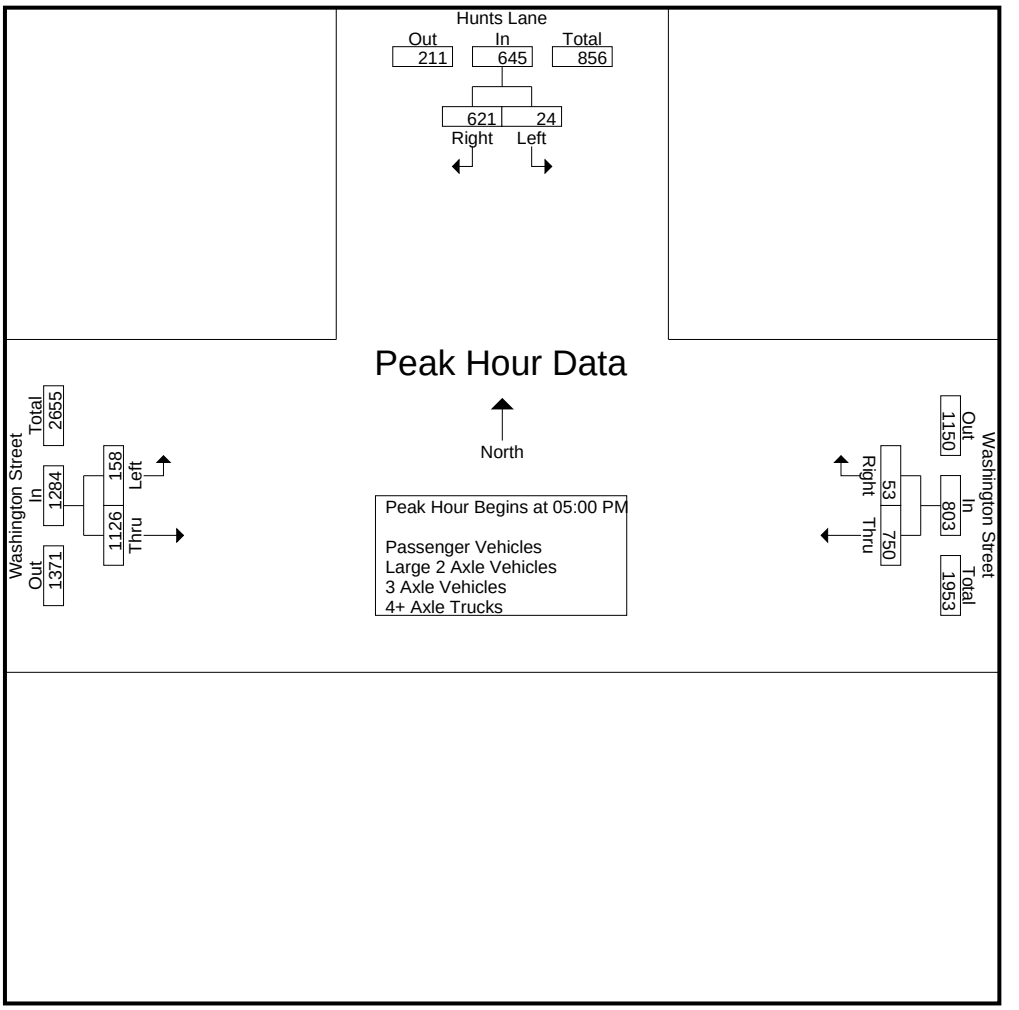

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:00 PM			05:00 PM		
+0 mins.	2	168	170	**257**	12	**269**	39	260	299
+15 mins.	6	141	147	246	4	250	**45**	281	326
+30 mins.	**8**	**170**	**178**	189	**16**	205	39	**309**	**348**
+45 mins.	8	142	150	147	7	154	35	276	311
Total Volume	24	621	645	839	39	878	158	1126	1284
% App. Total	3.7	96.3		95.6	4.4		12.3	87.7	
PHF	.750	.913	.906	.816	.609	.816	.878	.911	.922

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Groups Printed- Passenger Vehicles

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	14	156	170	252	12	264	43	238	281	715
04:15 PM	13	134	147	242	4	246	44	229	273	666
04:30 PM	5	130	135	184	16	200	48	270	318	653
04:45 PM	8	131	139	146	7	153	53	250	303	595
Total	40	551	591	824	39	863	188	987	1175	2629
05:00 PM	2	167	169	218	9	227	38	258	296	692
05:15 PM	6	141	147	162	18	180	45	277	322	649
05:30 PM	8	166	174	173	12	185	39	307	346	705
05:45 PM	8	140	148	187	14	201	34	274	308	657
Total	24	614	638	740	53	793	156	1116	1272	2703
Grand Total	64	1165	1229	1564	92	1656	344	2103	2447	5332
Apprch %	5.2	94.8		94.4	5.6		14.1	85.9		
Total %	1.2	21.8	23	29.3	1.7	31.1	6.5	39.4	45.9	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	2	**167**	169	**218**	9	**227**	38	258	296	692
05:15 PM	6	141	147	162	**18**	180	**45**	277	322	649
05:30 PM	**8**	166	**174**	173	12	185	39	**307**	**346**	**705**
05:45 PM	8	140	148	187	14	201	34	274	308	657
Total Volume	24	614	638	740	53	793	156	1116	1272	2703
% App. Total	3.8	96.2		93.3	6.7		12.3	87.7		
PHF	.750	.919	.917	.849	.736	.873	.867	.909	.919	.959

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City of San Bernardino
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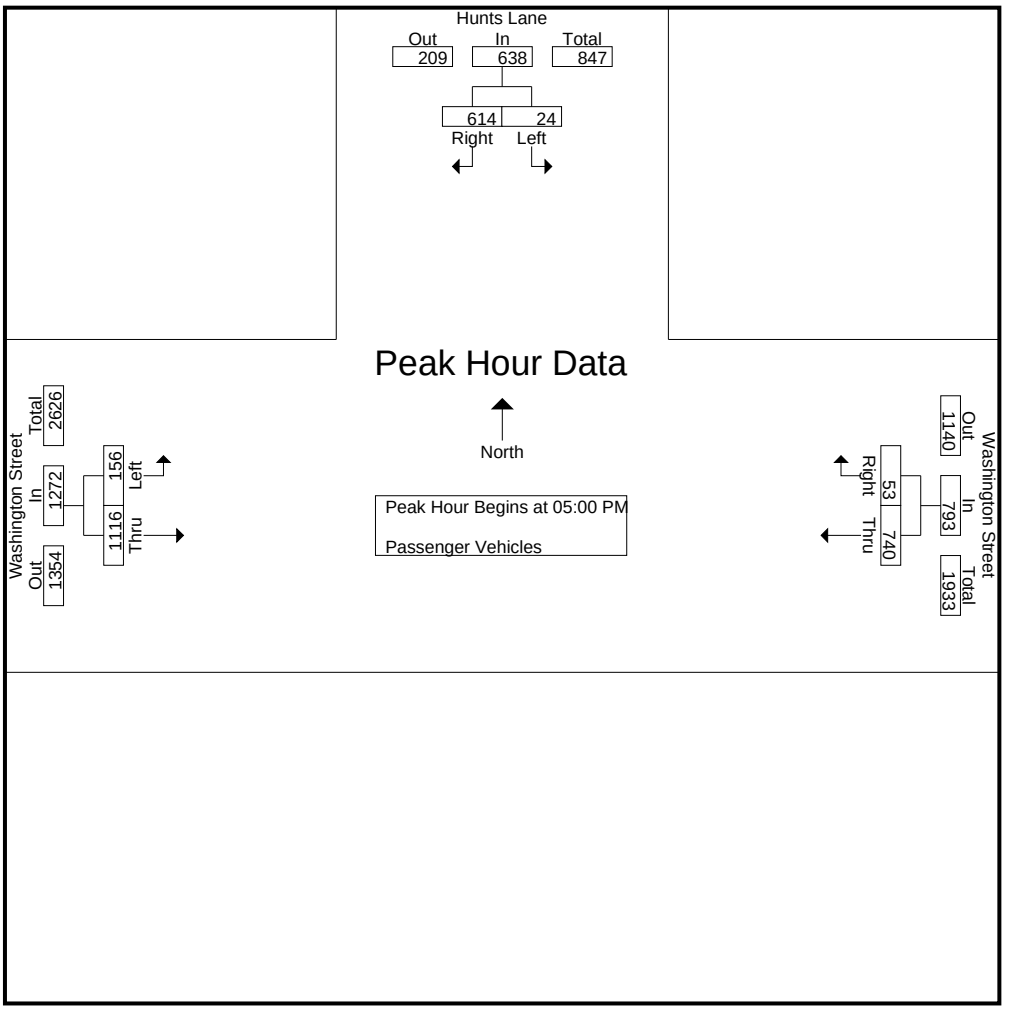


Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	2	**167**	169	**218**	9	**227**	38	258	296
+15 mins.	6	141	147	162	**18**	180	**45**	277	322
+30 mins.	**8**	166	**174**	173	12	185	39	**307**	**346**
+45 mins.	8	140	148	187	14	201	34	274	308
Total Volume	24	614	638	740	53	793	156	1116	1272
% App. Total	3.8	96.2		93.3	6.7		12.3	87.7	
PHF	.750	.919	.917	.849	.736	.873	.867	.909	.919

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington PM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

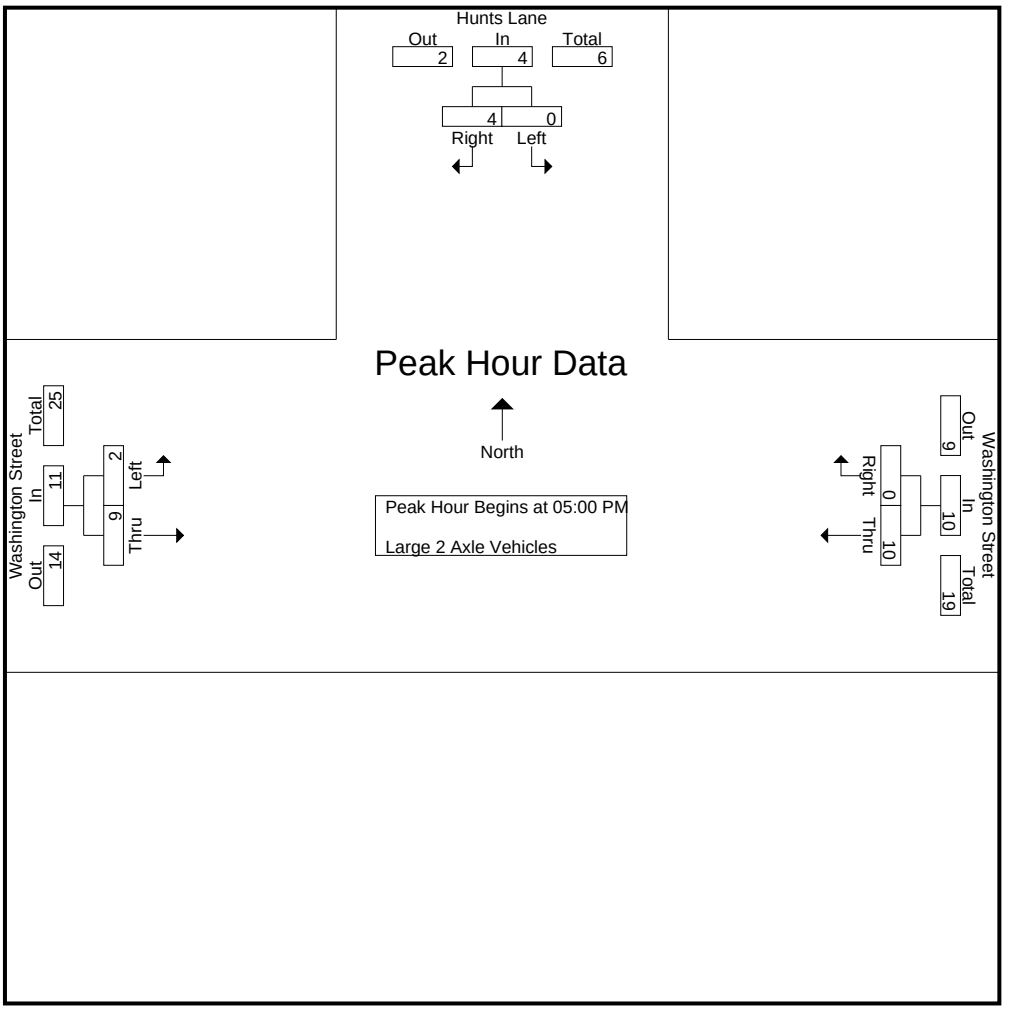
	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	0	0	5	0	5	3	4	7	12
04:15 PM	0	0	0	4	0	4	3	1	4	8
04:30 PM	1	4	5	5	0	5	0	3	3	13
04:45 PM	0	1	1	1	0	1	1	1	2	4
Total	1	5	6	15	0	15	7	9	16	37
05:00 PM	0	1	1	1	0	1	1	2	3	5
05:15 PM	0	0	0	3	0	3	0	3	3	6
05:30 PM	0	1	1	2	0	2	0	2	2	5
05:45 PM	0	2	2	4	0	4	1	2	3	9
Total	0	4	4	10	0	10	2	9	11	25
Grand Total	1	9	10	25	0	25	9	18	27	62
Apprch %	10	90		100	0		33.3	66.7		
Total %	1.6	14.5	16.1	40.3	0	40.3	14.5	29	43.5	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	1	1	1	0	1	**1**	2	**3**	5
05:15 PM	0	0	0	3	0	3	0	**3**	3	6
05:30 PM	0	1	1	2	0	2	0	2	2	5
05:45 PM	0	**2**	**2**	**4**	0	**4**	1	2	3	**9**
Total Volume	0	4	4	10	0	10	2	9	11	25
% App. Total	0	100		100	0		18.2	81.8		
PHF	.000	.500	.500	.625	.000	.625	.500	.750	.917	.694

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington PM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	1	1	1	0	1	**1**	2	**3**
+15 mins.	0	0	0	3	0	3	0	**3**	3
+30 mins.	0	1	1	2	0	2	0	2	2
+45 mins.	0	**2**	**2**	**4**	0	**4**	1	2	3
Total Volume	0	4	4	10	0	10	2	9	11
% App. Total	0	100		100	0		18.2	81.8	
PHF	.000	.500	.500	.625	.000	.625	.500	.750	.917

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington PM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

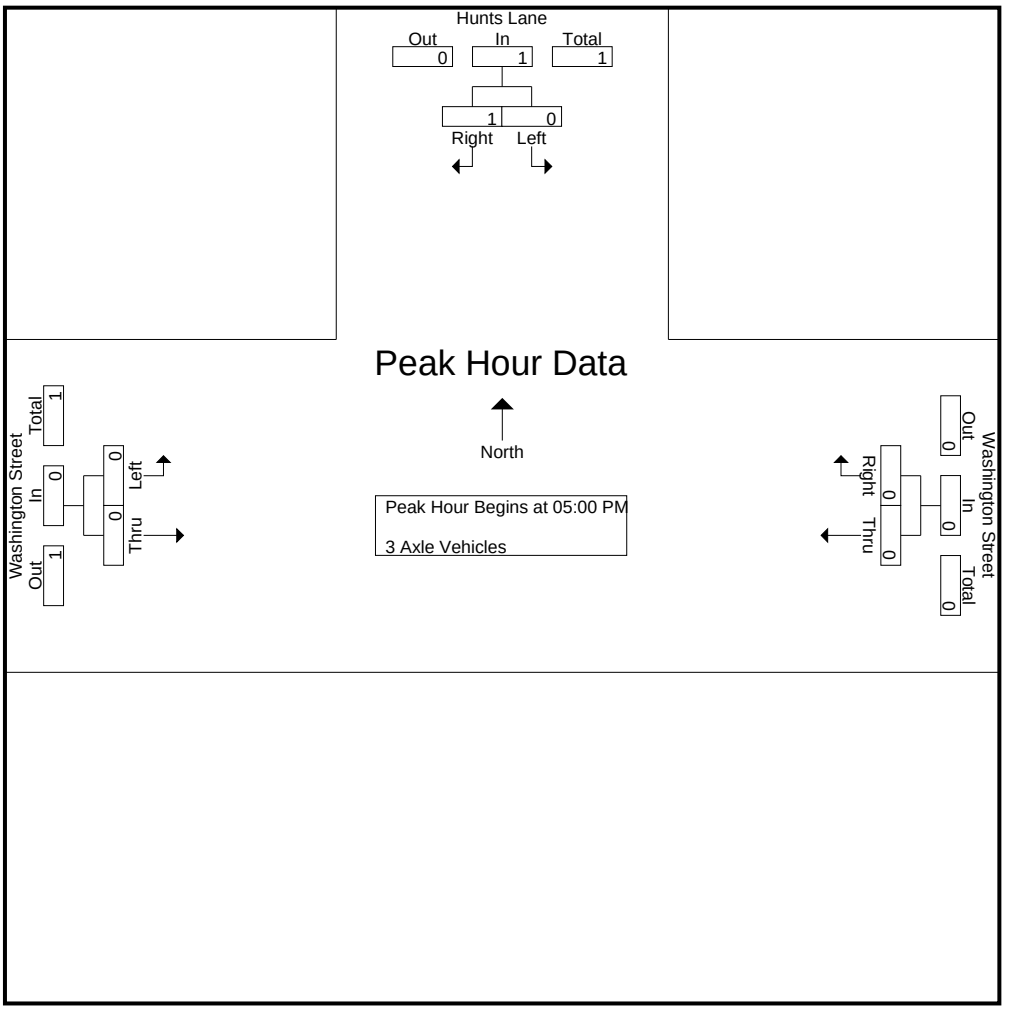
	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	0	1	1	0	0	0	1	0	1	2
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	**1**	**1**	0	0	0	0	0	0	**1**
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington PM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	**1**	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington PM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

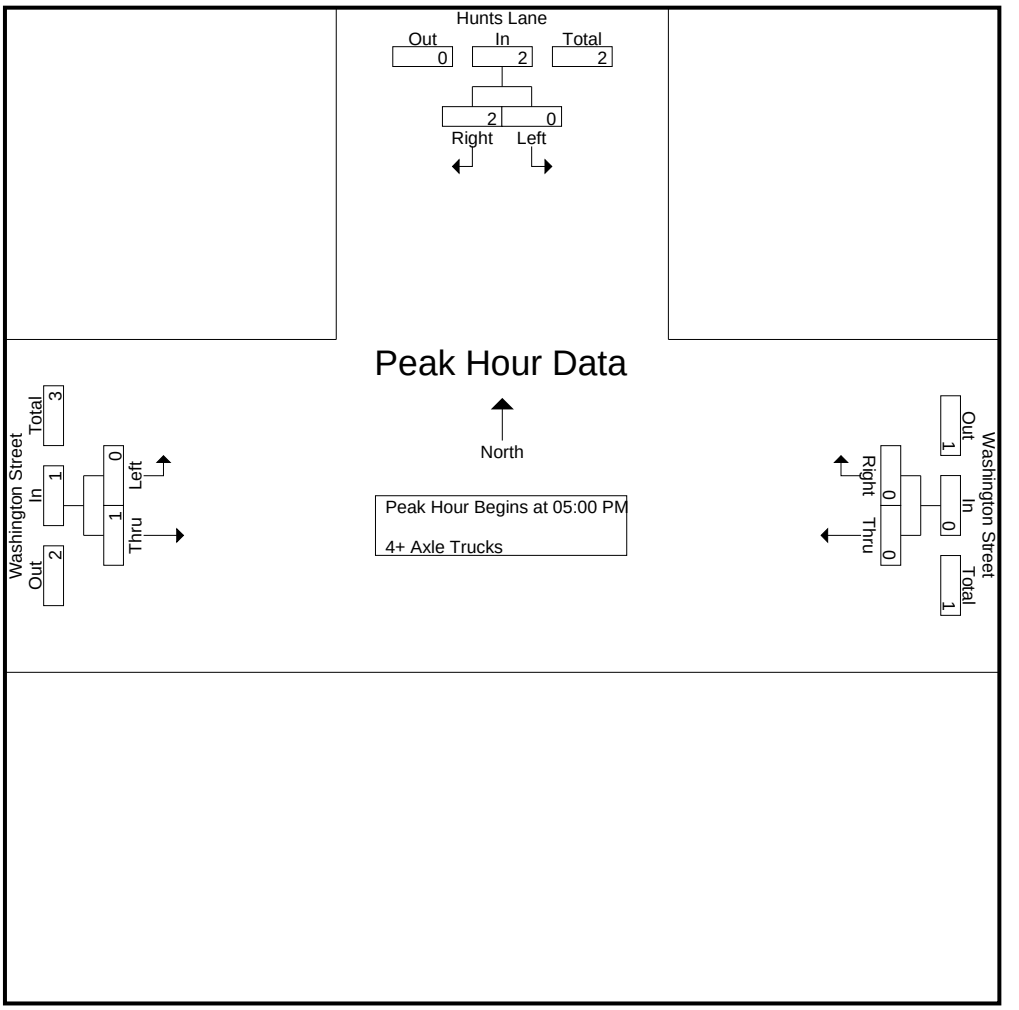
	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	1	1	2	2
Total	0	0	0	0	0	0	1	3	4	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	2	2	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	0	1	1	3
Grand Total	0	2	2	0	0	0	1	4	5	7
Apprch %	0	100		0	0		20	80		
Total %	0	28.6	28.6	0	0	0	14.3	57.1	71.4	

	Hunts Lane Southbound			Washington Street Westbound			Washington Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	**1**	**1**	1
05:30 PM	0	**2**	**2**	0	0	0	0	0	0	**2**
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	0	1	1	3
% App. Total	0	100		0	0		0	100		
PHF	.000	.250	.250	.000	.000	.000	.000	.250	.250	.375

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Hunts Lane
E/W: Washington Street
Weather: Clear

File Name : 09_SBC_Hunts_Washington PM
Site Code : 05718426
Start Date : 5/31/2018
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	**1**	**1**
+30 mins.	0	**2**	**2**	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	0	1	1
% App. Total	0	100		0	0		0	100	
PHF	.000	.250	.250	.000	.000	.000	.000	.250	.250

AXLE COUNT PEAK HOUR SUMMARY

Input areas in Yellow

Location	**Reche Cyn at Park Cyn**																		
Peak Hour:	AM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		0	1225	0		0	300	4		4	0	1		0	0	0			
Ttl w/pce factor	1.0	0	1225	0	1225	0	300	4	304	4	0	1	5	0	0	0	0	**1534**	**1.00**
3 Axle Truck		0	1	0		0	0	0		0	0	0		0	0	0			
Ttl w/pce factor	2.0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**0.00**
4+ Axle Truck		0	1	0		0	0	0		0	0	0		0	0	0			
Ttl w/pce factor	3.0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	**3**	**0.00**
Total Movement	AM Peak	0	1230	0	1230	0	300	4	304	4	0	1	5	0	0	0	0	**1539**	
Location	**Reche Cyn at Park Cyn**																		
Peak Hour:	PM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		2	578	0		0	1213	2		3	0	3		0	0	0			
Ttl w/pce factor	1.0	2	578	0	580	0	1213	2	1215	3	0	3	6	0	0	0	0	**1801**	**0.99**
3 Axle Truck		0	0	0		0	1	0		0	0	0		0	0	0			
Ttl w/pce factor	2.0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	**2**	**0.00**
4+ Axle Truck		0	0	0		0	3	0		0	0	0		0	0	0			
Ttl w/pce factor	3.0	0	0	0	0	0	9	0	9	0	0	0	0	0	0	0	0	**9**	**0.00**
Total Movement	PM Peak	2	578	0	580	0	1224	2	1226	3	0	3	6	0	0	0	0	**1812**	

TURNING MOVEMENT COUNT

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2016

TIME	N-S STREET: Reche Canyon Road							E-W STREET: Park Canyon Road							1 9 5 13			
	12 11 10			4 3 2				16 15 14			8 7 6							
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15		312			66	1	379	1						1				
07:15-07:30		325			79	2	406			1				1				
07:30-07:45		308			83		391	2						2				
07:45-08:00		280			72	1	353	1						1				
08:00-08:15		237			59	3	299	2		1				3				
08:15-08:30	1	226			39		266	2						2				
08:30-08:45	2	217			32	1	252	2		1				3				
08:45-09:00		213			51	1	265	1						1				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15	1	140			289	2	432	3						3				
16:15-16:30		128			294	1	423			2				2				
16:30-16:45		118			281	4	403			3				3				
16:45-17:00	1	166			300		467	2		1				3				
17:00-17:15		126			271	1	398							0				
17:15-17:30	1	127			324	1	453			2				2				
17:30-17:45		159			318		477	1						1				
17:45-18:00	1	150			266	3	420			4				4				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		4	300	0	
		SR	ST	SL	
4	EL			WR	0
0	ET		07:00-08:00	WT	0
1	ER			WL	0
		NL	NT	NR	
		0	1225	0	

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		11:00-12:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	0	0	

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-PM

		2	1213	0	
		SR	ST	SL	
3	EL			WR	0
0	ET		16:45-17:45	WT	0
3	ER			WL	0
		NL	NT	NR	
		2	578	0	

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

TRUCK COUNT 3 Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2016

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Park Cyn Road										
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0							0				
07:30-07:45		1					1							0				
07:45-08:00							0							0				
08:00-08:15							0							0				
08:15-08:30							0							0				
08:30-08:45							0							0				
08:45-09:00							0							0				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30							0							0				
16:30-16:45					1		1							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45							0							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	1	0		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		0	1	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

TRUCK COUNT 4+ Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2106

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Park Cyn Road										
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0							0				
07:30-07:45							0							0				
07:45-08:00							0							0				
08:00-08:15							0							0				
08:15-08:30							0							0				
08:30-08:45		1					1							0				
08:45-09:00							0							0				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30					2		2							0				
16:30-16:45					1		1							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45					1		1							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		07:45-08:45	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	1	0	

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		11:00-12:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	0	0	

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-PM

		0	3	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	0	0	

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

AXLE COUNT PEAK HOUR SUMMARY

Input areas in Yellow

Location	**Reche Cyn at Shadid Dr**																		
Peak Hour:	AM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		0	1225	0		2	298	0		0	0	0		2	0	6			
Ttl w/pce factor	1.0	0	1225	0	1225	2	298	0	300	0	0	0	0	2	0	6	8	**1533**	**1.00**
3 Axle Truck		0	1	0		0	0	0		0	0	0		0	0	0			
Ttl w/pce factor	2.0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**0.00**
4+ Axle Truck		0	0	0		0	1	0		0	0	0		0	0	0			
Ttl w/pce factor	3.0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	**3**	**0.00**
Total Movement	AM Peak	0	1227	0	1227	2	301	0	303	0	0	0	0	2	0	6	8	**1538**	
Location	**Reche Cyn at Shadid Dr**																		
Peak Hour:	PM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		0	581	0		3	1213	0		0	0	0		2	0	4			
Ttl w/pce factor	1.0	0	581	0	581	3	1213	0	1216	0	0	0	0	2	0	4	6	**1803**	**0.99**
3 Axle Truck		0	0	0		0	1	0		0	0	0		0	0	0			
Ttl w/pce factor	2.0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	**2**	**0.00**
4+ Axle Truck		0	0	0		0	3	0		0	0	0		0	0	0			
Ttl w/pce factor	3.0	0	0	0	0	0	9	0	9	0	0	0	0	0	0	0	0	**9**	**0.00**
Total Movement	PM Peak	0	581	0	581	3	1224	0	1227	0	0	0	0	2	0	4	6	**1814**	

Turning Movement Count

PROJECT NAME: Colton

PROJECT NO: 16280

DATE: 12/8/2016

Prepared by: G.E. Traffic Surveys

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Shadid Dr										
	12	11	10	4	3	2		16	15	14	8	7	6		1	9	5	13
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15		312			66		378							0				
07:15-07:30		325			79		404				1		2	3				
07:30-07:45		308		2	82		392						3	3				
07:45-08:00		280			71		351				1		1	2				
08:00-08:15		237			61		298						1	1				
08:15-08:30		226		2	39		267							0				
08:30-08:45		217			33		250						3	3				
08:45-09:00		213		1	52		266							0			1	
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15		143		2	292		437						1	1				
16:15-16:30		128			295		423							0				
16:30-16:45		117	2	2	284		405				1		4	5				
16:45-17:00		168			300		468						1	1				
17:00-17:15		126		1	271		398				1		2	3				
17:15-17:30		127		1	325		453							0				
17:30-17:45		160		1	317		478				1		1	2				
17:45-18:00	1	148	1	2	269		421						1	1				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	298	2	
		SR	ST	SL	
0	EL			WR	6
0	ET		07:00-08:00	WT	0
0	ER			WL	2
		NL	NT	NR	
		0	1225	0	

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		11:00-12:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	0	0	

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-PM

		0	1213	3	
		SR	ST	SL	
0	EL			WR	4
0	ET		16:45-17:45	WT	0
0	ER			WL	2
		NL	NT	NR	
		0	581	0	

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

TRUCK COUNT 3 Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2016

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Shadid Dr										
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0							0				
07:30-07:45		1					1							0				
07:45-08:00							0							0				
08:00-08:15							0							0				
08:15-08:30							0							0				
08:30-08:45							0							0				
08:45-09:00							0							0				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30							0							0				
16:30-16:45					1		1							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45							0							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0		
		SR	ST	SL		
0	EL			WR	0	
0	ET		07:00-08:00	WT	0	
0	ER			WL	0	
		NL	NT	NR		
		0	1	0		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL			WR	____	
____	ET		____	WT	____	
____	ER			WL	____	
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL			WR	0	
0	ET		11:00-12:00	WT	0	
0	ER			WL	0	
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL			WR	____	
____	ET		____	WT	____	
____	ER			WL	____	
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		0	1	0		
		SR	ST	SL		
0	EL			WR	0	
0	ET		16:00-17:00	WT	0	
0	ER			WL	0	
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL			WR	____	
____	ET		____	WT	____	
____	ER			WL	____	
		NL	NT	NR		
		____	____	____		

TRUCK COUNT 4+ Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2016

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Shadid Dr										
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0							0				
07:30-07:45					1		1							0				
07:45-08:00							0							0				
08:00-08:15							0							0				
08:15-08:30							0							0				
08:30-08:45		1					1							0				
08:45-09:00							0							0				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30					2		2							0				
16:30-16:45					1		1							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45					1		1							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	1	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		0	3	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

AXLE COUNT PEAK HOUR SUMMARY

Input areas in Yellow

Location	**Reche Cyn at Crystal Ridge**																		
Peak Hour:	AM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		0	1230	1		9	341	0		1	0	0		3	0	39			
Ttl w/pce factor	1.0	0	1230	1	1231	9	341	0	350	1	0	0	1	3	0	39	42	**1624**	**0.99**
3 Axle Truck		0	1	0		0	3	0		0	0	0		0	0	0			
Ttl w/pce factor	2.0	0	2	0	2	0	6	0	6	0	0	0	0	0	0	0	0	**8**	**0.00**
4+ Axle Truck		0	4	0		0	0	0		0	0	0		0	0	0			
Ttl w/pce factor	3.0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	**12**	**0.01**
Total Movement	AM Peak	0	1244	1	1245	9	347	0	356	1	0	0	1	3	0	39	42	**1644**	
Location	**Reche Cyn at Crystal Ridge**																		
Peak Hour:	PM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		0	587	4		29	1215	5		1	0	0		0	0	22			
Ttl w/pce factor	1.0	0	587	4	591	29	1215	5	1249	1	0	0	1	0	0	22	22	**1863**	**0.99**
3 Axle Truck		0	1	0		0	1	0		0	0	0		0	0	0			
Ttl w/pce factor	2.0	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	**4**	**0.00**
4+ Axle Truck		0	2	0		0	2	0		0	0	0		0	0	0			
Ttl w/pce factor	3.0	0	6	0	6	0	6	0	6	0	0	0	0	0	0	0	0	**12**	**0.01**
Total Movement	PM Peak	0	595	4	599	29	1223	5	1257	1	0	0	1	0	0	22	22	**1879**	

TURNING MOVEMENT COUNT

PROJECT NAME: Reche Canyon Plaza City of Colton
PROJECT NO: 16280
DATE: 12/8/16

TIME	N-S STREET: Reche Canyon Rd							E-W STREET: Crystal Ridge Lane										
	12	11	10	4	3	2		16	15	14	8	7	6		1	9	5	13
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15		300			45		345				1		12	13				
07:15-07:30		312		4	69	1	386						9	9				
07:30-07:45		319	1	6	81		407			1			11	12				
07:45-08:00		276		6	62		344						18	18				
08:00-08:15		318		1	88		407	1			1		9	11				
08:15-08:30		300		3	74		377						7	7				
08:30-08:45		314	1	1	83		399						10	10				
08:45-09:00		298		4	96		398				2		13	15				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15		137	2	6	321		466						6	6				
16:15-16:30		103		7	289		399						12	12				
16:30-16:45		171	1	11	287	1	471	1					5	6				
16:45-17:00		134	1	11	302	2	450						4	4				
17:00-17:15		120	1	3	330	2	456						8	8				
17:15-17:30		162	1	4	296		463						5	5				
17:30-17:45		139	2	2	304	1	448						7	7				
17:45-18:00		146	3	6	292		447	1					5	6				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	341	9		
		SR	ST	SL		
1	EL				WR	39
0	ET		08:00-09:00		WT	0
0	ER				WL	3
		NL	NT	NR		
		0	1230	1		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		5	1215	29		
		SR	ST	SL		
1	EL				WR	22
0	ET		16:30-17:30		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	587	4		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

TRUCK COUNT 4+ Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Reche Canyon Plaza City of Colton
PROJECT NO: 16280
DATE: 12/8/16

TIME	N-S STREET: Reche Canyon Rd							E-W STREET: Crystal Ridge Lane							PED COUNT			
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0							0				
07:30-07:45							0							0				
07:45-08:00							0							0				
08:00-08:15		1					1							0				
08:15-08:30		2					2							0				
08:30-08:45							0							0				
08:45-09:00		1					1							0				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30							0							0				
16:30-16:45							0							0				
16:45-17:00							0							0				
17:00-17:15					1		1							0				
17:15-17:30					1		1							0				
17:30-17:45		2					2							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		08:00-09:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	4	0		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		0	2	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:45-17:45		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	2	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

TRUCK COUNT 3 Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Reche Canyon Plaza City of Colton
PROJECT NO: 16280
DATE: 12/8/16

TIME	N-S STREET: Reche Canyon Rd							E-W STREET: Crystal Ridge Lane							PED COUNT			
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30		1			1		2							0				
07:30-07:45							0							0				
07:45-08:00							0							0				
08:00-08:15					2		2							0				
08:15-08:30							0							0				
08:30-08:45							0							0				
08:45-09:00					1		1							0				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30							0							0				
16:30-16:45							0							0				
16:45-17:00					1		1							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45		1					1							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	3	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:15-08:15		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	1	0		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		0	1	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:45-17:45		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	1	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

AXLE COUNT PEAK HOUR SUMMARY

Input areas in Yellow

Location	**Reche Cyn at Washington**																		
Peak Hour:	AM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		737	0	887		0	0	0		0	956	247		242	624	0			
Ttl w/pce factor	1.0	737	0	887	1624	0	0	0	0	0	956	247	1203	242	624	0	866	**3693**	**0.99**
3 Axle Truck		2	0	0		0	0	0		0	3	0		1	1	0			
Ttl w/pce factor	2.0	4	0	0	4	0	0	0	0	0	6	0	6	2	2	0	4	**14**	**0.00**
4+ Axle Truck		1	0	0		0	0	0		0	3	0		0	1	0			
Ttl w/pce factor	3.0	3	0	0	3	0	0	0	0	0	9	0	9	0	3	0	3	**15**	**0.00**
Total Movement	AM Peak	744	0	887	1631	0	0	0	0	0	971	247	1218	244	629	0	873	**3722**	
Location	**Reche Cyn at Washington**																		
Peak Hour:	PM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		579	0	596		0	0	0		0	894	898		798	804	0			
Ttl w/pce factor	1.0	579	0	596	1175	0	0	0	0	0	894	898	1792	798	804	0	1602	**4569**	**1.00**
3 Axle Truck		1	0	0		0	0	0		0	3	0		0	1	0			
Ttl w/pce factor	2.0	2	0	0	2	0	0	0	0	0	6	0	6	0	2	0	2	**10**	**0.00**
4+ Axle Truck		0	0	0		0	0	0		0	0	0		0	1	0			
Ttl w/pce factor	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	**3**	**0.00**
Total Movement	PM Peak	581	0	596	1177	0	0	0	0	0	900	898	1798	798	809	0	1607	**4582**	

TURNING MOVEMENT COUNT

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2016

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Washington Street							1	9	5	13
	12	11	10	4	3	2		16	15	14	8	7	6		PED COUNT			
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	223		215				438		167	39	54	110		370				
07:15-07:30	196		183				379		224	56	58	127		465				
07:30-07:45	189		254				443		248	63	69	160		540				
07:45-08:00	166		254				420		245	77	55	187		564				
08:00-08:15	186		196				382		239	51	60	150		500				
08:15-08:30	139		187				326		218	64	45	137		464				
08:30-08:45	168		166				334		179	55	49	97		380		2		
08:45-09:00	97		176				273		187	76	83	121		467				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15	95		102				197		160	176	198	218		752				
16:15-16:30	92		133				225		187	216	226	242		871		2	3	
16:30-16:45	92		119				211		187	222	203	227		839				
16:45-17:00	115		157				272		218	224	182	180		804				
17:00-17:15	132		121				253		198	171	190	181		740				
17:15-17:30	128		136				264		239	246	168	153		806				
17:30-17:45	168		175				343		230	244	212	224		910				
17:45-18:00	151		164				315		227	237	228	246		938				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		SR	ST	SL		
		0	0	0		
0	EL				WR	0
956	ET		07:15-08:15		WT	624
247	ER				WL	242
		NL	NT	NR		
		737	0	887		

ADJUSTED PEAK HOUR VOLUMES-AM

		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		SR	ST	SL		
		0	0	0		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		SR	ST	SL		
		0	0	0		
0	EL				WR	0
894	ET		17:00-18:00		WT	804
898	ER				WL	798
		NL	NT	NR		
		579	0	596		

ADJUSTED PEAK HOUR VOLUMES-PM

		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

TRUCK COUNT 3 Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2016

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Washington Street										
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0					1		1				
07:30-07:45							0		1		1	1		3				
07:45-08:00	1						1							0				
08:00-08:15	1						1							0				
08:15-08:30							0		2					2				
08:30-08:45							0		1			2		3				
08:45-09:00							0		1					1				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30							0		2					2				
16:30-16:45							0		1			1		2				
16:45-17:00	1						1							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45							0					1		1				
17:45-18:00							0		2					2				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0	
		SR	ST	SL	
0	EL			WR	0
3	ET	07:30-08:30		WT	1
0	ER			WL	1
		NL	NT	NR	
		2	0	0	

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET	11:00-12:00		WT	0
0	ER			WL	0
		NL	NT	NR	
		0	0	0	

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

CALCULATED PEAK HOUR VOLUMES-PM

		0	0	0	
		SR	ST	SL	
0	EL			WR	0
3	ET	16:00-17:00		WT	1
0	ER			WL	0
		NL	NT	NR	
		1	0	0	

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____	
		SR	ST	SL	
____	EL			WR	____
____	ET		____	WT	____
____	ER			WL	____
		NL	NT	NR	
		____	____	____	

TRUCK COUNT 4+ Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/8/2016

TIME	N-S STREET: Reche Cyn Road							E-W STREET: Washington Street										
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0					2		2				
07:30-07:45							0			1				1				
07:45-08:00							0		1					1				
08:00-08:15							0							0				
08:15-08:30							0							0				
08:30-08:45	1						1		2			1		3				
08:45-09:00							0							0				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30							0					1		1				
16:30-16:45							0							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45							0							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
3	ET		07:45-08:45		WT	1
0	ER				WL	0
		NL	NT	NR		
		1	0	0		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	1
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

AXLE COUNT PEAK HOUR SUMMARY

Input areas in Yellow

Location	**Barton at Washington**																		
Peak Hour:	AM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		10	141	557		58	124	143		144	601	1		322	907	48			
Ttl w/pce factor	1.0	10	141	557	708	58	124	143	325	144	601	1	746	322	907	48	1277	**3056**	**0.99**
3 Axle Truck		0	0	2		0	0	0		0	0	0		3	0	0			
Ttl w/pce factor	2.0	0	0	4	4	0	0	0	0	0	0	0	0	6	0	0	6	**10**	**0.00**
4+ Axle Truck		0	0	1		0	0	0		0	0	0		1	1	0			
Ttl w/pce factor	3.0	0	0	3	3	0	0	0	0	0	0	0	0	3	3	0	6	**9**	**0.00**
Total Movement	AM Peak	10	141	564	715	58	124	143	325	144	601	1	746	331	910	48	1289	**3075**	
Location	**Barton at Washington**																		
Peak Hour:	PM Peak																		
Direction		North Bound				South Bound				East Bound				West Bound					
Veh Type	Pce Factor	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	LT	THRU	RT	Total	**Total**	**% of Total**
Car/2 axle Veh		13	233	524		121	469	210		176	961	6		315	603	21			
Ttl w/pce factor	1.0	13	233	524	770	121	469	210	800	176	961	6	1143	315	603	21	939	**3652**	**1.00**
3 Axle Truck		0	0	0		0	0	0		0	1	0		0	2	0			
Ttl w/pce factor	2.0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	4	**6**	**0.00**
4+ Axle Truck		0	0	0		0	0	0		0	3	0		0	0	0			
Ttl w/pce factor	3.0	0	0	0	0	0	0	0	0	0	9	0	9	0	0	0	0	**9**	**0.00**
Total Movement	PM Peak	13	233	524	770	121	469	210	800	176	972	6	1154	315	607	21	943	**3667**	

TURNING MOVEMENT COUNT

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/6/2016

TIME	N-S STREET: Barton Road							E-W STREET: Washington Street											
	12	11	10	4	3	2		16	15	14	8	7	6		1	9	5	13
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	1	12	79	11	16	36	155	19	146	1	55	206	23	450	1		1	
07:15-07:30	2	27	112	16	29	36	222	24	131		82	219	10	466	1		1	1
07:30-07:45	1	41	163	15	31	38	289	53	176		83	221	17	550				1
07:45-08:00	5	48	170	22	47	48	340	47	138	1	88	221	10	505			1	
08:00-08:15	2	25	112	5	17	21	182	20	156		69	246	11	502				
08:15-08:30	1	16	85	12	37	23	174	15	133	1	51	185	14	399	1	6	6	
08:30-08:45	1	13	87	12	15	20	148	10	118	1	53	159	10	351	1			
08:45-09:00		17	78	12	19	21	147	13	140		69	154	10	386				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15	1	30	89	21	45	36	222	34	217	4	86	175	7	523				
16:15-16:30		45	92	23	67	32	259	38	202	1	86	159	4	490	2	1		
16:30-16:45	1	41	129	30	59	41	301	45	211	2	88	152	8	506	2	2	1	
16:45-17:00	4	43	112	25	90	54	328	47	311	1	54	149	3	565		1		
17:00-17:15	5	54	125	37	111	52	384	45	252	1	77	131	4	510				
17:15-17:30	4	76	156	31	106	53	426	34	206	2	92	158	5	497				
17:30-17:45	2	60	109	33	137	45	386	41	253	1	60	164	6	525		1		
17:45-18:00	2	43	134	20	115	60	374	56	250	2	86	150	6	550				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		143	124	58		
		SR	ST	SL		
144	EL				WR	48
601	ET		07:15-08:15		WT	907
1	ER				WL	322
		NL	NT	NR		
		10	141	557		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		210	469	121		
		SR	ST	SL		
176	EL				WR	21
961	ET		17:00-18:00		WT	603
6	ER				WL	315
		NL	NT	NR		
		13	233	524		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

TRUCK COUNT 3 Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/6/2016

TIME	N-S STREET: Barton Road							E-W STREET: Washington Street							PED COUNT			
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15			1				1				1			1				
07:15-07:30			1				1				1			1				
07:30-07:45							0							0				
07:45-08:00							0				1			1				
08:00-08:15							0		1					1				
08:15-08:30		1					1						1	1				
08:30-08:45							0							0				
08:45-09:00							0		1					1				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0		1					1				
16:15-16:30							0							0				
16:30-16:45							0					1		1				
16:45-17:00							0							0				
17:00-17:15							0		1					1				
17:15-17:30							0					1		1				
17:30-17:45							0							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	0
0	ER				WL	3
		NL	NT	NR		
		0	0	2		

ADJUSTED PEAK HOUR VOLUMES-AM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

CALCULATED PEAK HOUR VOLUMES-PM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
1	ET		16:30-17:30		WT	2
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		____	____	____		
		SR	ST	SL		
____	EL				WR	____
____	ET		____		WT	____
____	ER				WL	____
		NL	NT	NR		
		____	____	____		

TRUCK COUNT 4+ Axle
Turning Movement Count
AXLE COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: Colton
PROJECT NO: 16280
DATE: 12/6/2016

TIME	N-S STREET: Barton Road							E-W STREET: Washington Street											
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15			1				1				1			1				
07:15-07:30							0							0				
07:30-07:45							0					1		1				
07:45-08:00							0							0				
08:00-08:15							0	1	1					2				
08:15-08:30							0							0				
08:30-08:45							0							0				
08:45-09:00							0		1					1				
11:00-11:15							0							0				
11:15-11:30							0							0				
11:30-11:45							0							0				
11:45-12:00							0							0				
12:00-12:15							0							0				
12:15-12:30							0							0				
12:30-12:45							0							0				
12:45-13:00							0							0				
16:00-16:15							0							0				
16:15-16:30							0		1					1				
16:30-16:45							0							0				
16:45-17:00							0		1					1				
17:00-17:15							0		1					1				
17:15-17:30							0		1					1				
17:30-17:45							0							0				
17:45-18:00							0		1					1				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	1
0	ER				WL	1
		NL	NT	NR		
		0	0	1		

ADJUSTED PEAK HOUR VOLUMES-AM

		SR	ST	SL		
	EL				WR	
	ET				WT	
	ER				WL	
		NL	NT	NR		

CALCULATED PEAK HOUR VOLUMES-NOON

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		11:00-12:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-NOON

		SR	ST	SL		
	EL				WR	
	ET				WT	
	ER				WL	
		NL	NT	NR		

CALCULATED PEAK HOUR VOLUMES-PM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
3	ET		16:15-17:15		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES-PM

		SR	ST	SL		
	EL				WR	
	ET				WT	
	ER				WL	
		NL	NT	NR		

APPENDIX B-2:

YEAR 2021 TRAFFIC COUNT SHEETS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Colton
N/S: Reche Canyon Road
E/W: Crystal Ridge Lane
Weather: Clear

File Name : 01_COL_RC_CR AM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 1

Groups Printed- Total Volume

	Reche Canyon Road Southbound			Crystal Ridge Lane Westbound			Reche Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	4	92	96	1	8	9	302	1	303	408
07:15 AM	2	79	81	1	11	12	301	0	301	394
07:30 AM	2	106	108	1	18	19	287	1	288	415
07:45 AM	4	98	102	1	7	8	278	2	280	390
Total	12	375	387	4	44	48	1168	4	1172	1607
08:00 AM	3	96	99	0	3	3	309	0	309	411
08:15 AM	3	89	92	0	6	6	296	0	296	394
08:30 AM	1	86	87	1	4	5	279	1	280	372
08:45 AM	4	77	81	0	6	6	179	1	180	267
Total	11	348	359	1	19	20	1063	2	1065	1444
Grand Total	23	723	746	5	63	68	2231	6	2237	3051
Apprch %	3.1	96.9		7.4	92.6		99.7	0.3		
Total %	0.8	23.7	24.5	0.2	2.1	2.2	73.1	0.2	73.3	

	Reche Canyon Road Southbound			Crystal Ridge Lane Westbound			Reche Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	79	81	**1**	11	12	301	0	301	394
07:30 AM	2	**106**	**108**	1	**18**	**19**	287	1	288	**415**
07:45 AM	**4**	98	102	1	7	8	278	**2**	280	390
08:00 AM	3	96	99	0	3	3	**309**	0	**309**	411
Total Volume	11	379	390	3	39	42	1175	3	1178	1610
% App. Total	2.8	97.2		7.1	92.9		99.7	0.3		
PHF	.688	.894	.903	.750	.542	.553	.951	.375	.953	.970

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City of Colton
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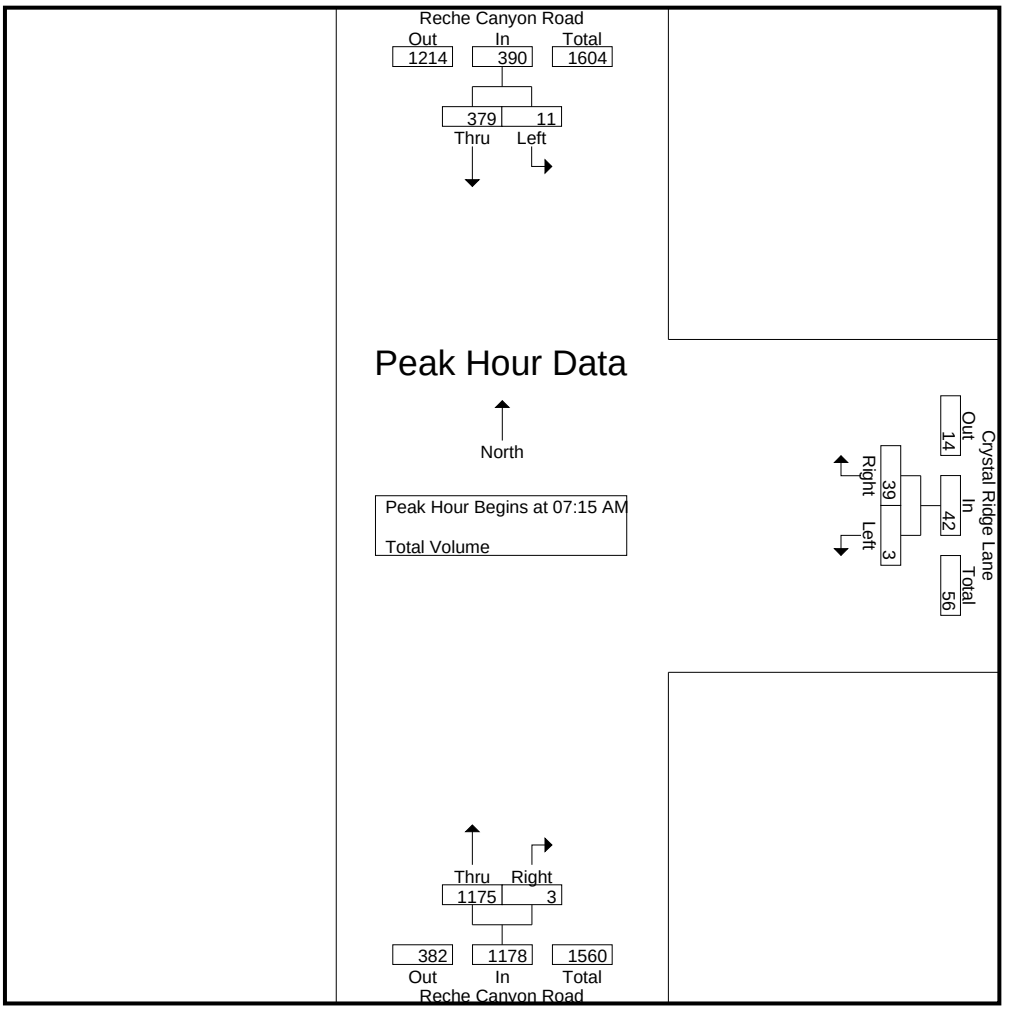
Weather: Clear

File Name : 01_COL_RC_CR AM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:15 AM		
+0 mins.	2	**106**	**108**	**1**	8	9	301	0	301
+15 mins.	**4**	98	102	1	11	12	287	1	288
+30 mins.	3	96	99	1	**18**	**19**	278	**2**	280
+45 mins.	3	89	92	1	7	8	**309**	0	**309**
Total Volume	12	389	401	4	44	48	1175	3	1178
% App. Total	3	97		8.3	91.7		99.7	0.3	
PHF	.750	.917	.928	1.000	.611	.632	.951	.375	.953

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City of Colton
N/S: Reche Canyon Road
E/W: Crystal Ridge Lane
Weather: Clear

File Name : 01_COL_RC_CR PM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 1

Groups Printed- Total Volume

	Reche Canyon Road Southbound			Crystal Ridge Lane Westbound			Reche Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	6	298	304	0	2	2	209	1	210	516
04:15 PM	4	299	303	2	4	6	201	1	202	511
04:30 PM	10	313	323	0	5	5	205	1	206	534
04:45 PM	5	281	286	0	2	2	205	1	206	494
Total	25	1191	1216	2	13	15	820	4	824	2055
05:00 PM	9	272	281	0	3	3	138	0	138	422
05:15 PM	5	280	285	0	2	2	191	2	193	480
05:30 PM	6	265	271	0	5	5	192	1	193	469
05:45 PM	5	284	289	2	6	8	161	0	161	458
Total	25	1101	1126	2	16	18	682	3	685	1829
Grand Total	50	2292	2342	4	29	33	1502	7	1509	3884
Apprch %	2.1	97.9		12.1	87.9		99.5	0.5		
Total %	1.3	59	60.3	0.1	0.7	0.8	38.7	0.2	38.9	

	Reche Canyon Road Southbound			Crystal Ridge Lane Westbound			Reche Canyon Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	6	298	304	0	2	2	**209**	**1**	**210**	516
04:15 PM	4	299	303	**2**	4	**6**	201	1	202	511
04:30 PM	**10**	**313**	**323**	0	**5**	5	205	1	206	**534**
04:45 PM	5	281	286	0	2	2	205	1	206	494
Total Volume	25	1191	1216	2	13	15	820	4	824	2055
% App. Total	2.1	97.9		13.3	86.7		99.5	0.5		
PHF	.625	.951	.941	.250	.650	.625	.981	1.00	.981	.962

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City of Colton
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E/W: Crystal Ridge Lane
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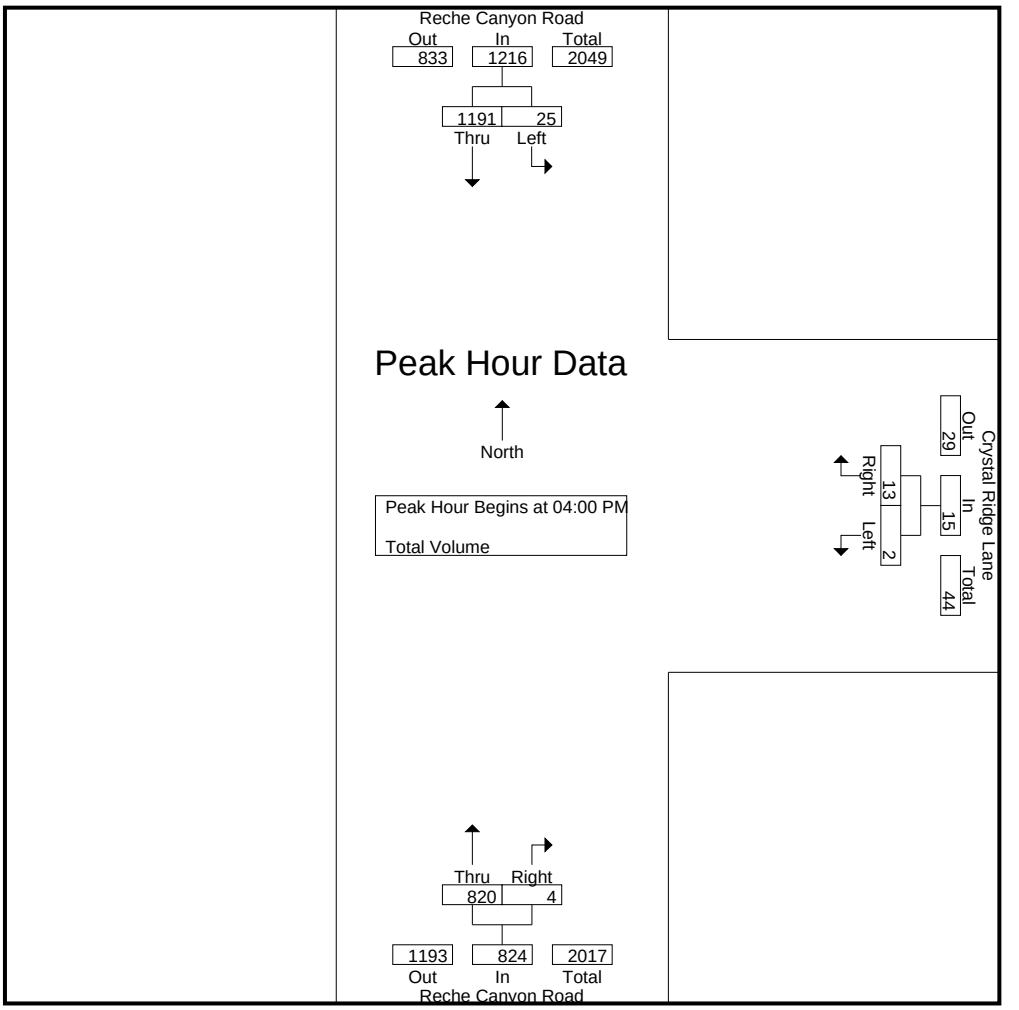
File Name : 01_COL_RC_CR PM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:00 PM		
+0 mins.	6	298	304	0	3	3	**209**	**1**	**210**
+15 mins.	4	299	303	0	2	2	201	1	202
+30 mins.	**10**	**313**	**323**	0	5	5	205	1	206
+45 mins.	5	281	286	**2**	**6**	**8**	205	1	206
Total Volume	25	1191	1216	2	16	18	820	4	824
% App. Total	2.1	97.9		11.1	88.9		99.5	0.5	
PHF	.625	.951	.941	.250	.667	.563	.981	1.000	.981

Counts Unlimited, Inc.
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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH AM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	79	5	84	0	0	0	0	0	271	1	272	15	0	0	15	371
07:15 AM	0	75	2	77	0	0	1	1	1	290	0	291	12	0	0	12	381
07:30 AM	0	102	11	113	0	1	0	1	1	276	0	277	14	0	0	14	405
07:45 AM	0	83	4	87	0	0	0	0	1	264	0	265	9	0	1	10	362
Total	0	339	22	361	0	1	1	2	3	1101	1	1105	50	0	1	51	1519
08:00 AM	0	94	5	99	0	0	0	0	1	280	0	281	12	0	0	12	392
08:15 AM	2	81	3	86	0	0	0	0	0	288	0	288	13	1	1	15	389
08:30 AM	0	82	4	86	0	0	0	0	2	249	0	251	8	0	1	9	346
08:45 AM	0	69	2	71	0	0	0	0	0	161	0	161	15	0	1	16	248
Total	2	326	14	342	0	0	0	0	3	978	0	981	48	1	3	52	1375
Grand Total	2	665	36	703	0	1	1	2	6	2079	1	2086	98	1	4	103	2894
Apprch %	0.3	94.6	5.1		0	50	50		0.3	99.7	0		95.1	1	3.9		
Total %	0.1	23	1.2	24.3	0	0	0	0.1	0.2	71.8	0	72.1	3.4	0	0.1	3.6	
Passenger Vehicles	1	651	31	683	0	1	1	2	6	2055	1	2062	97	1	3	101	2848
% Passenger Vehicles	50	97.9	86.1	97.2	0	100	100	100	100	98.8	100	98.8	99	100	75	98.1	98.4
Large 2 Axle Vehicles	1	11	3	15	0	0	0	0	0	15	0	15	1	0	1	2	32
% Large 2 Axle Vehicles	50	1.7	8.3	2.1	0	0	0	0	0	0.7	0	0.7	1	0	25	1.9	1.1
3 Axle Vehicles	0	1	2	3	0	0	0	0	0	3	0	3	0	0	0	0	6
% 3 Axle Vehicles	0	0.2	5.6	0.4	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.2
4+ Axle Trucks	0	2	0	2	0	0	0	0	0	6	0	6	0	0	0	0	8
% 4+ Axle Trucks	0	0.3	0	0.3	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.3

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**102**	**11**	**113**	0	**1**	0	**1**	**1**	276	0	277	**14**	0	0	14	**405**
07:45 AM	0	83	4	87	0	0	0	0	1	264	0	265	9	0	**1**	10	362
08:00 AM	0	94	5	99	0	0	0	0	1	280	0	281	12	0	0	12	392
08:15 AM	**2**	81	3	86	0	0	0	0	0	**288**	0	**288**	13	**1**	1	**15**	389
Total Volume	2	360	23	385	0	1	0	1	3	1108	0	1111	48	1	2	51	1548
% App. Total	0.5	93.5	6		0	100	0		0.3	99.7	0		94.1	2	3.9		
PHF	.250	.882	.523	.852	.000	.250	.000	.250	.750	.962	.000	.964	.857	.250	.500	.850	.956

Counts Unlimited, Inc.
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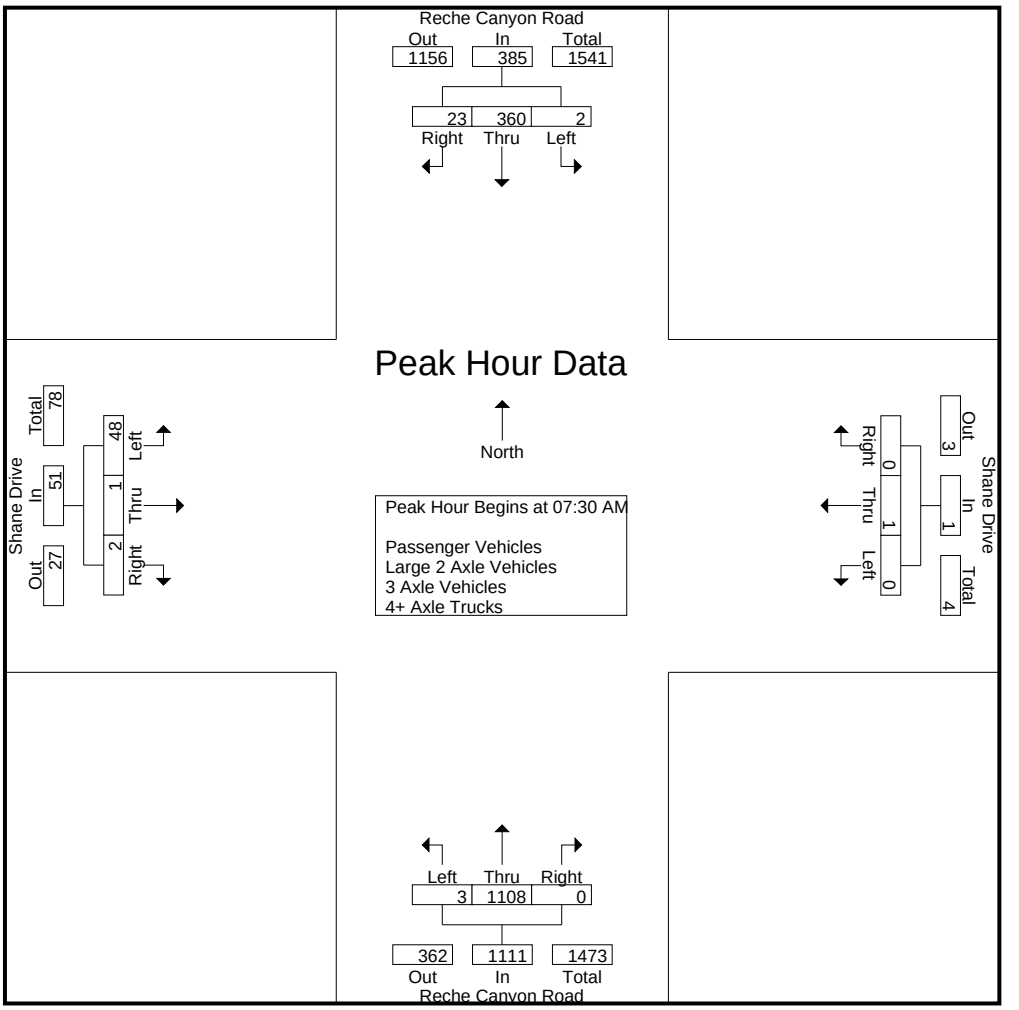
City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH AM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				08:00 AM			
+0 mins.	0	**102**	**11**	**113**	0	0	0	0	**1**	**290**	0	**291**	12	0	0	12
+15 mins.	0	83	4	87	0	0	**1**	**1**	1	276	0	277	13	**1**	**1**	15
+30 mins.	0	94	5	99	0	**1**	0	1	1	264	0	265	8	0	1	9
+45 mins.	**2**	81	3	86	0	0	0	0	1	280	0	281	**15**	0	1	**16**
Total Volume	2	360	23	385	0	1	1	2	4	1110	0	1114	48	1	3	52
% App. Total	0.5	93.5	6		0	50	50		0.4	99.6	0		92.3	1.9	5.8	
PHF	.250	.882	.523	.852	.000	.250	.250	.500	1.000	.957	.000	.957	.800	.250	.750	.813

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH AM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	76	5	81	0	0	0	0	0	271	1	272	15	0	0	15	368
07:15 AM	0	74	2	76	0	0	1	1	1	284	0	285	12	0	0	12	374
07:30 AM	0	99	9	108	0	1	0	1	1	270	0	271	14	0	0	14	394
07:45 AM	0	83	3	86	0	0	0	0	1	261	0	262	9	0	1	10	358
Total	0	332	19	351	0	1	1	2	3	1086	1	1090	50	0	1	51	1494
08:00 AM	0	93	4	97	0	0	0	0	1	280	0	281	12	0	0	12	390
08:15 AM	1	78	3	82	0	0	0	0	0	284	0	284	13	1	0	14	380
08:30 AM	0	80	3	83	0	0	0	0	2	247	0	249	8	0	1	9	341
08:45 AM	0	68	2	70	0	0	0	0	0	158	0	158	14	0	1	15	243
Total	1	319	12	332	0	0	0	0	3	969	0	972	47	1	2	50	1354
Grand Total	1	651	31	683	0	1	1	2	6	2055	1	2062	97	1	3	101	2848
Apprch %	0.1	95.3	4.5		0	50	50		0.3	99.7	0		96	1	3		
Total %	0	22.9	1.1	24	0	0	0	0.1	0.2	72.2	0	72.4	3.4	0	0.1	3.5	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**99**	**9**	**108**	0	**1**	0	**1**	**1**	270	0	271	**14**	0	0	**14**	**394**
07:45 AM	0	83	3	86	0	0	0	0	1	261	0	262	9	0	**1**	10	358
08:00 AM	0	93	4	97	0	0	0	0	1	280	0	281	12	0	0	12	390
08:15 AM	**1**	78	3	82	0	0	0	0	0	**284**	0	**284**	13	**1**	0	14	380
Total Volume	1	353	19	373	0	1	0	1	3	1095	0	1098	48	1	1	50	1522
% App. Total	0.3	94.6	5.1		0	100	0		0.3	99.7	0		96	2	2		
PHF	.250	.891	.528	.863	.000	.250	.000	.250	.750	.964	.000	.967	.857	.250	.250	.893	.966

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City of Colton
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E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH AM
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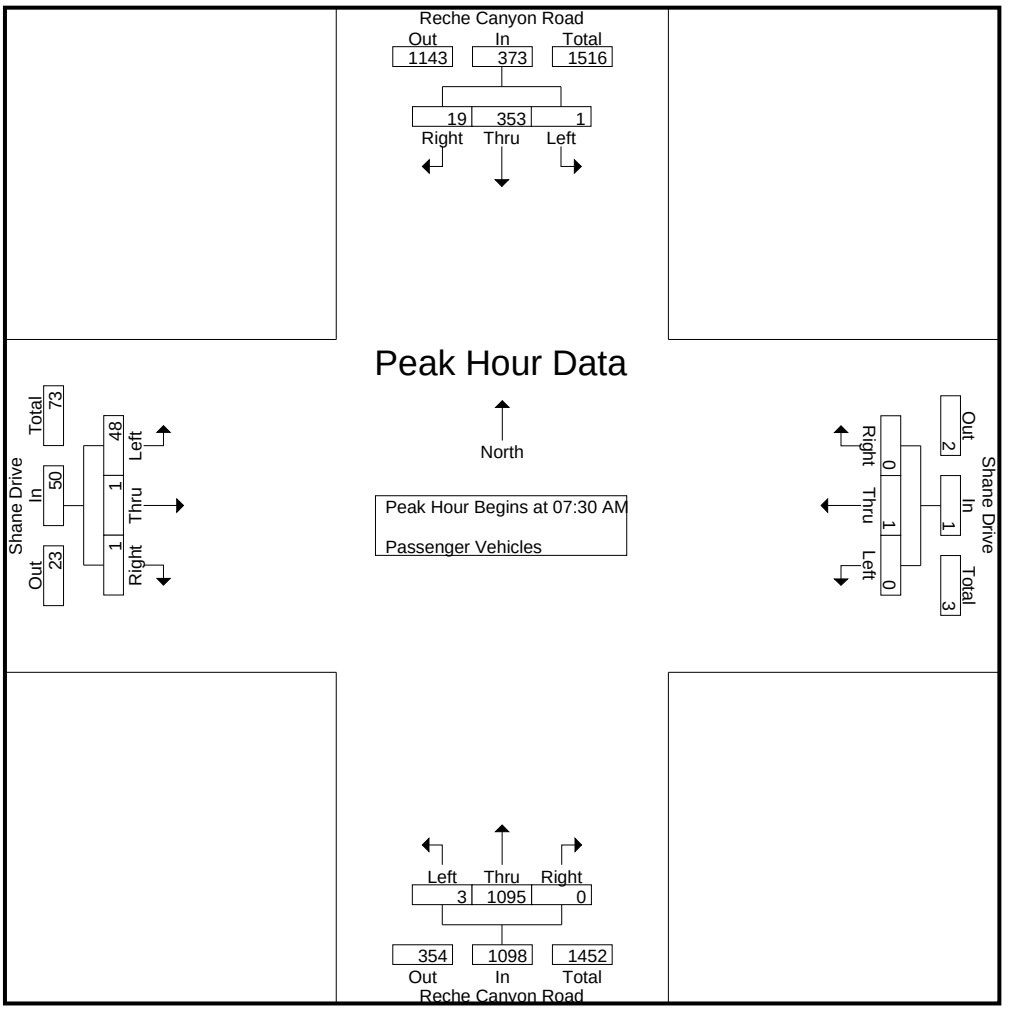

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**99**	**9**	**108**	0	**1**	0	**1**	**1**	270	0	271	**14**	0	0	**14**
+15 mins.	0	83	3	86	0	0	0	0	1	261	0	262	9	0	**1**	10
+30 mins.	0	93	4	97	0	0	0	0	1	280	0	281	12	0	0	12
+45 mins.	**1**	78	3	82	0	0	0	0	0	**284**	0	**284**	13	**1**	0	14
Total Volume	1	353	19	373	0	1	0	1	3	1095	0	1098	48	1	1	50
% App. Total	0.3	94.6	5.1		0	100	0		0.3	99.7	0		96	2	2	
PHF	.250	.891	.528	.863	.000	.250	.000	.250	.750	.964	.000	.967	.857	.250	.250	.893

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File Name : 02_COL_RC_SH AM
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Groups Printed- Large 2 Axle Vehicles

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	2	1	3	0	0	0	0	0	5	0	5	0	0	0	0	8
07:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	5	1	6	0	0	0	0	0	9	0	9	0	0	0	0	15
08:00 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	1	2	0	3	0	0	0	0	0	2	0	2	0	0	1	1	6
08:30 AM	0	2	1	3	0	0	0	0	0	2	0	2	0	0	0	0	5
08:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	1	0	0	1	4
Total	1	6	2	9	0	0	0	0	0	6	0	6	1	0	1	2	17
Grand Total	1	11	3	15	0	0	0	0	0	15	0	15	1	0	1	2	32
Apprch %	6.7	73.3	20		0	0	0		0	100	0		50	0	50		
Total %	3.1	34.4	9.4	46.9	0	0	0	0	0	46.9	0	46.9	3.1	0	3.1	6.2	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**2**	**1**	**3**	0	0	0	0	0	**5**	0	**5**	0	0	0	0	**8**
07:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:00 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	**1**	2	0	3	0	0	0	0	0	2	0	2	0	0	**1**	**1**	6
Total Volume	1	5	2	8	0	0	0	0	0	9	0	9	0	0	1	1	18
% App. Total	12.5	62.5	25		0	0	0		0	100	0		0	0	100		
PHF	.250	.625	.500	.667	.000	.000	.000	.000	.000	.450	.000	.450	.000	.000	.250	.250	.563

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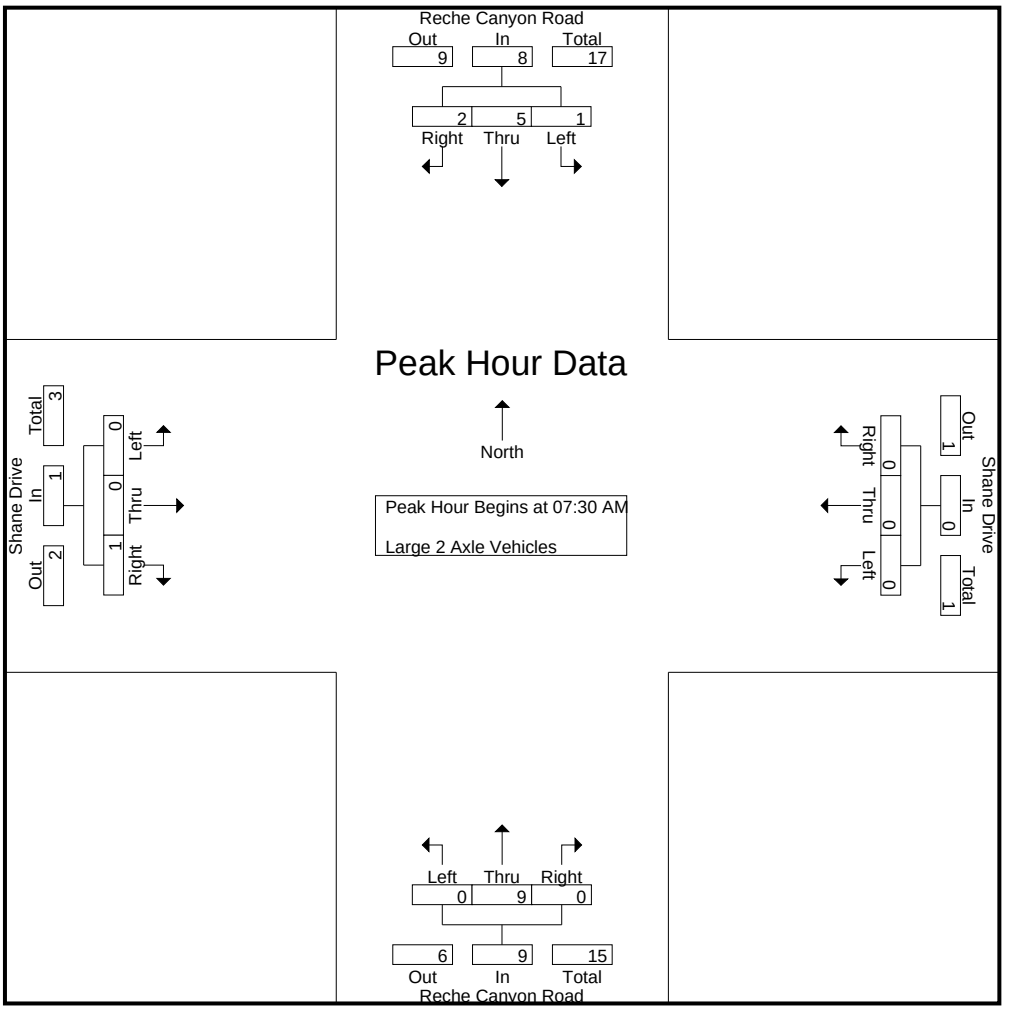

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**2**	**1**	**3**	0	0	0	0	0	**5**	0	**5**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	**1**	2	0	3	0	0	0	0	0	2	0	2	0	0	**1**	**1**
Total Volume	1	5	2	8	0	0	0	0	0	9	0	9	0	0	1	1
% App. Total	12.5	62.5	25		0	0	0		0	100	0		0	0	100	
PHF	.250	.625	.500	.667	.000	.000	.000	.000	.000	.450	.000	.450	.000	.000	.250	.250

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Groups Printed- 3 Axle Vehicles

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	2	3	0	0	0	0	0	2	0	2	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	1	2	3	0	0	0	0	0	3	0	3	0	0	0	0	6
Apprch %	0	33.3	66.7		0	0	0		0	100	0		0	0	0		
Total %	0	16.7	33.3	50	0	0	0	0	0	50	0	50	0	0	0	0	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	**1**	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
Total Volume	0	1	2	3	0	0	0	0	0	1	0	1	0	0	0	0	4
% App. Total	0	33.3	66.7		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.500	.375	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.500

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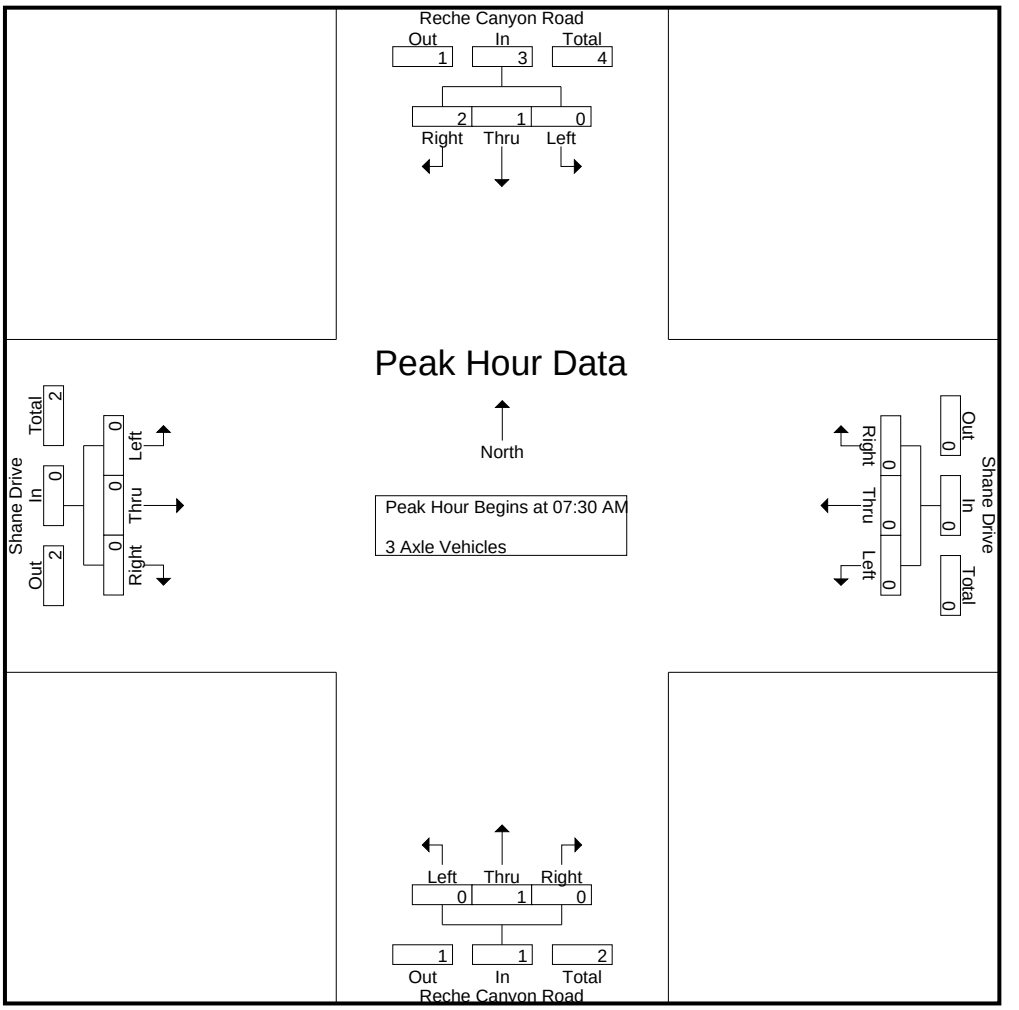

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	**1**	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
Total Volume	0	1	2	3	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	33.3	66.7		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.500	.375	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Grand Total	0	2	0	2	0	0	0	0	0	6	0	6	0	0	0	0	8
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	25	0	25	0	0	0	0	0	75	0	75	0	0	0	0	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	**1**	0	**1**	0	0	0	0	0	1	0	1	0	0	0	0	**2**
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.500

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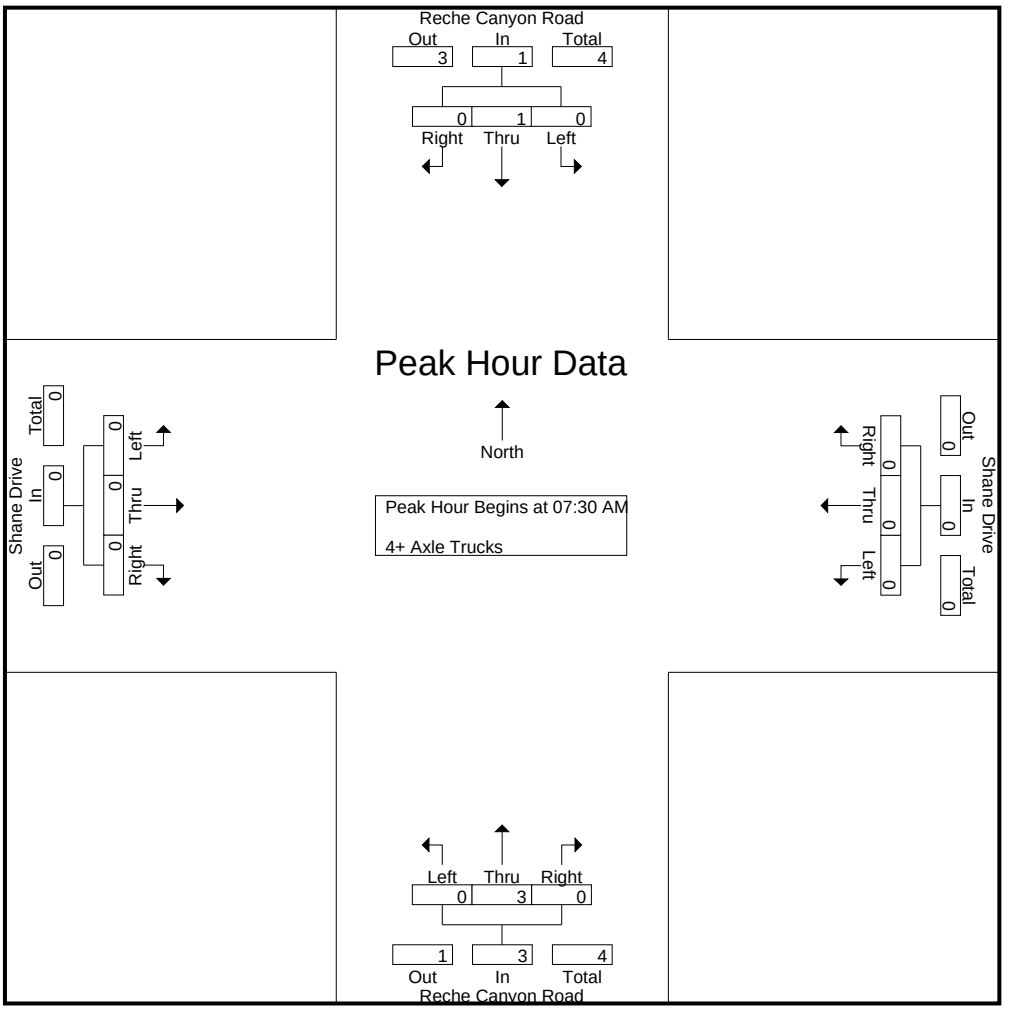

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	0	**1**	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000

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City of Colton
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	269	7	276	0	0	0	0	2	203	0	205	5	0	1	6	487
04:15 PM	1	283	12	296	0	0	0	0	1	182	0	183	8	0	0	8	487
04:30 PM	0	294	12	306	0	0	1	1	0	195	0	195	3	0	0	3	505
04:45 PM	0	279	11	290	0	0	1	1	0	197	0	197	8	0	1	9	497
Total	1	1125	42	1168	0	0	2	2	3	777	0	780	24	0	2	26	1976
05:00 PM	0	251	15	266	0	0	0	0	0	148	1	149	4	1	3	8	423
05:15 PM	0	268	6	274	0	0	3	3	0	174	0	174	6	0	1	7	458
05:30 PM	2	241	16	259	0	1	4	5	2	174	0	176	6	0	2	8	448
05:45 PM	2	261	16	279	0	0	0	0	1	149	0	150	9	0	1	10	439
Total	4	1021	53	1078	0	1	7	8	3	645	1	649	25	1	7	33	1768
Grand Total	5	2146	95	2246	0	1	9	10	6	1422	1	1429	49	1	9	59	3744
Apprch %	0.2	95.5	4.2		0	10	90		0.4	99.5	0.1		83.1	1.7	15.3		
Total %	0.1	57.3	2.5	60	0	0	0.2	0.3	0.2	38	0	38.2	1.3	0	0.2	1.6	
Passenger Vehicles	4	2118	93	2215	0	1	9	10	6	1400	1	1407	47	1	9	57	3689
% Passenger Vehicles	80	98.7	97.9	98.6	0	100	100	100	100	98.5	100	98.5	95.9	100	100	96.6	98.5
Large 2 Axle Vehicles	1	19	1	21	0	0	0	0	0	17	0	17	2	0	0	2	40
% Large 2 Axle Vehicles	20	0.9	1.1	0.9	0	0	0	0	0	1.2	0	1.2	4.1	0	0	3.4	1.1
3 Axle Vehicles	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
% 3 Axle Vehicles	0	0.2	0	0.2	0	0	0	0	0	0.4	0	0.3	0	0	0	0	0.2
4+ Axle Trucks	0	5	1	6	0	0	0	0	0	0	0	0	0	0	0	0	6
% 4+ Axle Trucks	0	0.2	1.1	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.2

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	269	7	276	0	0	0	0	**2**	**203**	0	**205**	5	0	**1**	6	487
04:15 PM	**1**	283	**12**	296	0	0	0	0	1	182	0	183	**8**	0	0	8	487
04:30 PM	0	**294**	12	**306**	0	0	**1**	**1**	0	195	0	195	3	0	0	3	**505**
04:45 PM	0	279	11	290	0	0	1	1	0	197	0	197	8	0	1	**9**	497
Total Volume	1	1125	42	1168	0	0	2	2	3	777	0	780	24	0	2	26	1976
% App. Total	0.1	96.3	3.6		0	0	100		0.4	99.6	0		92.3	0	7.7		
PHF	.250	.957	.875	.954	.000	.000	.500	.500	.375	.957	.000	.951	.750	.000	.500	.722	.978

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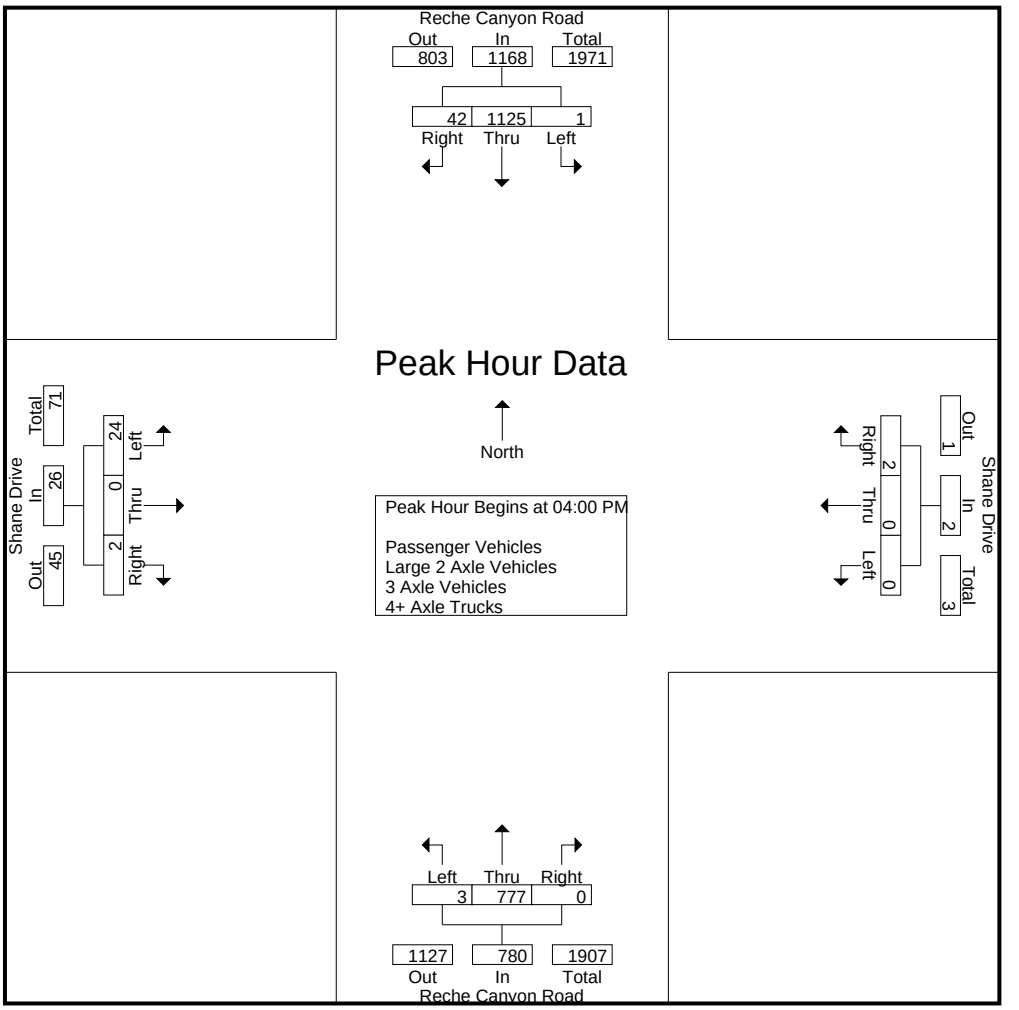

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				04:00 PM				05:00 PM			
+0 mins.	0	269	7	276	0	0	1	1	**2**	**203**	0	**205**	4	**1**	**3**	8
+15 mins.	**1**	283	**12**	296	0	0	0	0	1	182	0	183	6	0	1	7
+30 mins.	0	**294**	12	**306**	0	0	3	3	0	195	0	195	6	0	2	8
+45 mins.	0	279	11	290	0	**1**	**4**	**5**	0	197	0	197	**9**	0	1	**10**
Total Volume	1	1125	42	1168	0	1	8	9	3	777	0	780	25	1	7	33
% App. Total	0.1	96.3	3.6		0	11.1	88.9		0.4	99.6	0		75.8	3	21.2	
PHF	.250	.957	.875	.954	.000	.250	.500	.450	.375	.957	.000	.951	.694	.250	.583	.825

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH PM
Site Code : 00321457
Start Date : 9/2/2021
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Groups Printed- Passenger Vehicles

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	265	6	271	0	0	0	0	2	200	0	202	5	0	1	6	479
04:15 PM	1	279	12	292	0	0	0	0	1	178	0	179	8	0	0	8	479
04:30 PM	0	294	12	306	0	0	1	1	0	190	0	190	3	0	0	3	500
04:45 PM	0	277	11	288	0	0	1	1	0	196	0	196	7	0	1	8	493
Total	1	1115	41	1157	0	0	2	2	3	764	0	767	23	0	2	25	1951
05:00 PM	0	249	14	263	0	0	0	0	0	146	1	147	4	1	3	8	418
05:15 PM	0	262	6	268	0	0	3	3	0	171	0	171	5	0	1	6	448
05:30 PM	1	235	16	252	0	1	4	5	2	171	0	173	6	0	2	8	438
05:45 PM	2	257	16	275	0	0	0	0	1	148	0	149	9	0	1	10	434
Total	3	1003	52	1058	0	1	7	8	3	636	1	640	24	1	7	32	1738
Grand Total	4	2118	93	2215	0	1	9	10	6	1400	1	1407	47	1	9	57	3689
Apprch %	0.2	95.6	4.2		0	10	90		0.4	99.5	0.1		82.5	1.8	15.8		
Total %	0.1	57.4	2.5	60	0	0	0.2	0.3	0.2	38	0	38.1	1.3	0	0.2	1.5	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	265	6	271	0	0	0	0	**2**	**200**	0	**202**	5	0	**1**	6	479
04:15 PM	**1**	279	**12**	292	0	0	0	0	1	178	0	179	**8**	0	0	**8**	479
04:30 PM	0	**294**	12	**306**	0	0	**1**	**1**	0	190	0	190	3	0	0	3	**500**
04:45 PM	0	277	11	288	0	0	1	1	0	196	0	196	7	0	1	8	493
Total Volume	1	1115	41	1157	0	0	2	2	3	764	0	767	23	0	2	25	1951
% App. Total	0.1	96.4	3.5		0	0	100		0.4	99.6	0		92	0	8		
PHF	.250	.948	.854	.945	.000	.000	.500	.500	.375	.955	.000	.949	.719	.000	.500	.781	.976

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH PM
Site Code : 00321457
Start Date : 9/2/2021
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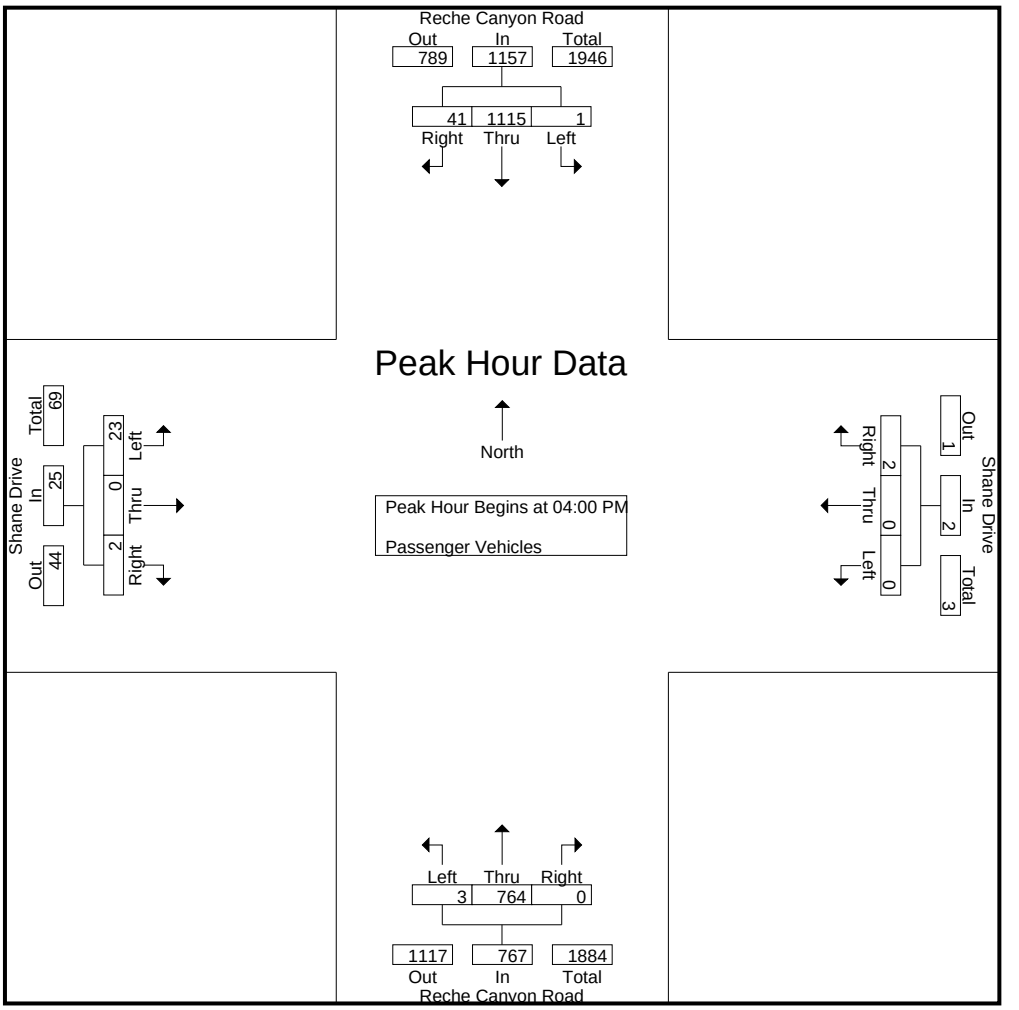

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	265	6	271	0	0	0	0	**2**	**200**	0	**202**	5	0	**1**	6
+15 mins.	**1**	279	**12**	292	0	0	0	0	1	178	0	179	**8**	0	0	**8**
+30 mins.	0	**294**	12	**306**	0	0	**1**	**1**	0	190	0	190	3	0	0	3
+45 mins.	0	277	11	288	0	0	1	1	0	196	0	196	7	0	1	8
Total Volume	1	1115	41	1157	0	0	2	2	3	764	0	767	23	0	2	25
% App. Total	0.1	96.4	3.5		0	0	100		0.4	99.6	0		92	0	8	
PHF	.250	.948	.854	.945	.000	.000	.500	.500	.375	.955	.000	.949	.719	.000	.500	.781

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH PM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
04:15 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
04:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
Total	0	5	0	5	0	0	0	0	0	10	0	10	1	0	0	1	16
05:00 PM	0	2	1	3	0	0	0	0	0	1	0	1	0	0	0	0	4
05:15 PM	0	6	0	6	0	0	0	0	0	3	0	3	1	0	0	1	10
05:30 PM	1	3	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
05:45 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
Total	1	14	1	16	0	0	0	0	0	7	0	7	1	0	0	1	24
Grand Total	1	19	1	21	0	0	0	0	0	17	0	17	2	0	0	2	40
Apprch %	4.8	90.5	4.8		0	0	0		0	100	0		100	0	0		
Total %	2.5	47.5	2.5	52.5	0	0	0	0	0	42.5	0	42.5	5	0	0	5	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**2**	0	**2**	0	0	0	0	0	**3**	0	**3**	0	0	0	0	**5**
04:15 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
04:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	**1**	0	0	**1**	3
Total Volume	0	5	0	5	0	0	0	0	0	10	0	10	1	0	0	1	16
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0		
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.000	.833	.000	.833	.250	.000	.000	.250	.800

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
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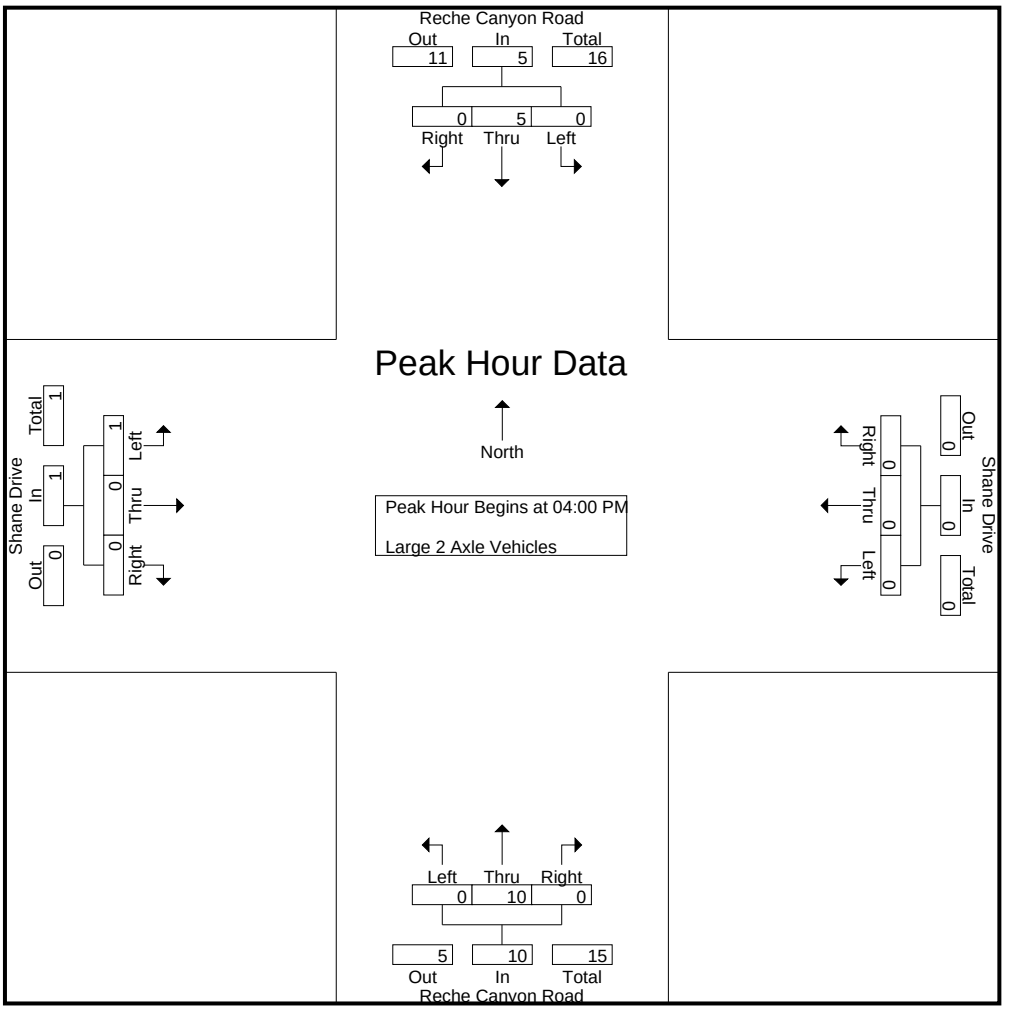

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	0	**3**	0	**3**	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	**1**	0	0	**1**
Total Volume	0	5	0	5	0	0	0	0	0	10	0	10	1	0	0	1
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0	
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.000	.833	.000	.833	.250	.000	.000	.250

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH PM
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Groups Printed- 3 Axle Vehicles

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Grand Total	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	44.4	0	44.4	0	0	0	0	0	55.6	0	55.6	0	0	0	0	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	**1**	0	**1**	0	0	0	0	0	1	0	1	0	0	0	0	**2**
04:30 PM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.500

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH PM
Site Code : 00321457
Start Date : 9/2/2021
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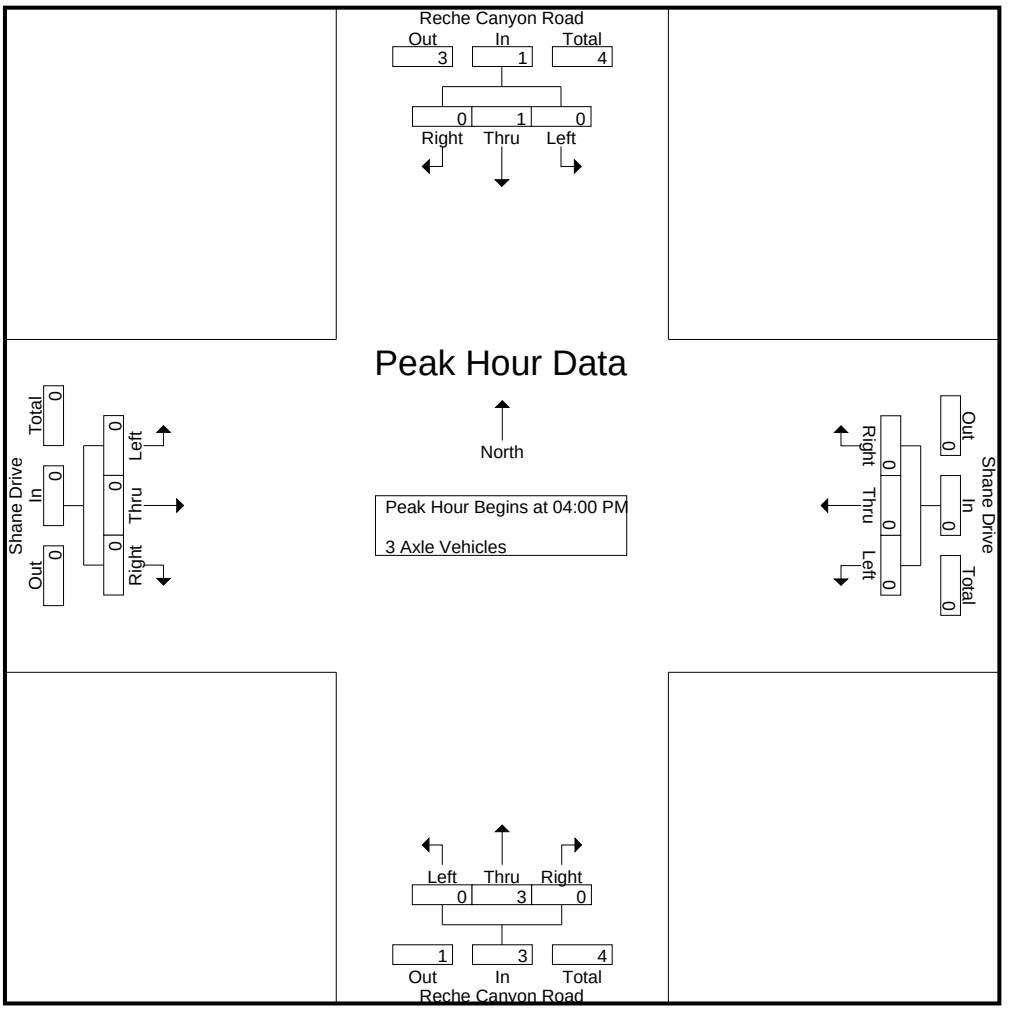

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
Weather: Clear

File Name : 02_COL_RC_SH PM
Site Code : 00321457
Start Date : 9/2/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	4	1	5	0	0	0	0	0	0	0	0	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	5	1	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Apprch %	0	83.3	16.7		0	0	0		0	0	0		0	0	0		
Total %	0	83.3	16.7	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Reche Canyon Road Southbound				Shane Drive Westbound				Reche Canyon Road Northbound				Shane Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0	0	0	0	0	**3**
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	4	1	5	0	0	0	0	0	0	0	0	0	0	0	0	5
% App. Total	0	80	20		0	0	0		0	0	0		0	0	0		
PHF	.000	.500	.250	.417	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417

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City of Colton
N/S: Reche Canyon Road
E/W: Shane Drive
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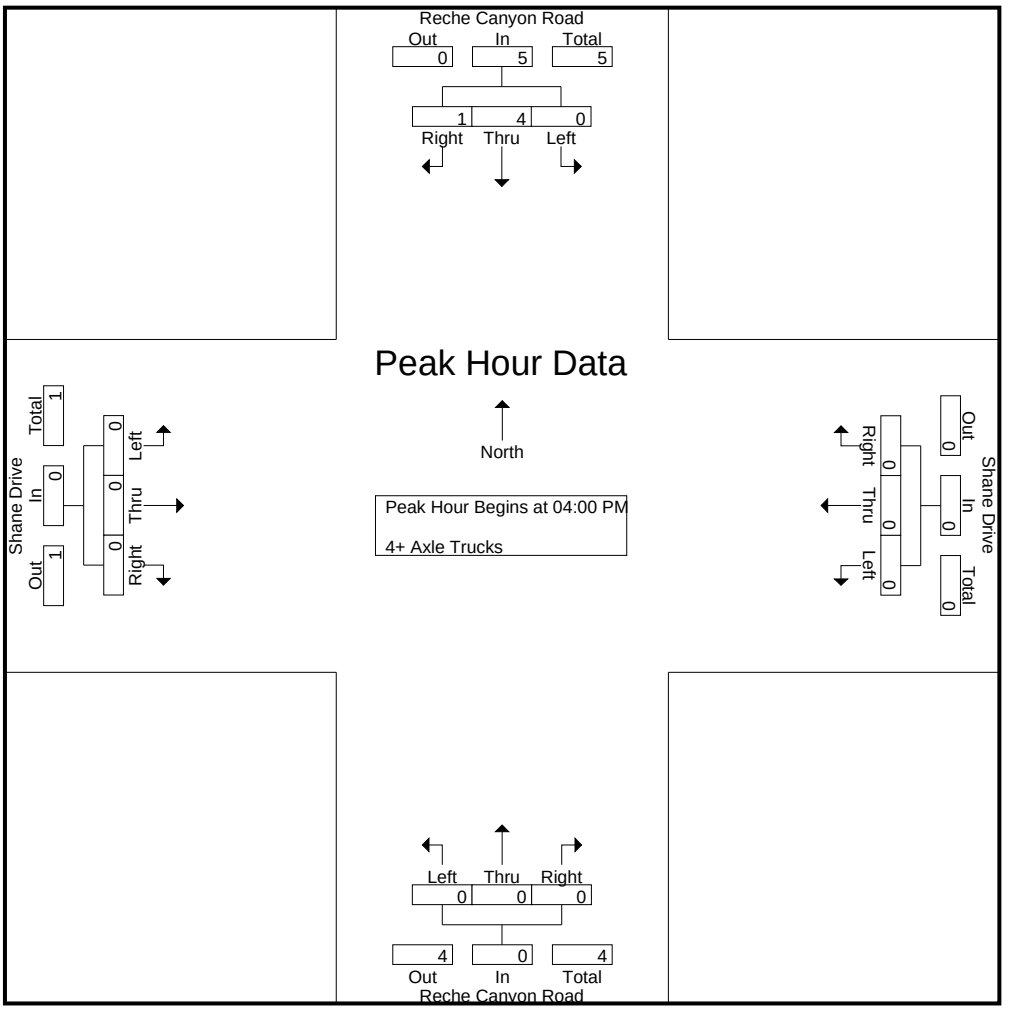

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	4	1	5	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	80	20		0	0	0		0	0	0		0	0	0	
PHF	.000	.500	.250	.417	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts AM
Site Code : 00321608
Start Date : 10/21/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	119	3	122	0	333	333	1	0	1	456
07:15 AM	111	2	113	0	366	366	12	0	12	491
07:30 AM	136	2	138	0	364	364	8	1	9	511
07:45 AM	159	1	160	0	362	362	4	0	4	526
Total	525	8	533	0	1425	1425	25	1	26	1984
08:00 AM	143	5	148	0	366	366	2	2	4	518
08:15 AM	138	3	141	0	356	356	4	1	5	502
08:30 AM	147	1	148	1	295	296	9	0	9	453
08:45 AM	148	1	149	0	290	290	2	0	2	441
Total	576	10	586	1	1307	1308	17	3	20	1914
Grand Total	1101	18	1119	1	2732	2733	42	4	46	3898
Apprch %	98.4	1.6		0	100		91.3	8.7		
Total %	28.2	0.5	28.7	0	70.1	70.1	1.1	0.1	1.2	
Passenger Vehicles	1062	18	1080	1	2693	2694	42	4	46	3820
% Passenger Vehicles	96.5	100	96.5	100	98.6	98.6	100	100	100	98
Large 2 Axle Vehicles	32	0	32	0	29	29	0	0	0	61
% Large 2 Axle Vehicles	2.9	0	2.9	0	1.1	1.1	0	0	0	1.6
3 Axle Vehicles	3	0	3	0	5	5	0	0	0	8
% 3 Axle Vehicles	0.3	0	0.3	0	0.2	0.2	0	0	0	0.2
4+ Axle Trucks	4	0	4	0	5	5	0	0	0	9
% 4+ Axle Trucks	0.4	0	0.4	0	0.2	0.2	0	0	0	0.2

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	136	2	138	0	364	364	**8**	1	**9**	511
07:45 AM	**159**	1	**160**	0	362	362	4	0	4	**526**
08:00 AM	143	**5**	148	0	**366**	**366**	2	**2**	4	518
08:15 AM	138	3	141	0	356	356	4	1	5	502
Total Volume	576	11	587	0	1448	1448	18	4	22	2057
% App. Total	98.1	1.9		0	100		81.8	18.2		
PHF	.906	.550	.917	.000	.989	.989	.563	.500	.611	.978

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City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts AM
Site Code : 00321608
Start Date : 10/21/2021
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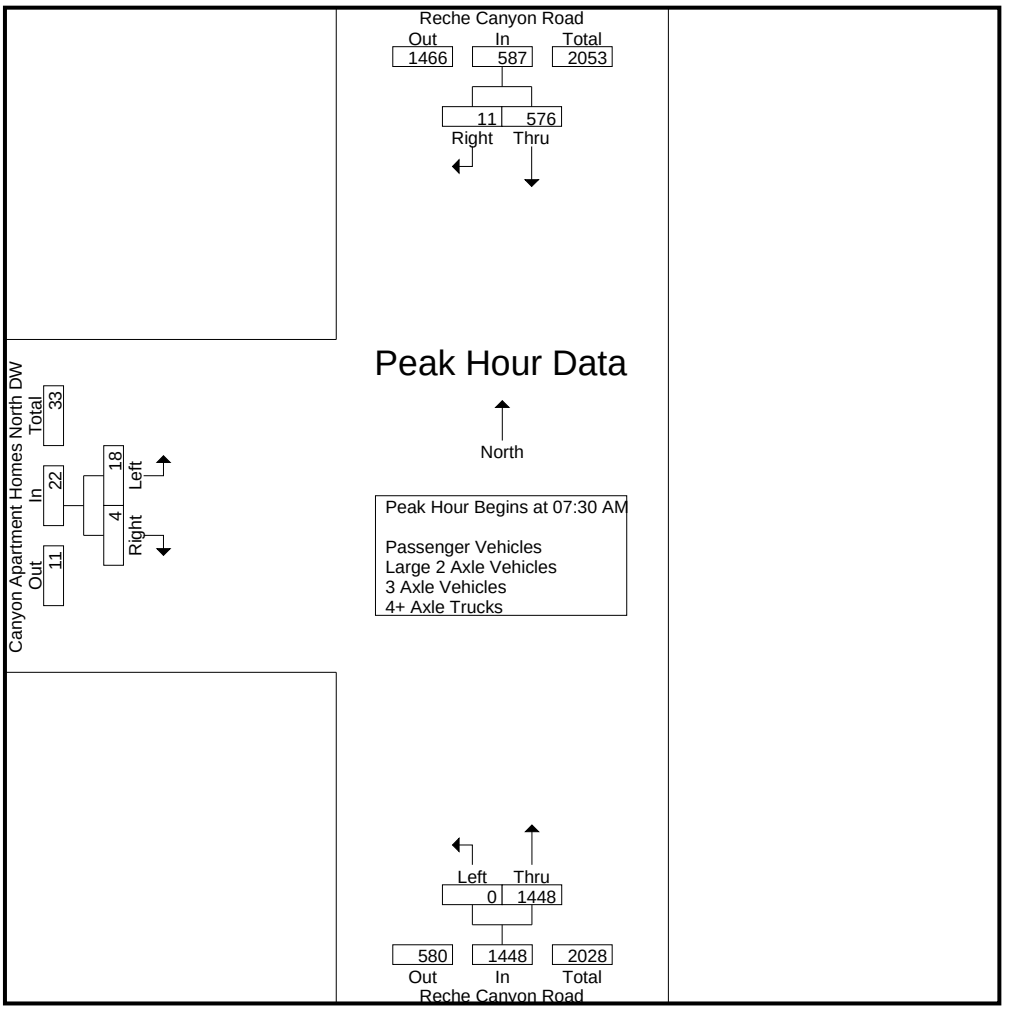

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:15 AM			07:15 AM		
+0 mins.	**159**	1	**160**	0	**366**	**366**	**12**	0	**12**
+15 mins.	143	**5**	148	0	364	364	8	1	9
+30 mins.	138	3	141	0	362	362	4	0	4
+45 mins.	147	1	148	0	366	366	2	**2**	4
Total Volume	587	10	597	0	1458	1458	26	3	29
% App. Total	98.3	1.7		0	100		89.7	10.3	
PHF	.923	.500	.933	.000	.996	.996	.542	.375	.604

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File Name : COL_Reche_Cyn Apts AM
Site Code : 00321608
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Groups Printed- Passenger Vehicles

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	111	3	114	0	328	328	1	0	1	443
07:15 AM	109	2	111	0	362	362	12	0	12	485
07:30 AM	134	2	136	0	358	358	8	1	9	503
07:45 AM	155	1	156	0	356	356	4	0	4	516
Total	509	8	517	0	1404	1404	25	1	26	1947
08:00 AM	138	5	143	0	364	364	2	2	4	511
08:15 AM	130	3	133	0	351	351	4	1	5	489
08:30 AM	146	1	147	1	289	290	9	0	9	446
08:45 AM	139	1	140	0	285	285	2	0	2	427
Total	553	10	563	1	1289	1290	17	3	20	1873
Grand Total	1062	18	1080	1	2693	2694	42	4	46	3820
Apprch %	98.3	1.7		0	100		91.3	8.7		
Total %	27.8	0.5	28.3	0	70.5	70.5	1.1	0.1	1.2	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	134	2	136	0	358	358	**8**	1	**9**	503
07:45 AM	**155**	1	**156**	0	356	356	4	0	4	**516**
08:00 AM	138	**5**	143	0	**364**	**364**	2	**2**	4	511
08:15 AM	130	3	133	0	351	351	4	1	5	489
Total Volume	557	11	568	0	1429	1429	18	4	22	2019
% App. Total	98.1	1.9		0	100		81.8	18.2		
PHF	.898	.550	.910	.000	.981	.981	.563	.500	.611	.978

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City of Colton
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File Name : COL_Reche_Cyn Apts AM
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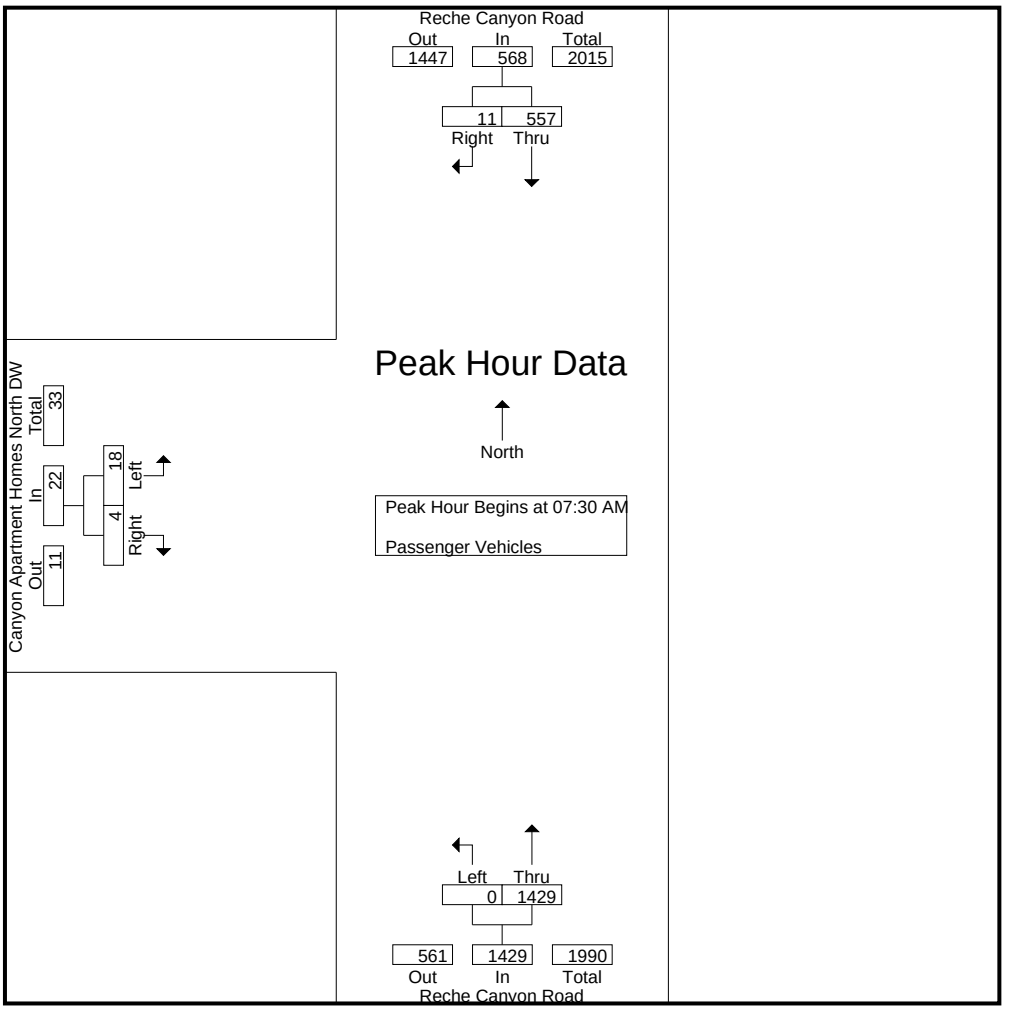

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	134	2	136	0	358	358	**8**	1	**9**
+15 mins.	**155**	1	**156**	0	356	356	4	0	4
+30 mins.	138	**5**	143	0	**364**	**364**	2	**2**	4
+45 mins.	130	3	133	0	351	351	4	1	5
Total Volume	557	11	568	0	1429	1429	18	4	22
% App. Total	98.1	1.9		0	100		81.8	18.2	
PHF	.898	.550	.910	.000	.981	.981	.563	.500	.611

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Weather: Clear

File Name : COL_Reche_Cyn Apts AM
Site Code : 00321608
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Groups Printed- Large 2 Axle Vehicles

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	6	0	6	0	2	2	0	0	0	8
07:15 AM	1	0	1	0	4	4	0	0	0	5
07:30 AM	2	0	2	0	5	5	0	0	0	7
07:45 AM	2	0	2	0	2	2	0	0	0	4
Total	11	0	11	0	13	13	0	0	0	24
08:00 AM	4	0	4	0	2	2	0	0	0	6
08:15 AM	8	0	8	0	5	5	0	0	0	13
08:30 AM	1	0	1	0	5	5	0	0	0	6
08:45 AM	8	0	8	0	4	4	0	0	0	12
Total	21	0	21	0	16	16	0	0	0	37
Grand Total	32	0	32	0	29	29	0	0	0	61
Apprch %	100	0		0	100		0	0		
Total %	52.5	0	52.5	0	47.5	47.5	0	0	0	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	2	0	2	0	**5**	**5**	0	0	0	7
07:45 AM	2	0	2	0	2	2	0	0	0	4
08:00 AM	4	0	4	0	2	2	0	0	0	6
08:15 AM	**8**	0	**8**	0	5	5	0	0	0	**13**
Total Volume	16	0	16	0	14	14	0	0	0	30
% App. Total	100	0		0	100		0	0		
PHF	.500	.000	.500	.000	.700	.700	.000	.000	.000	.577

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City of Colton
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E/W: Canyon Apartment Homes North DW
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File Name : COL_Reche_Cyn Apts AM
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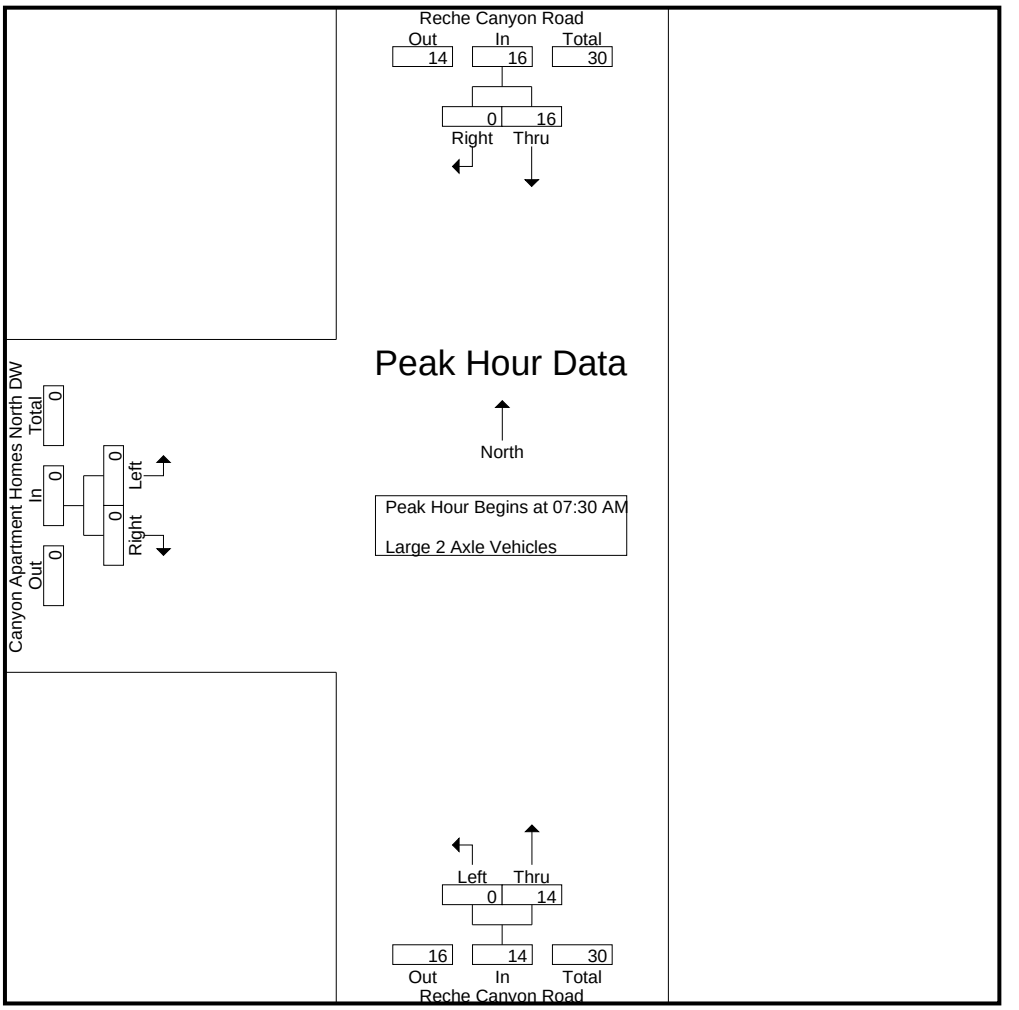

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	2	0	2	0	**5**	**5**	0	0	0
+15 mins.	2	0	2	0	2	2	0	0	0
+30 mins.	4	0	4	0	2	2	0	0	0
+45 mins.	**8**	0	**8**	0	5	5	0	0	0
Total Volume	16	0	16	0	14	14	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.500	.000	.500	.000	.700	.700	.000	.000	.000

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City of Colton
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File Name : COL_Reche_Cyn Apts AM
Site Code : 00321608
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Groups Printed- 3 Axle Vehicles

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	2	0	2	0	3	3	0	0	0	5
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	1	0	1	1	0	0	0	2
Total	3	0	3	0	4	4	0	0	0	7
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	1	1	0	0	0	1
Total	0	0	0	0	1	1	0	0	0	1
Grand Total	3	0	3	0	5	5	0	0	0	8
Apprch %	100	0		0	100		0	0		
Total %	37.5	0	37.5	0	62.5	62.5	0	0	0	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	**1**	0	**1**	0	**1**	**1**	0	0	0	**2**
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	1	1	0	0	0	2
% App. Total	100	0		0	100		0	0		
PHF	.250	.000	.250	.000	.250	.250	.000	.000	.000	.250

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City of Colton
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File Name : COL_Reche_Cyn Apts AM
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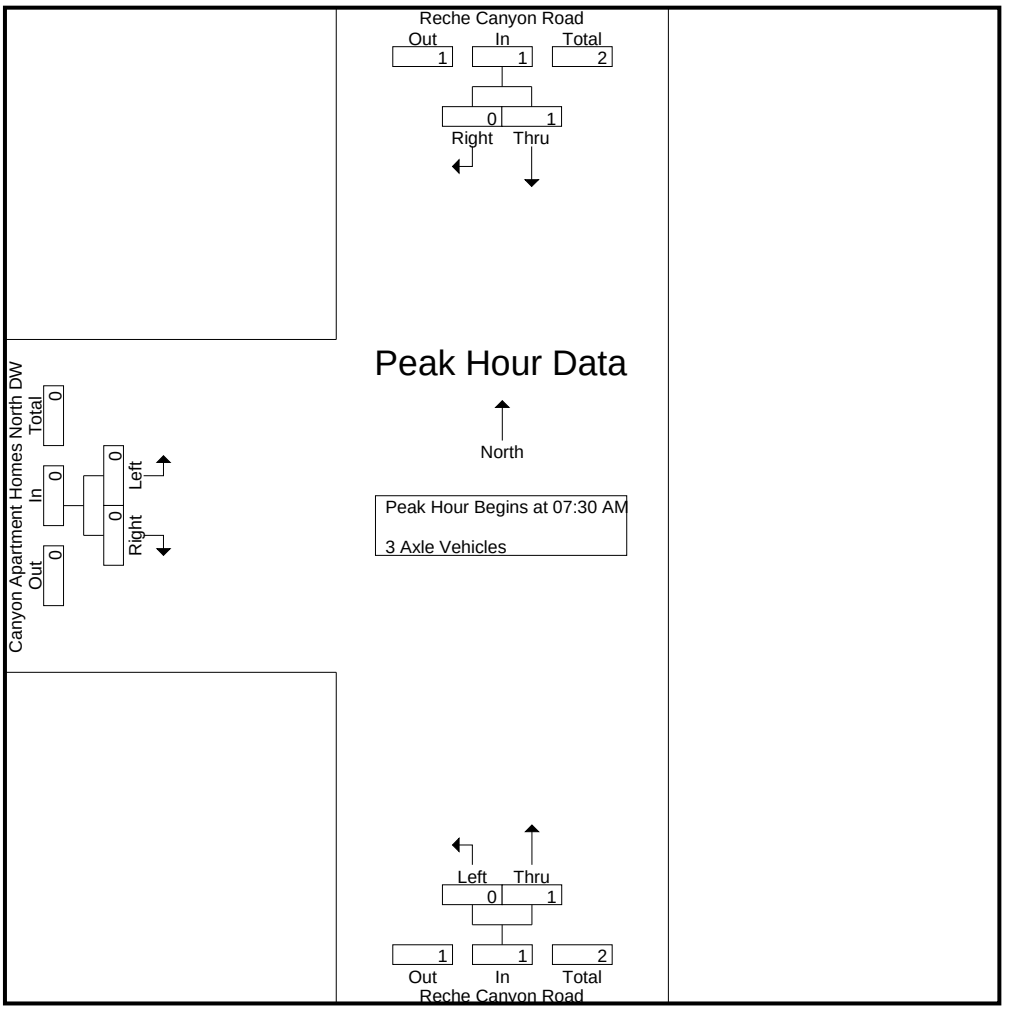

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	**1**	0	**1**	0	**1**	**1**	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	1	1	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.250	.000	.250	.000	.250	.250	.000	.000	.000

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File Name : COL_Reche_Cyn Apts AM
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Groups Printed- 4+ Axle Trucks

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	1	1	0	0	0	1
07:45 AM	1	0	1	0	3	3	0	0	0	4
Total	2	0	2	0	4	4	0	0	0	6
08:00 AM	1	0	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	1	1	0	0	0	1
08:45 AM	1	0	1	0	0	0	0	0	0	1
Total	2	0	2	0	1	1	0	0	0	3
Grand Total	4	0	4	0	5	5	0	0	0	9
Apprch %	100	0		0	100		0	0		
Total %	44.4	0	44.4	0	55.6	55.6	0	0	0	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	1	1	0	0	0	1
07:45 AM	**1**	0	**1**	0	**3**	**3**	0	0	0	**4**
08:00 AM	1	0	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	2	0	4	4	0	0	0	6
% App. Total	100	0		0	100		0	0		
PHF	.500	.000	.500	.000	.333	.333	.000	.000	.000	.375

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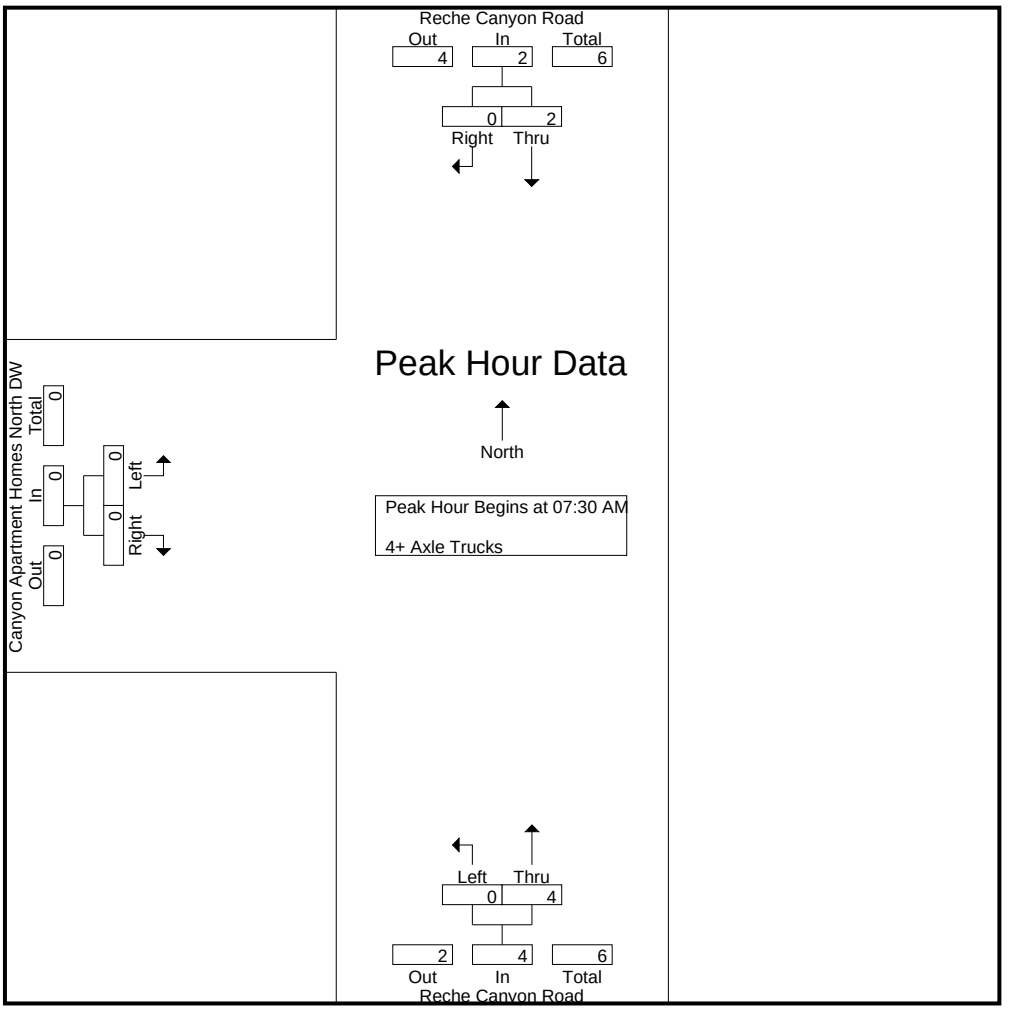

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	1	1	0	0	0
+15 mins.	**1**	0	**1**	0	**3**	**3**	0	0	0
+30 mins.	1	0	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	2	0	2	0	4	4	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.500	.000	.500	.000	.333	.333	.000	.000	.000

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City of Colton
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File Name : COL_Reche_Cyn Apts PM
Site Code : 00321608
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	299	4	303	0	302	302	0	0	0	605
04:15 PM	305	3	308	0	244	244	2	1	3	555
04:30 PM	313	6	319	0	269	269	3	0	3	591
04:45 PM	322	4	326	1	252	253	4	1	5	584
Total	1239	17	1256	1	1067	1068	9	2	11	2335
05:00 PM	327	8	335	0	242	242	2	0	2	579
05:15 PM	315	3	318	0	254	254	6	0	6	578
05:30 PM	291	2	293	0	241	241	2	1	3	537
05:45 PM	309	5	314	0	245	245	3	1	4	563
Total	1242	18	1260	0	982	982	13	2	15	2257
Grand Total	2481	35	2516	1	2049	2050	22	4	26	4592
Apprch %	98.6	1.4		0	100		84.6	15.4		
Total %	54	0.8	54.8	0	44.6	44.6	0.5	0.1	0.6	
Passenger Vehicles	2442	34	2476	1	2015	2016	22	4	26	4518
% Passenger Vehicles	98.4	97.1	98.4	100	98.3	98.3	100	100	100	98.4
Large 2 Axle Vehicles	32	1	33	0	28	28	0	0	0	61
% Large 2 Axle Vehicles	1.3	2.9	1.3	0	1.4	1.4	0	0	0	1.3
3 Axle Vehicles	4	0	4	0	3	3	0	0	0	7
% 3 Axle Vehicles	0.2	0	0.2	0	0.1	0.1	0	0	0	0.2
4+ Axle Trucks	3	0	3	0	3	3	0	0	0	6
% 4+ Axle Trucks	0.1	0	0.1	0	0.1	0.1	0	0	0	0.1

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	299	4	303	0	**302**	**302**	0	0	0	**605**
04:15 PM	305	3	308	0	244	244	2	**1**	3	555
04:30 PM	313	**6**	319	0	269	269	3	0	3	591
04:45 PM	**322**	4	**326**	**1**	252	253	**4**	1	**5**	584
Total Volume	1239	17	1256	1	1067	1068	9	2	11	2335
% App. Total	98.6	1.4		0.1	99.9		81.8	18.2		
PHF	.962	.708	.963	.250	.883	.884	.563	.500	.550	.965

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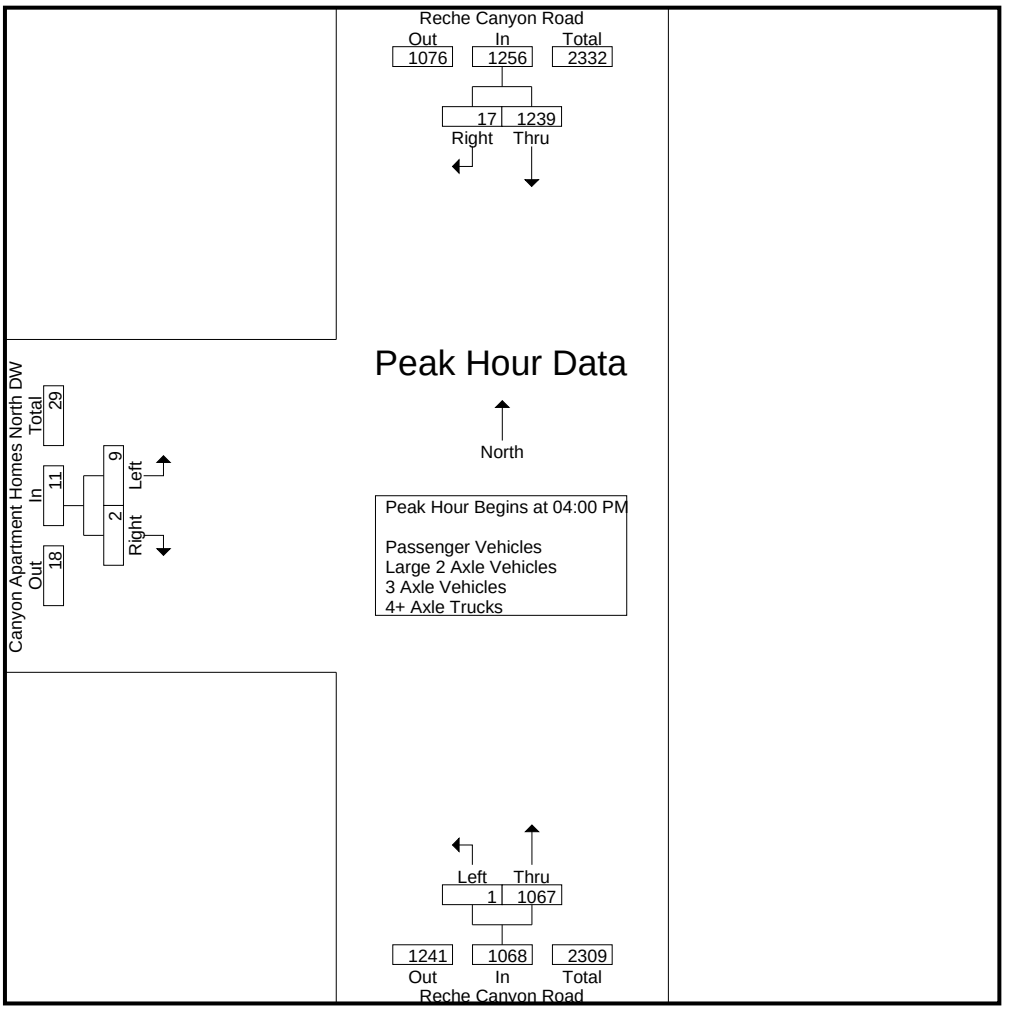

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:30 PM		
+0 mins.	313	6	319	0	**302**	**302**	3	0	3
+15 mins.	322	4	326	0	244	244	4	**1**	5
+30 mins.	**327**	**8**	**335**	0	269	269	2	0	2
+45 mins.	315	3	318	**1**	252	253	**6**	0	**6**
Total Volume	1277	21	1298	1	1067	1068	15	1	16
% App. Total	98.4	1.6		0.1	99.9		93.8	6.2	
PHF	.976	.656	.969	.250	.883	.884	.625	.250	.667

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Groups Printed- Passenger Vehicles

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	295	4	299	0	296	296	0	0	0	595
04:15 PM	298	2	300	0	240	240	2	1	3	543
04:30 PM	305	6	311	0	263	263	3	0	3	577
04:45 PM	320	4	324	1	250	251	4	1	5	580
Total	1218	16	1234	1	1049	1050	9	2	11	2295
05:00 PM	323	8	331	0	240	240	2	0	2	573
05:15 PM	311	3	314	0	247	247	6	0	6	567
05:30 PM	286	2	288	0	238	238	2	1	3	529
05:45 PM	304	5	309	0	241	241	3	1	4	554
Total	1224	18	1242	0	966	966	13	2	15	2223
Grand Total	2442	34	2476	1	2015	2016	22	4	26	4518
Apprch %	98.6	1.4		0	100		84.6	15.4		
Total %	54.1	0.8	54.8	0	44.6	44.6	0.5	0.1	0.6	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	295	4	299	0	**296**	**296**	0	0	0	**595**
04:15 PM	298	2	300	0	240	240	2	**1**	3	543
04:30 PM	305	**6**	311	0	263	263	3	0	3	577
04:45 PM	**320**	4	**324**	**1**	250	251	**4**	1	**5**	580
Total Volume	1218	16	1234	1	1049	1050	9	2	11	2295
% App. Total	98.7	1.3		0.1	99.9		81.8	18.2		
PHF	.952	.667	.952	.250	.886	.887	.563	.500	.550	.964

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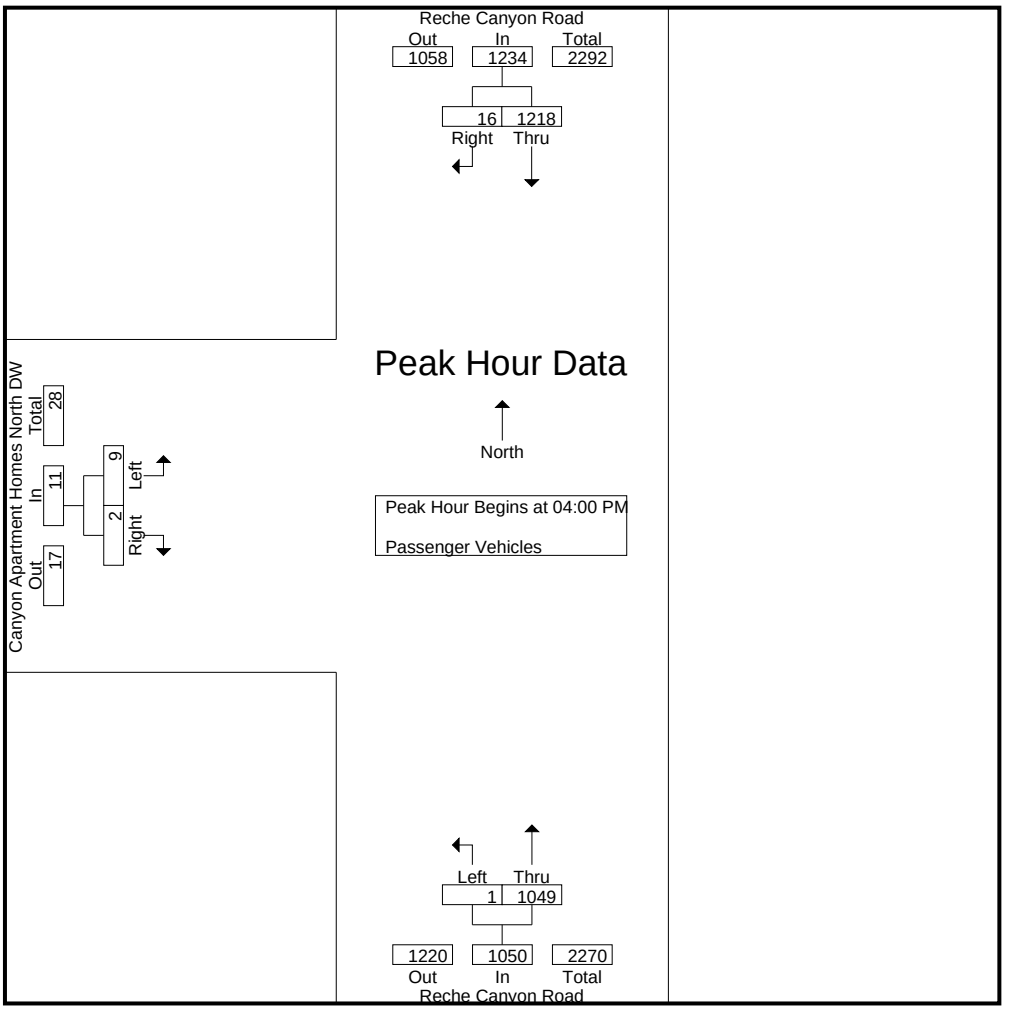
City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts PM
Site Code : 00321608
Start Date : 10/21/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	295	4	299	0	**296**	**296**	0	0	0
+15 mins.	298	2	300	0	240	240	2	**1**	3
+30 mins.	305	**6**	311	0	263	263	3	0	3
+45 mins.	**320**	4	**324**	**1**	250	251	**4**	1	**5**
Total Volume	1218	16	1234	1	1049	1050	9	2	11
% App. Total	98.7	1.3		0.1	99.9		81.8	18.2	
PHF	.952	.667	.952	.250	.886	.887	.563	.500	.550

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City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts PM
Site Code : 00321608
Start Date : 10/21/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	3	0	3	0	6	6	0	0	0	9
04:15 PM	5	1	6	0	4	4	0	0	0	10
04:30 PM	8	0	8	0	5	5	0	0	0	13
04:45 PM	2	0	2	0	2	2	0	0	0	4
Total	18	1	19	0	17	17	0	0	0	36
05:00 PM	3	0	3	0	2	2	0	0	0	5
05:15 PM	3	0	3	0	5	5	0	0	0	8
05:30 PM	3	0	3	0	1	1	0	0	0	4
05:45 PM	5	0	5	0	3	3	0	0	0	8
Total	14	0	14	0	11	11	0	0	0	25
Grand Total	32	1	33	0	28	28	0	0	0	61
Apprch %	97	3		0	100		0	0		
Total %	52.5	1.6	54.1	0	45.9	45.9	0	0	0	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	3	0	3	0	**6**	**6**	0	0	0	9
04:15 PM	5	**1**	6	0	4	4	0	0	0	10
04:30 PM	**8**	0	**8**	0	5	5	0	0	0	**13**
04:45 PM	2	0	2	0	2	2	0	0	0	4
Total Volume	18	1	19	0	17	17	0	0	0	36
% App. Total	94.7	5.3		0	100		0	0		
PHF	.563	.250	.594	.000	.708	.708	.000	.000	.000	.692

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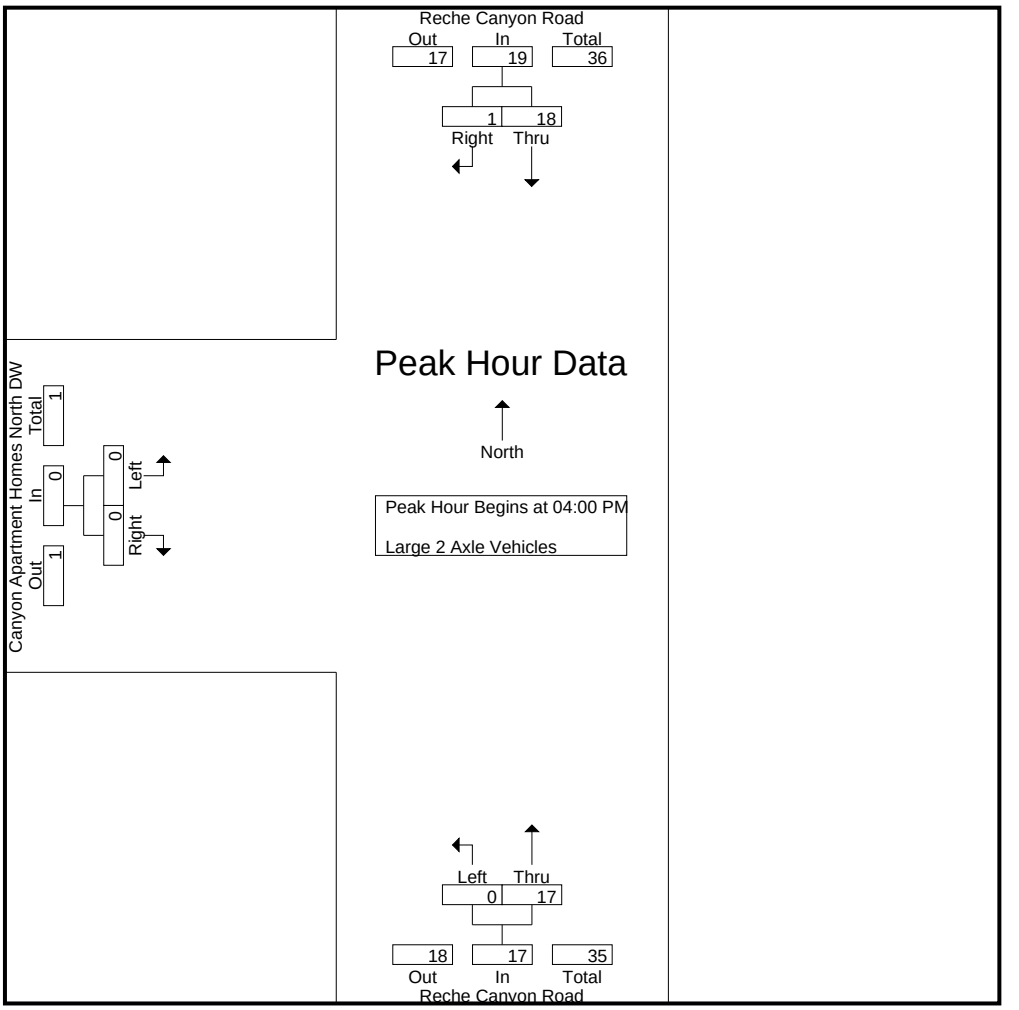
City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts PM
Site Code : 00321608
Start Date : 10/21/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	3	0	3	0	**6**	**6**	0	0	0
+15 mins.	5	**1**	6	0	4	4	0	0	0
+30 mins.	**8**	0	**8**	0	5	5	0	0	0
+45 mins.	2	0	2	0	2	2	0	0	0
Total Volume	18	1	19	0	17	17	0	0	0
% App. Total	94.7	5.3		0	100		0	0	
PHF	.563	.250	.594	.000	.708	.708	.000	.000	.000

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City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts PM
Site Code : 00321608
Start Date : 10/21/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	1	0	1	0	0	0	0	0	0	1
04:15 PM	1	0	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	1	1	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	2	0	2	0	1	1	0	0	0	3
05:00 PM	1	0	1	0	0	0	0	0	0	1
05:15 PM	1	0	1	0	1	1	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	1	0	0	0	1
Total	2	0	2	0	2	2	0	0	0	4
Grand Total	4	0	4	0	3	3	0	0	0	7
Apprch %	100	0		0	100		0	0		
Total %	57.1	0	57.1	0	42.9	42.9	0	0	0	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**1**	0	**1**	0	0	0	0	0	0	**1**
04:15 PM	1	0	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	**1**	**1**	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	2	0	1	1	0	0	0	3
% App. Total	100	0		0	100		0	0		
PHF	.500	.000	.500	.000	.250	.250	.000	.000	.000	.750

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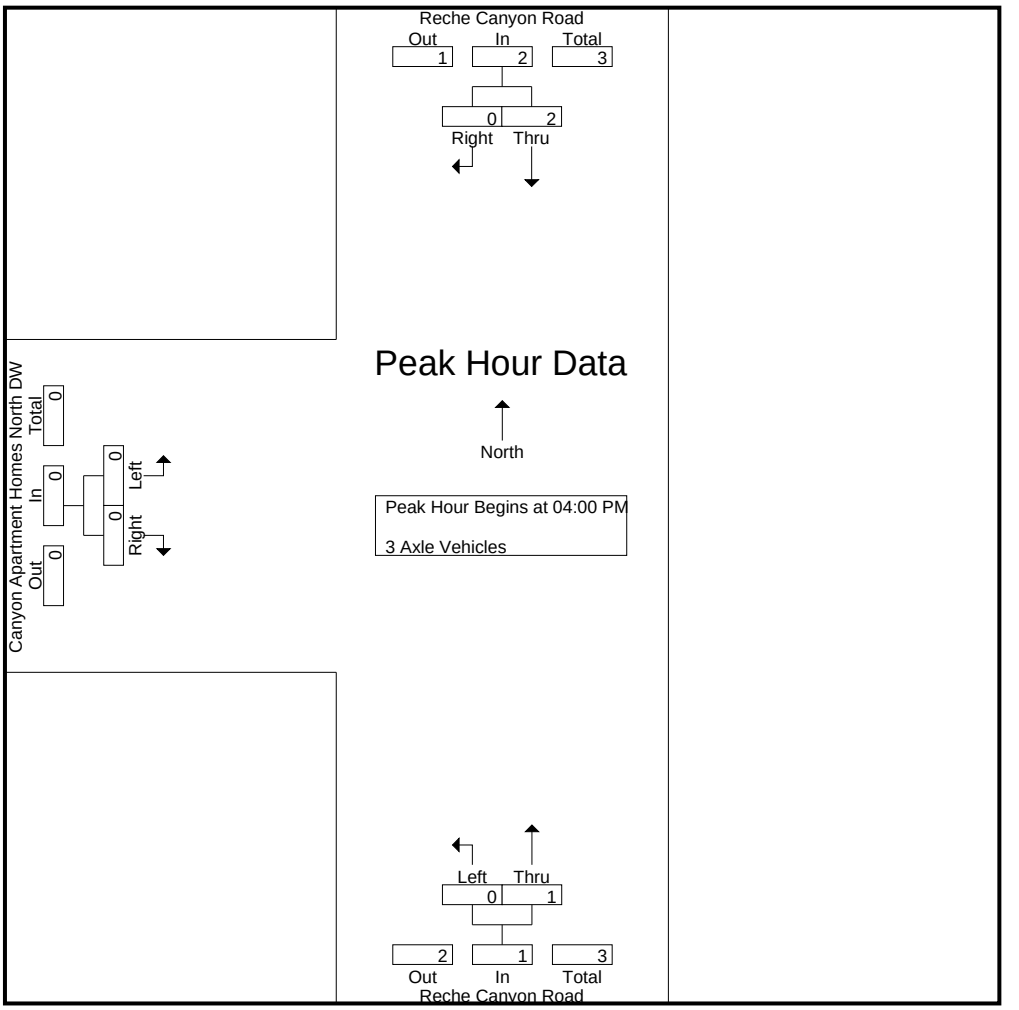
City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts PM
Site Code : 00321608
Start Date : 10/21/2021
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	**1**	0	**1**	0	0	0	0	0	0
+15 mins.	1	0	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	**1**	**1**	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	2	0	2	0	1	1	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.500	.000	.500	.000	.250	.250	.000	.000	.000

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City of Colton
N/S: Reche Canyon Road
E/W: Canyon Apartment Homes North DW
Weather: Clear

File Name : COL_Reche_Cyn Apts PM
Site Code : 00321608
Start Date : 10/21/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	1	1	0	0	0	1
05:30 PM	2	0	2	0	2	2	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	2	0	2	0	3	3	0	0	0	5
Grand Total	3	0	3	0	3	3	0	0	0	6
Apprch %	100	0		0	100		0	0		
Total %	50	0	50	0	50	50	0	0	0	

	Reche Canyon Road Southbound			Reche Canyon Road Northbound			Canyon Apartment Homes North DW Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	**1**	0	**1**	0	0	0	0	0	0	**1**
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	0	0	1
% App. Total	100	0		0	0		0	0		
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000	.250

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File Name : COL_Reche_Cyn Apts PM
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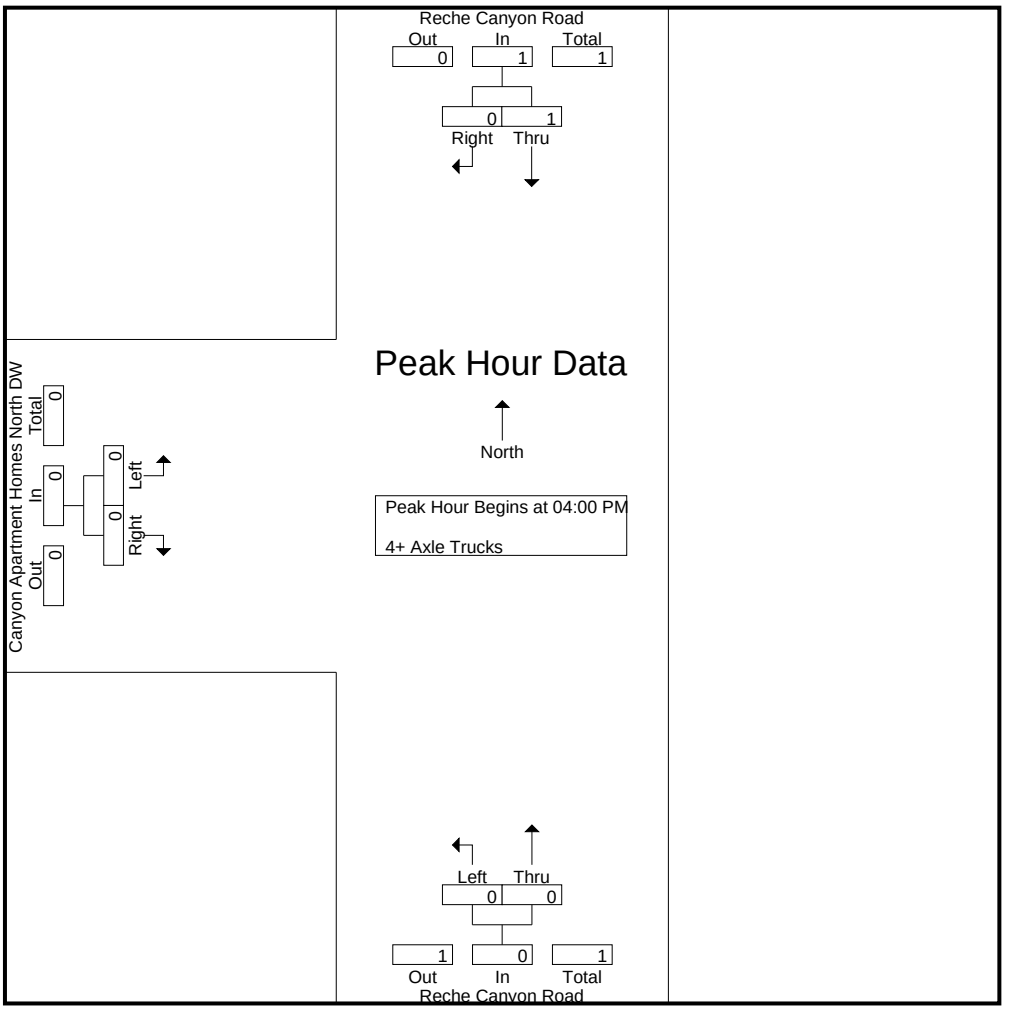
Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	**1**	0	**1**	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	0	0
% App. Total	100	0		0	0		0	0	
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000

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City of Colton
Reche Canyon Road
B/ Shadid Drive - Old Reche Canyon Road
24 Hour Directional Speed Survey

COLRCSHORSP
Site Code: 003-21616

Northbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
10/26/21	1	0	0	0	0	1	9	7	6	4	1	0	0	0	29
01:00	0	0	0	1	1	2	1	8	6	3	4	0	0	0	26
02:00	0	0	0	0	0	1	2	4	11	9	3	2	0	0	32
03:00	0	0	0	0	0	3	14	12	21	14	8	1	0	0	73
04:00	0	0	0	0	1	6	18	46	73	36	13	6	0	0	199
05:00	0	0	0	0	0	22	93	225	161	44	4	3	2	0	554
06:00	0	0	0	23	88	270	336	239	86	10	1	1	0	0	1054
07:00	114	117	227	192	116	146	184	50	15	4	0	0	0	0	1165
08:00	207	191	258	184	89	61	39	51	29	4	0	0	0	0	1113
09:00	1	6	16	13	9	51	191	234	101	20	2	0	0	0	644
10:00	1	0	0	3	14	41	151	220	78	16	2	2	0	0	528
11:00	0	0	1	3	23	53	128	144	90	13	2	1	0	0	458
12 PM	0	0	0	0	4	27	157	177	109	16	1	4	2	0	497
13:00	3	0	0	0	12	50	172	218	142	27	1	0	0	1	626
14:00	0	0	4	4	17	73	191	296	139	21	1	2	1	0	749
15:00	2	4	16	14	20	43	208	336	134	38	3	0	2	0	820
16:00	0	2	1	0	0	26	215	371	196	27	5	0	1	0	844
17:00	2	1	5	4	22	66	243	314	103	11	5	2	1	0	779
18:00	0	0	0	0	13	52	187	158	65	9	1	0	0	0	485
19:00	0	1	1	3	10	32	66	63	30	4	5	1	2	1	219
20:00	2	0	2	0	5	11	54	66	32	16	4	2	1	1	196
21:00	0	0	2	0	0	15	25	31	25	5	2	3	1	0	109
22:00	0	1	0	0	2	5	13	35	17	13	4	4	0	2	96
23:00	1	0	0	0	0	0	11	7	14	5	2	1	0	0	41
Total	334	323	533	444	446	1057	2708	3312	1683	369	74	35	13	5	11336

Daily

15th Percentile :	30 MPH
50th Percentile :	44 MPH
85th Percentile :	51 MPH
95th Percentile :	54 MPH

Statistics

Mean Speed(Average) :	43 MPH
10 MPH Pace Speed :	41-50 MPH
Number in Pace :	6020
Percent in Pace :	53.1%
Number of Vehicles > 55 MPH :	496
Percent of Vehicles > 55 MPH :	4.4%

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City of Colton
Reche Canyon Road
B/ Shadid Drive - Old Reche Canyon Road
24 Hour Directional Speed Survey

COLRCSHORSP
Site Code: 003-21616

Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
10/26/21	0	0	0	1	0	8	10	14	9	0	0	1	0	0	43
01:00	0	0	0	1	5	5	14	11	7	5	1	0	0	0	49
02:00	0	0	0	0	2	3	1	8	5	3	0	2	0	0	24
03:00	0	0	0	0	0	3	8	7	6	4	0	0	0	0	28
04:00	0	0	0	1	0	1	9	19	11	2	1	1	0	0	45
05:00	0	0	2	1	2	4	17	35	16	9	2	0	0	0	88
06:00	0	0	0	1	5	30	52	81	36	9	3	0	0	0	217
07:00	0	0	0	0	14	78	122	119	52	8	2	0	0	0	395
08:00	3	11	4	6	21	64	138	113	40	3	2	0	0	0	405
09:00	1	0	6	1	5	57	184	111	33	5	2	0	0	0	405
10:00	0	0	0	1	14	53	132	108	25	6	2	0	0	1	342
11:00	0	0	1	2	26	81	157	95	37	2	0	0	0	0	401
12 PM	0	0	1	10	17	74	250	151	39	6	1	0	0	0	549
13:00	0	0	1	18	20	85	243	172	50	4	2	0	0	0	595
14:00	2	0	2	3	18	175	444	221	46	2	0	0	0	0	913
15:00	0	1	1	7	69	283	490	150	27	0	3	0	0	0	1031
16:00	3	1	0	0	27	183	588	290	51	3	1	0	0	0	1147
17:00	2	3	6	12	55	368	509	191	19	6	0	0	0	0	1171
18:00	0	0	9	27	126	457	331	67	10	1	0	0	0	0	1028
19:00	0	0	6	28	42	116	175	99	31	5	0	0	0	0	502
20:00	0	0	2	15	22	61	105	66	24	9	2	0	1	0	307
21:00	0	0	1	1	13	22	91	83	30	9	2	1	0	0	253
22:00	2	0	0	1	3	17	40	63	35	8	5	0	1	0	175
23:00	0	0	0	0	1	8	27	37	24	10	3	2	0	0	112
Total	13	16	42	137	507	2236	4137	2311	663	119	34	7	2	1	10225

Daily

15th Percentile :	36 MPH
50th Percentile :	42 MPH
85th Percentile :	48 MPH
95th Percentile :	52 MPH

Statistics

Mean Speed(Average) :	43 MPH
10 MPH Pace Speed :	41-50 MPH
Number in Pace :	6448
Percent in Pace :	63.1%
Number of Vehicles > 55 MPH :	163
Percent of Vehicles > 55 MPH :	1.6%

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City of Colton
Reche Canyon Road
B/ Shadid Drive - Old Reche Canyon Road
24 Hour Directional Speed Survey
Northbound, Southbound

COLRCSHORSP
Site Code: 003-21616

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
10/26/21	1	0	0	1	0	9	19	21	15	4	1	1	0	0	72
01:00	0	0	0	2	6	7	15	19	13	8	5	0	0	0	75
02:00	0	0	0	0	2	4	3	12	16	12	3	4	0	0	56
03:00	0	0	0	0	0	6	22	19	27	18	8	1	0	0	101
04:00	0	0	0	1	1	7	27	65	84	38	14	7	0	0	244
05:00	0	0	2	1	2	26	110	260	177	53	6	3	2	0	642
06:00	0	0	0	24	93	300	388	320	122	19	4	1	0	0	1271
07:00	114	117	227	192	130	224	306	169	67	12	2	0	0	0	1560
08:00	210	202	262	190	110	125	177	164	69	7	2	0	0	0	1518
09:00	2	6	22	14	14	108	375	345	134	25	4	0	0	0	1049
10:00	1	0	0	4	28	94	283	328	103	22	4	2	0	1	870
11:00	0	0	2	5	49	134	285	239	127	15	2	1	0	0	859
12 PM	0	0	1	10	21	101	407	328	148	22	2	4	2	0	1046
13:00	3	0	1	18	32	135	415	390	192	31	3	0	0	1	1221
14:00	2	0	6	7	35	248	635	517	185	23	1	2	1	0	1662
15:00	2	5	17	21	89	326	698	486	161	38	6	0	2	0	1851
16:00	3	3	1	0	27	209	803	661	247	30	6	0	1	0	1991
17:00	4	4	11	16	77	434	752	505	122	17	5	2	1	0	1950
18:00	0	0	9	27	139	509	518	225	75	10	1	0	0	0	1513
19:00	0	1	7	31	52	148	241	162	61	9	5	1	2	1	721
20:00	2	0	4	15	27	72	159	132	56	25	6	2	2	1	503
21:00	0	0	3	1	13	37	116	114	55	14	4	4	1	0	362
22:00	2	1	0	1	5	22	53	98	52	21	9	4	1	2	271
23:00	1	0	0	0	1	8	38	44	38	15	5	3	0	0	153
Total	347	339	575	581	953	3293	6845	5623	2346	488	108	42	15	6	21561

Daily

15th Percentile :	35 MPH
50th Percentile :	43 MPH
85th Percentile :	49 MPH
95th Percentile :	54 MPH

Statistics

Mean Speed(Average) :	43 MPH
10 MPH Pace Speed :	41-50 MPH
Number in Pace :	12468
Percent in Pace :	57.8%
Number of Vehicles > 55 MPH :	659
Percent of Vehicles > 55 MPH :	3.1%

APPENDIX B-3:

SIGNAL TIMING SHEETS

Timings
4: RECHE CANYON MOBILE HOME ESTATES & RECHE CANYON ROAD

City of Colton
9/16/2002

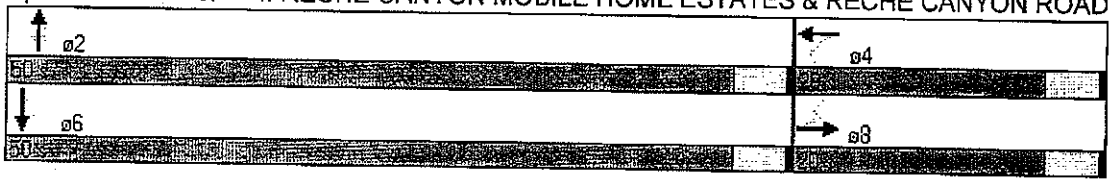
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	54	0	4	0	2	1211	6	1293
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phases	8	8	4	4	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	50.0	50.0	50.0	50.0
Total Split (%)	29%	29%	29%	29%	71%	71%	71%	71%
Maximum Green (s)	16.0	16.0	16.0	16.0	46.0	46.0	46.0	46.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	Min	Min	Min	Min
Walk Time (s)			5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)			11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)			0	0	0	0	0	0
Act Effct Green (s)		8.8		8.6	82.0	82.0	82.0	82.0
Actuated g/C Ratio		0.09		0.09	0.87	0.87	0.87	0.87
v/c Ratio		0.43		0.06	0.03	0.72	0.05	0.80
Uniform Delay, d1		40.1		20.8	1.0	3.0	1.1	3.7
Delay		23.1		18.6	2.5	6.5	2.5	11.6
LOS		C		B	A	A	A	B
Approach Delay		23.1		18.6		6.5		11.5
Approach LOS		C		B		A		B

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 94.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 9.5
Intersection Capacity Utilization 94.0%

Intersection LOS: A
ICU Level of Service E

Splits and Phases: 4: RECHE CANYON MOBILE HOME ESTATES & RECHE CANYON ROAD

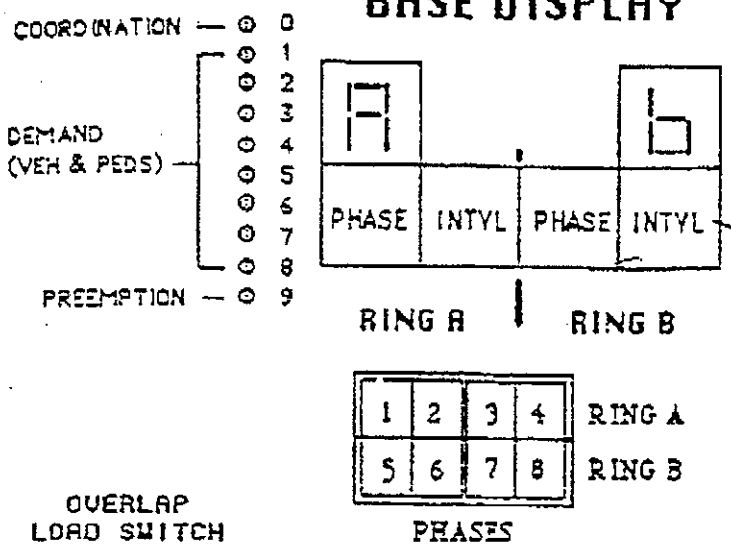


Minagar and Associates
Traffic Engineering-Transportation Planning-ITS

INTERSECTION: RECHE CANYON RD. at SHANE DR./RECHE CANYON MOBILE HOME ESTATES
BY: FM/DT Date: 9/16/02

PROGRAM **200SA**

BASE DISPLAY



INTERVALS

0 - WALK
1 - FLASH DONT WALK
2 - MINIMUM GREEN
3 -
4 - VARIABLE INITIAL
5 - EXTENSION
6 -
7 - REDUCED GAP
8 - RED REST
9 - PREEMPTION
A - STOP TIME
B - RED REVERT
C - GAP TERMINATION
D - MAX TERMINATION
E - FORCEOFF
F - RED CLEARANCE

OVERLAP LOAD SWITCH ASSIGNMENT D-0-

OVERLAP A		(0-8)
OVERLAP B		(0-8)
OVERLAP C		(0-8)
OVERLAP D		(0-8)

bAdE EPROM ERROR, SEE C-E-D
WATCHDOG STOPS IF F-C-F = 0

bAdA TURN STOPTIME SW ON THEN OFF TO REINITIALIZE

CONFIGURATION DATA

NOTE: "E" KEY ENABLED (F-9-E ≠ 0)

KEYSTROKES: E+E+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0 EXCLU PH								
1 RR1 GRN CL								
2 RR2 GRN CL								
3 RR2 LTD								
4 PROT/PERM								
5 OLA COMIT								
6 OLB COMIT								
7 OLC COMIT								
8 OLD COMIT								
9 OV FL YEL								
A EMVEH A								
B EMVEH B								
C EMVEH C								
D EMVEH D								
E EXTRA								
F IC SELECT								

EXTRA: (E+E+E)
1-TBC TYPE 1
3-DAYLIGHT SAV
4-EV ADVANCE
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSEL: (E+E+F)
1- SIMPLEX IN
2-2-WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
7-7 WIRE OUT

ASSIGNS: (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEAC
4-FLASH EV BEAC

KEYSTROKES: E+F+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0								
1 RR OLAP A								
2 RR OLAP B								
3 RR OLAP C								
4 RR OLAP D								
5 PED2P	X							
6 PED6P						X		
7 PED4P				X				
8 PED8P								
9 FLH YELO								
A OVERLAP A								
B OVERLAP B								
C OVERLAP C								
D OVERLAP D								
E RESTRICT								
F ASSIGNS								

Minagar and Associates
Traffic Engineering-Transportation Planning-ITS

200SA

PHASE TIMING

KEYSTROKES: F+PHASE+INTERVAL

		PHASE									
			NB		WB		SB		EB	PREEMPT	
INTERVAL		1	2	3	4	5	6	7	8		E
WALK	0		5.0		5.0		5.0			RR1 DELAY	0
FLASH D/W	1		11.0		11.0		11.0			RR1 CLEAR	1
MIN GREEN	2		16.0		16.0		16.0		16.0	EVA DELAY	2
TYPE 3 DET	3									EVA CLEAR	3
ADD/VEH	4									EVB DELAY	4
VEH EXTEN *	5		3.0		3.0		3.0		3.0	EVB CLEAR	5
MAX GAP *	6		3.0		3.0		3.0		3.0	EVC DELAY	6
MIN GAP *	7		3.0		3.0		3.0		3.0	EVC CLEAR	7
MAX EXTEN	8		46.0		16.0		46.0		16.0	EVD DELAY	8
MAX 2	9									EVD CLEAR	9
	A									RR2 DELAY	A
CALLTO PHASE	B									RR2 CLEAR	B
REDUCE BY	C									EV CLR THR	C
REDUCE EVERY	D									EV DLY THR	D
YELLOW	E		3.5		3.5		3.5		3.5	AR CLR THR	E
RED CLEAR	F		0.5		0.5		0.5		0.5	AR DLY THR	F

MAX INITIAL (F-0-E) = _____

RED REVERT (F-0-F) = _____

* MUST BE SAME FOR NON-DENSITY OPERATION

ALL RED START (F-C-0)= _____

PHASE FUNCTION FLAGS

KEYSTROKES: F+F+FUNCTION#

FUNCTION		PHASE							
		1	2	3	4	5	6	7	8
PERMIT	0		X		X		X		X
RED LOCK	1								
YELLOW LOCK	2								
VEH RECALL	3		X				X		
PED RECALL	4								
PEDS	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVE	C								
RESERVED	D								
STARTUP	E								
FIRST PHASES	F								

OVERLAP TIMING

KEYSTROKE: F+ COLOR CODE+OVERLAP

	9 GREEN	C YELLO	D RED
OVERLAP A			
OVERLAP B			
OVERLAP C			
OVERLAP D			

BI TRAN SYSTEMS, INC.

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Traffic Engineering-Transportation Planning-ITS

DETECTOR TIMING

200SA

DESCRIPTION	C1 PIN	DET NO.	332 INPUT FILE SLOT	DELAY 1/10 SEC	CARRYOVER 1/10 SEC
	56	14	111	D-1-0	D-3-0
	39	1	212U	D-1-1	D-3-1
	43	5	212L	D-1-2	D-3-2
	76	25	213U	D-1-3	D-3-3
	63	21	213L	D-1-4	D-3-4
	47	9	214	D-1-5	D-3-5
	58	15	315	D-1-6	D-3-6
	41	3	416U	D-1-7	D-3-7
	45	7	416L	D-1-8	D-3-8
	78	27	417U	D-1-9	D-3-9
	65	23	417L	D-1-A	D-3-A
	49	11	418	D-1-B	D-3-B
	60	18	119U	D-1-C	D-3-C
	62	20	319L	D-1-D	D-3-D
	55	13	5J1	D-2-0	D-4-0
	40	2	6J2U	D-2-1	D-4-1
	44	6	6J2L	D-2-2	D-4-2
	77	26	6J3U	D-2-3	D-4-3
	64	22	6J3L	D-2-4	D-4-4
	48	10	6J4	D-2-5	D-4-5
	57	15	7J5	D-2-6	D-4-6
	42	4	8J6U	D-2-7	D-4-7
	46	8	8J6L	D-2-8	D-4-8
	79	29	8J7U	D-2-9	D-4-9
	66	24	8J7L	D-2-A	D-4-A
	50	12	8J8	D-2-B	D-4-B
	59	17	5J9U	D-2-C	D-4-C
	61	19	7J9L	D-2-D	D-4-D

PHASE 7
FILE J
SLOT 9
LOWER

ACTIVE DETECTOR ASSIGNMENTS

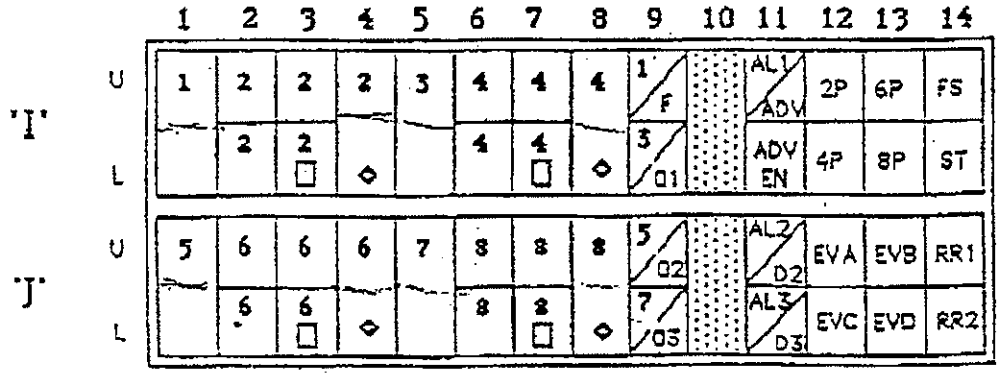
CALL/ACTIVE LIGHTS

	1	2	3	4	5	6	7	8
DET # D-E-A	1	2	3	4	5	6	7	8
DET # D-E-B	9	10	11	12				
DET # D-E-C	13	14	15	16	17	18	19	20
DET # D-E-D					21	22	23	24
DET # D-E-E								
DET # D-E-F		25	26	27	28			

DETECTOR MONITOR

MAXIMUM ON TIME (D-A-E)
DETON _____, MINUTES
MAXIMUM OFF TIME (D-A-F)
DETOFF _____, MINUTES

332 cabinet INPUT FILE LAYOUT

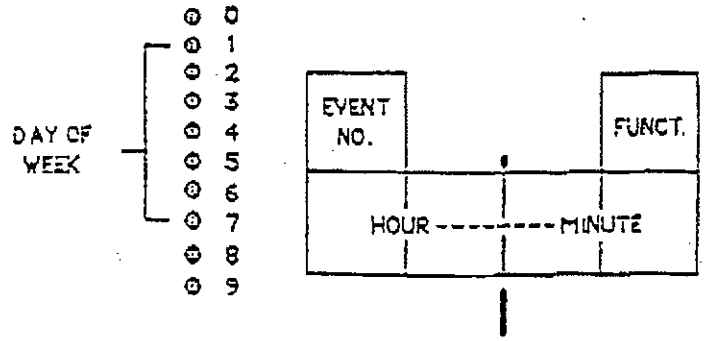


- EXTENSION, COUNT
□ - EXTENSION
◇ - CALL DETECTOR
D2 - DIAL 2
EVA - EMERG VEH A
ADV - ADVANCE
EN - ENABLE
F - FLASH/FREE
ST - STOP TIME
01 - OFFSET 1
FS - FLASH SENSE
2P - 2 PED
RR1 - RAILROAD 1
AL1 - ALARM 1

BI TRAN SYSTEMS, INC.

200SA

TIME OF DAY LOCAL FUNCTIONS



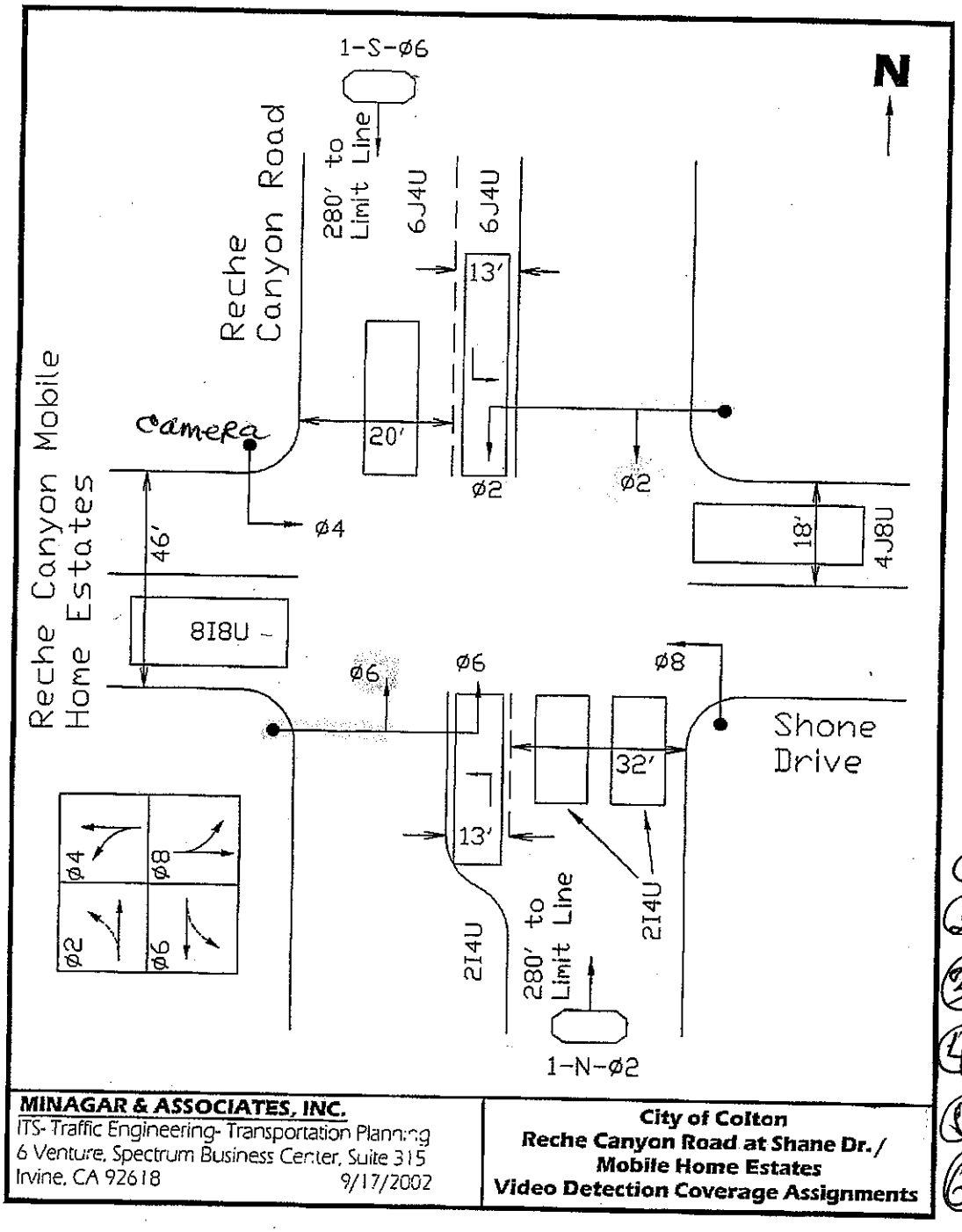
TIME OF DAY FUNCTIONS
KEYSTROKES: 7 + EVENT*

FUNCTION BY PHASE
KEYSTROKES: D-F-EVENT*

EVENT	TIME	FUNCT	DAY OF WEEK S	M	T	W	T	F	S	1	2	3	4	5	6	7	8
0																	
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
A																	
B																	
C																	
D																	
E																	
F																	

TIME OF DAY LOCAL FUNCTION CODES

0 - PERMIT	7 - RED REST	E - 1 - LOCAL OVERIDE	F - TOD OUTPUTS
1 - RED LOCK	8 - DBL ENTRY	2 - PHASE BANK 2	1 - TOD OUT 1
2 - YELLOW OCK	9 - VEH MAX RCL	3 - PHASE BANK 3	2 - TOD OUT 2
3 - VEH RECALL	A - SOFT RECALL	7 - DET COUNT	3 - TOD OUT 3
4 - PED RECALL	B - MAX II EXT	8 - SPLIT MONITOR	4 - TOD OUT 4
5 - RESERVED	C - COND SERVE		
6 - REST IN WALK	D - TOD LAG Ø		



MINAGAR & ASSOCIATES, INC.
ITS- Traffic Engineering- Transportation Planning
6 Venture, Spectrum Business Center, Suite 315
Irvine, CA 92618
9/17/2002

City of Colton
Reche Canyon Road at Shane Dr./
Mobile Home Estates
Video Detection Coverage Assignments

① 2I4U
② 6J4U
③ 4J8U
④ 8I8U
⑤ 1-S-ø6
⑥ 1-N-ø2

Shane DV

Timings

4: RECHE CANYON MOBILE HOME ESTATES & RECHE CANYON ROAD

City of Colton
9/16/2002

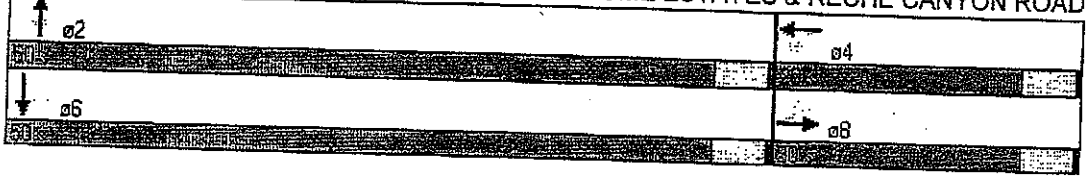
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	64	0	4	0	2	1211	6	1203
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		8		4		2		6
Permitted Phases	8		4		2		6	
Detector Phases	8	8	4	4	2	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	50.0	50.0	50.0	50.0
Total Split (%)	29%	29%	29%	29%	71%	71%	71%	71%
Maximum Green (s)	16.0	16.0	16.0	16.0	46.0	46.0	46.0	46.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	Min	Min	Min	Min
Walk Time (s)			5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)			11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)			0	0	0	0	0	0
Act Effct Green (s)		8.6		8.6	82.0	82.0	82.0	82.0
Actuated g/C Ratio		0.09		0.09	0.87	0.87	0.87	0.87
v/c Ratio		0.43		0.06	0.03	0.72	0.05	0.80
Uniform Delay, d1		40.1		20.8	1.0	3.0	1.1	3.7
Delay		23.1		18.6	2.5	6.5	2.5	11.6
LOS		C		B	A	A	A	B
Approach Delay		23.1		18.6		6.5		11.5
Approach LOS		C		B		A		B

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 94.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 9.5
Intersection Capacity Utilization 94.0%

Intersection LOS: A
ICU Level of Service E

Splits and Phases: 4: RECHE CANYON MOBILE HOME ESTATES & RECHE CANYON ROAD

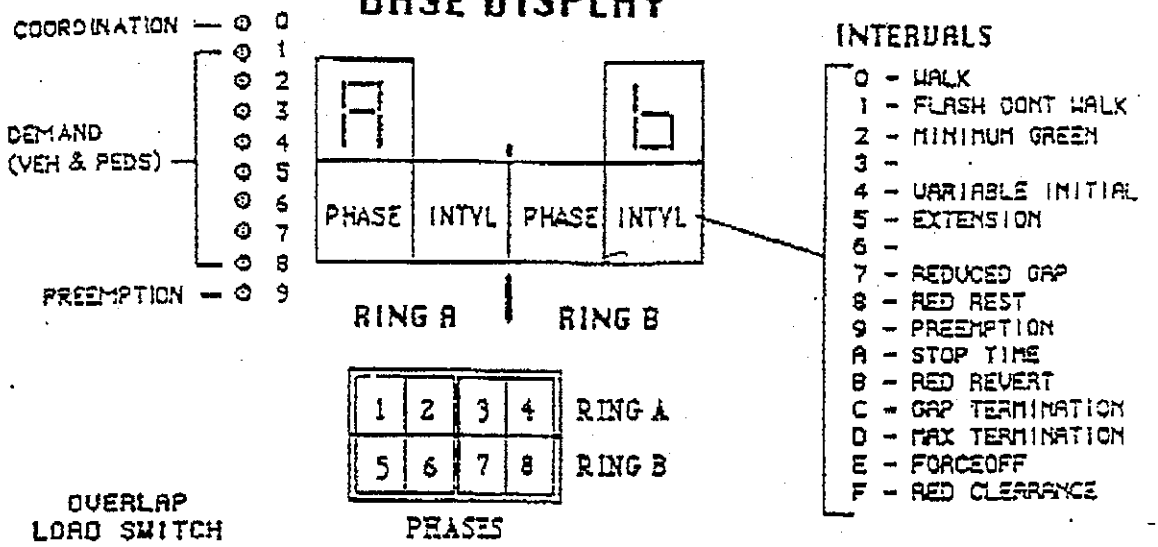


Minagar and Associates
Traffic Engineering-Transportation Planning-ITS

INTERSECTION: RECHE CANYON RD. at SHANE DR./RECHE CANYON MOBILE HOME ESTATES
by: FM/DT Date: 9/16/02

PROGRAM **200SA**

BASE DISPLAY



INTERVALS
0 - WALK
1 - FLASH DONT WALK
2 - MINIMUM GREEN
3 -
4 - VARIABLE INITIAL
5 - EXTENSION
6 -
7 - REDUCED GAP
8 - RED REST
9 - PREEMPTION
A - STOP TIME
B - RED REVERT
C - GAP TERMINATION
D - MAX TERMINATION
E - FORCEOFF
F - RED CLEARANCE

OVERLAP LOAD SWITCH ASSIGNMENT
0-0-

OVERLAP A		(0-8)
OVERLAP B		(0-8)
OVERLAP C		(0-8)
OVERLAP D		(0-8)

bAdE EPROM ERROR, SEE C-E-D
WATCHDOG STOPS IF F-C-F = 0

bAdA TURN STOPTIME SW ON THEN OFF TO REINITIALIZE

CONFIGURATION DATA

NOTE: "E" KEY ENABLED (F-9-E = 0)

KEYSTROKES: E+E+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0 EXCLU PH								
1 RR1 GRN CL								
2 RR2 GRN CL								
3 RR2 LTD								
4 PROT/PERM								
5 OLA GOMIT								
6 OLB GOMIT								
7 OLC GOMIT								
8 OLD GOMIT								
9 OV FL YEL								
A EMVEH A								
B EMVEH B								
C EMVEH C								
D EMVEH D								
E EXTRA								
F IC SELECT								

EXTRA: (E+E+E)
1-TBC TYPE 1
3-DAYLIGHT SAV
4-EV ADVANCE
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSEL: (E+E+F)
1- SIMPLEX IN
2-2-WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
7-7 WIRE OUT

ASSIGNS: (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEAC
4-FLASH EV BEAC

KEYSTROKES: E+F+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0								
1 RR OLAP A								
2 RR OLAP B								
3 RR OLAP C								
4 RR OLAP D								
5 PED2P	X							
6 PED6P						X		
7 PED4P				X				
8 PED8P								
9 FLH YELO								
A OVERLAP A								
B OVERLAP B								
C OVERLAP C								
D OVERLAP D								
E RESTRICT								
F ASSIGNS								

BI TRAN SYSTEMS, INC.

Minagar and Associates
Traffic Engineering-Transportation Planning-ITS

PHASE TIMING

200SA

KEYSTROKES: F+PHASE+INTERVAL

		NB			WB		SB		EB	PREEMPT		
INTERVAL		1	2	3	4	5	6	7	8		E	
WALK	0		5.0		5.0		5.0			RR1 DELAY		0
FLASH D/W	1		11.0		11.0		11.0			RR1 CLEAR		1
MIN GREEN	2		16.0	10.0	~~16.0~~		16.0		~~16.0~~	EVA DELAY		2
TYPE 3 DET	3				10.0				~~10.0~~	EVA CLEAR		3
ADD/VEH	4									EVB DELAY		4
VEH EXTEN *	5		3.0	3.0	3.0		3.0		~~3.0~~	EVB CLEAR		5
MAX GAP *	6		3.0	3.0	3.0		3.0		~~3.0~~	EVC DELAY		6
MIN GAP *	7		3.0	3.0	3.0		3.0		~~3.0~~	EVC CLEAR		7
MAX EXTEN	8		46.0	16.0	16.0		46.0		~~16.0~~	EVD DELAY		8
MAX 2	9									EVD CLEAR		9
	A									RR2 DELAY		A
CALL TO PHASE	B									RR2 CLEAR		B
REDUCE BY	C									EV CLR TMR		C
REDUCE EVERY	D									EV DLY TMR		D
YELLOW	E		3.5	3.5	3.5		3.5		~~3.5~~	RR CLR TMR		E
RED CLEAR	F		0.5	0.5	0.5		0.5		~~0.5~~	RR DLY TMR		F

MAX INITIAL (F-0-E) = _____

RED REVERT (F-0-F) = _____

* MUST BE SAME FOR NON-DENSITY OPERATION

ALL RED START (F-C-0) = _____

PHASE FUNCTION FLAGS

KEYSTROKES: F+F+FUNCTION#

FUNCTION		PHASE 1	2	3	4	5	6	7	8
PERMIT	0	X	X	X	X		X		
RED LOCK	1								
YELLOW LOCK	2								
VEH RECALL	3	X					X		
PED RECALL	4								
PEDS	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVE	C								
RESERVED	D								
STARTUP	E				X				X
FIRST PHASES	F	X					X		

OVERLAP TIMING

KEYSTROKE: F+ COLOR CODE+OVERLAP

	9 GREEN	C YELLO	D RED
OVERLAP A			
OVERLAP B			
OVERLAP C			
OVERLAP D			

Minagar and Associates
Traffic Engineering-Transportation Planning-ITS

DETECTOR TIMING

200SA

DESCRIPTION	C1 PIN	DET NO.	332 INPUT FILE SLOT	DELAY 1/10 SEC	CARRYOVER 1/10 SEC
	56	14	111	D-1-0	D-3-0
	39	1	212U	D-1-1	D-3-1
	43	5	212L	D-1-2	D-3-2
	76	25	213U	D-1-3	D-3-3
	63	21	213L	D-1-4	D-3-4
	47	9	214	D-1-5	D-3-5
	58	16	315	D-1-6	D-3-6
	41	3	416U	D-1-7	D-3-7
	45	7	416L	D-1-8	D-3-8
	78	27	417U	D-1-9	D-3-9
	65	23	417L	D-1-A	D-3-A
	49	11	418	D-1-B	D-3-B
	60	18	119U	D-1-C	D-3-C
	62	20	319L	D-1-D	D-3-D
	55	13	5J1	D-2-0	D-4-0
	40	2	6J2U	D-2-1	D-4-1
	44	6	6J2L	D-2-2	D-4-2
	77	26	6J3U	D-2-3	D-4-3
	64	22	6J3L	D-2-4	D-4-4
	48	10	6J4	D-2-5	D-4-5
	57	15	7J5	D-2-6	D-4-6
	42	4	8J6U	D-2-7	D-4-7
	46	8	8J6L	D-2-8	D-4-8
	79	28	8J7U	D-2-9	D-4-9
	66	24	8J7L	D-2-A	D-4-A
	50	12	8J8	D-2-B	D-4-B
	59	17	5J9U	D-2-C	D-4-C
	61	19	7J9L	D-2-D	D-4-D

PHASE 7
FILE J
SLOT 9
LOWER

ACTIVE DETECTOR ASSIGNMENTS

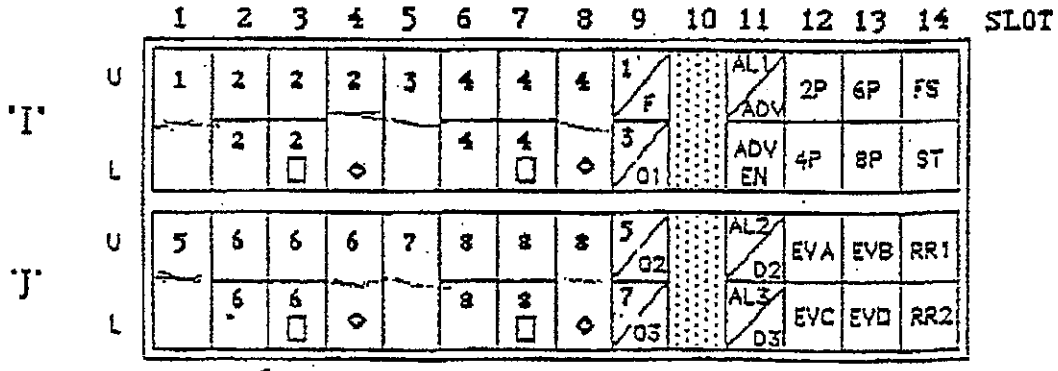
CALL/ACTIVE LIGHTS

	1	2	3	4	5	6	7	8
DET # D-E-A	1	2	3	4	5	6	7	8
DET # D-E-B	9	10	11	12				
DET # D-E-C	13	14	15	16	17	18	19	20
DET # D-E-D					21	22	23	24
DET # D-E-E								
DET # D-E-F		25	26	27	28			

DETECTOR MONITOR

MAXIMUM ON TIME (D-A-E)
DETON _____, MINUTES
MAXIMUM OFF TIME (D-A-F)
DETOFF _____, MINUTES

332 cabinet INPUT FILE LAYOUT



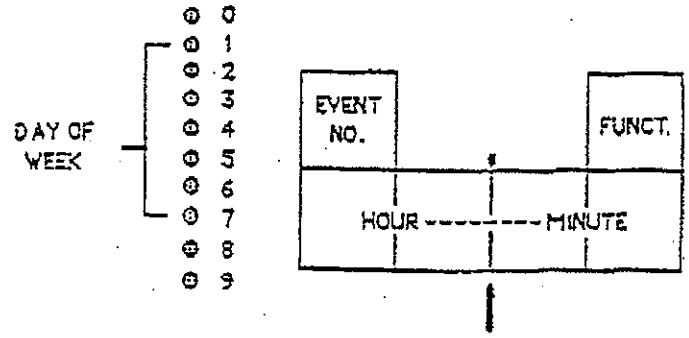
- EXTENSION, COUNT
□ - EXTENSION
◇ - CALL DETECTOR
D2 - DIAL 2
EVA - EMERG VEH A
ADV - ADVANCE
EN - ENABLE
F - FLASH/FREE
ST - STOP TIME
01 - OFFSET 1
FS - FLASH SENSE
2P - 2 PED
RR1 - RAILROAD 1
AL1 - ALARM 1

BI TRAN SYSTEMS, INC.

Minagar and Associates
Traffic Engineering-Transportation Planning-ITS

200SA

TIME OF DAY LOCAL FUNCTIONS



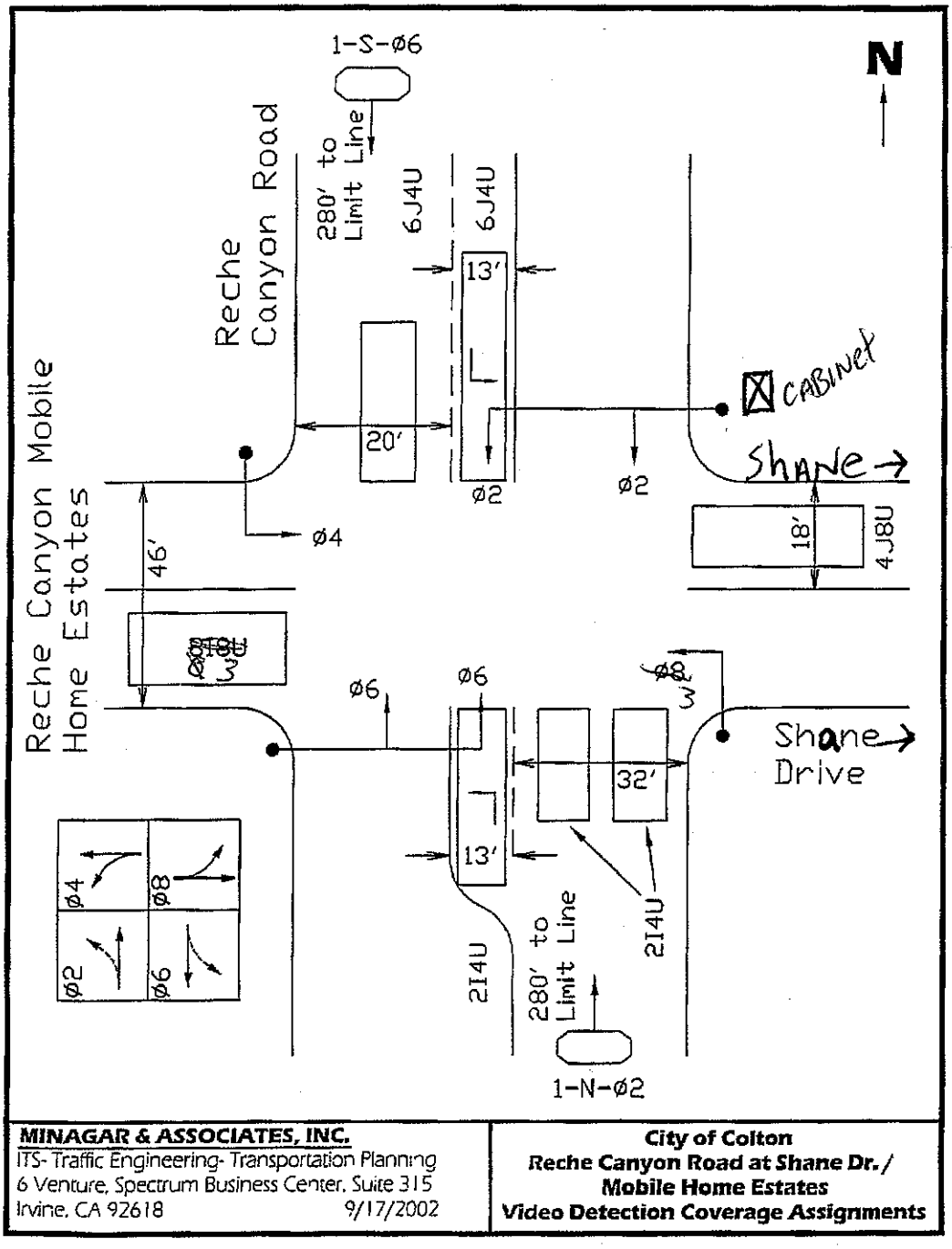
TIME OF DAY FUNCTIONS
KEYSTROKES: 7 + EVENT*

FUNCTION BY PHASE
KEYSTROKES: 0-F-EVENT*

EVENT	TIME	FUNCT	DAY OF WEEK S	M	T	W	T	F	S	1	2	3	4	5	6	7	8
0																	
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
A																	
B																	
C																	
D																	
E																	
F																	

TIME OF DAY LOCAL FUNCTION CODES

0 - PERMIT	7 - RED REST	E - 1 - LOCAL OVERIDE	F - TOD OUTPUTS
1 - RED LOCK	8 - DBL ENTRY	2 - PHASE BANK 2	1 - TOD OUT 1
2 - YELLOW OCK	9 - VEH MAX RCL	3 - PHASE BANK 3	2 - TOD OUT 2
3 - VEH RECALL	A - SOFT RECALL	7 - DET COUNT	3 - TOD OUT 3
4 - PED RECALL	B - MAX II EXT	8 - SPLIT MONITOR	4 - TOD OUT 4
5 - RESERVED	C - COND SERVE		
6 - REST IN WALK	D - TOD LAG Ø		



MINAGAR & ASSOCIATES, INC.
ITS- Traffic Engineering- Transportation Planning
6 Venture, Spectrum Business Center, Suite 315
Irvine, CA 92618 9/17/2002

City of Colton
Reche Canyon Road at Shane Dr./
Mobile Home Estates
Video Detection Coverage Assignments

12/03/09 - Implemented -

INTERSECTION: 016-Washington St & Reche Canyon

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **19**

N/S Street Name: **Reche Canyon**
E/W Street Name: **Washington St**

Last Database Change: **10/1/2007 16:54**

Change Record					
Change	By	Date	Change	By	Date

Notes: TOD(7) MAX2 UNWARRENTED - MAXTIME INHIBITED DURING COORDINATION

Drop Number	25	<C+0+0>
Zone Number	25	<C+0+1>
Area Number	1	<C+0+2>
Area Address	19	<C+0+3>
QuicNet Channel	COM102:	(QuicNet)

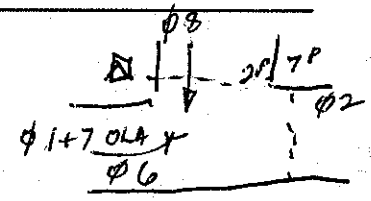
Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times



Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	0	0	0	6	0
1	Ped FDW	0	19	0	0	0	0	21	20
2	Min Green	10	16	0	0	0	4	0	15
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	4.0	4.0	0.0	0.0	0.0	4.0	0.0	4.0
6	Max Gap	4.0	4.0	0.0	0.0	0.0	4.0	0.0	4.0
7	Min Gap	4.0	4.0	0.0	0.0	0.0	4.0	0.0	4.0
8	Max Limit	43	35	0	0	0	35	0	30
9	Max Limit 2	70	70	70	70	70	70	70	70
A		0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	4.0	0.0	0.0	0.0	4.0	3.0	4.0
F	Red Clear	1.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0

Phase Timing - Bank 1 <F Page>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F		Row
Permit	12 6 8	0
Red Lock		1
Yellow Lock		2
Min Recall	2 6	3
Ped Recall		4
View Set Peds	2 7	5
Rest In Walk		6
Red Rest		7
Dual Entry	2 6	8
Max Recall		9
Soft Recall		A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	2 6	E
First Phases	8	F

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Coordination <C Page>

Row	Column Numbers →	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name →	AM	MD	PM							
0	Cycle Length	90	0	100	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	57	0	3807	0	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	0	0	0	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	360	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	55	0	55	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	4130	0	0330	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	51	0	0251	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	12	12	12	12	12	12	12	12	12	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

Row		E	Row
0			0
1	Plan 1 - Sync	2 6	1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync	2 6	4
5	Plan 5 - Sync	2 6	5
6	Plan 6 - Sync	2 6	6
7	Plan 7 - Sync	2 6	7
8	Plan 8 - Sync	2 6	8
9	Plan 9 - Sync	2 6	9
A	Coord Ped *		A
B	NEMA Hold		B
C			C
D			D
E			E
F			F

Configuration <E Page>

Row	Column Numbers →	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1 3
F	IC Select (Interconnect)	2

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	
Ped 4P	
Ped 8P	7 8
Yellow Flash Phases	
Overlap A - Phases	1 7
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

Row		F	Row
0	Free Lag	2 4 6 8	0
1	Plan 1 - Lag	2 4 6 8	1
2	Plan 2 - Lag	2 4 6 8	2
3	Plan 3 - Lag	2 4 6 8	3
4	Plan 4 - Lag	2 4 6 8	4
5	Plan 5 - Lag	2 4 6 8	5
6	Plan 6 - Lag	2 4 6 8	6
7	Plan 7 - Lag	2 4 6 8	7
8	Plan 8 - Lag	2 4 6 8	8
9	Plan 9 - Lag	2 4 6 8	9
A	Coord Max *		A
B	Coord Lag *		B
C			C
D			D
E			E
F			F

Row	Time	Plan	Offset	Day of Week
0	00:00	E	A	1234567
1	05:45	1	A	23456
2	14:29	E	A	23456
3	14:30	3	A	23456
4	20:00	E	A	1234567
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
05:45	B	23456	12345678
20:00	B	23456	
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			

Holiday # 1 TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			

Holiday # 2 TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
:				0
:				1
:				2
:				3
:				4
:				5
:				6
:				7
:				8
:				9
:				A
:				B
:				C
:				D
:				E
:				F

Holiday # 3 TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date				
B	Holiday # 2 Date				
C	Holiday # 3 Date				

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	4.5	5.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	4.5	5.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	0.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	3.0	0.0	1
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Row	Column Numbers →	Phase 1	2	3	4	5	6	7	8
	Phase Names →								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A		0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 2 <F Page>

Row	Column Numbers →	Phase 1	2	3	4	5	6	7	8
	Phase Names →								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A		0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 3 <F Page>

Row		7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0	Delay Only →	0	---	---	---	---	---	---	---	---
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service Int. →	0	0							
A		---	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

Special Event Schedule <C Page with F+9+F=22>

<--- Limited Service Interval (Set Dwell = 255)

Reche Canyon @ Washington

UNOFFICIAL TIME CHART — FROM CONTROL MEMORY

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
W	0	6				0		8
Y/W	4	12				0		16
MIN	2	2				2		2
EXT	2	2				2		2
	↓	↓				↓		↓
MAX	20	30				30		~~30~~
YEL	3.0	3.5				3.5		3.5
RED	.5	.5				.5		.5

TOD
- 0000 EA - 1-7
- 0600 ~~AA~~ -2-6
- 1500 3A -2-6
- 1900 EA - 1-7

cycle	#2	#3
0	80	90
1	55	50
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	32	18
9	0	0
A	31	38
B	0	0
C	0	0
D	12	12
E	255	255
F	0	0

COM ADDRESS #9

MASTER: WASHINGTON/BLUFF C+E+0, 8

CFO	Lag Free	2, 4, 6, 8	Sync Ø
PLAN	2	2468	2+6
"	3	2468	2+6

12/03/09 - Implemented -

INTERSECTION: 016-Washington St & Reche Canyon

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **19**

N/S Street Name: **Reche Canyon**
E/W Street Name: **Washington St**

Last Database Change: **10/1/2007 16:54**

Change Record					
Change	By	Date	Change	By	Date

Notes: TOD(7) MAX2 UNWARRENTED - MAXTIME INHIBITED DURING COORDINATION

Drop Number	25	<C+0+0>
Zone Number	25	<C+0+1>
Area Number	1	<C+0+2>
Area Address	19	<C+0+3>
QuicNet Channel	COM102:	(QuicNet)

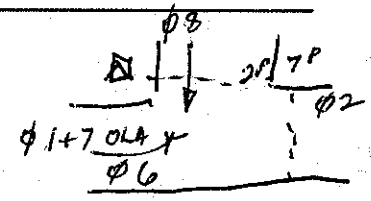
Communication Addresses

Manual Plan		<C+A+1>
Manual Offset		<C+B+1>

Manual Selection

Max Initial	20	<F+0+E>
Red Revert	5.0	<F+0+F>
All Red Start	5.0	<F+C+0>

Start / Revert Times



Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ---->								
0	Ped Walk	0	7	0	0	0	0	6	0
1	Ped FDW	0	19	0	0	0	0	21	20
2	Min Green	10	16	0	0	0	4	0	15
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	4.0	4.0	0.0	0.0	0.0	4.0	0.0	4.0
6	Max Gap	4.0	4.0	0.0	0.0	0.0	4.0	0.0	4.0
7	Min Gap	4.0	4.0	0.0	0.0	0.0	4.0	0.0	4.0
8	Max Limit	43	35	0	0	0	35	0	30
9	Max Limit 2	70	70	70	70	70	70	70	70
A		0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	4.0	0.0	0.0	0.0	4.0	3.0	4.0
F	Red Clear	1.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0

Phase Timing - Bank 1 <F Page>

E	
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

F		Row
Permit	12 6 8	0
Red Lock		1
Yellow Lock		2
Min Recall	2 6	3
Ped Recall		4
View Set Peds	2 7	5
Rest In Walk		6
Red Rest		7
Dual Entry	2 6	8
Max Recall		9
Soft Recall		A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	2 6	E
First Phases	8	F

Phase Functions <F Page>

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Coordination <C Page>

Row	Column Numbers →	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name →	AM	MD	PM							
0	Cycle Length	90	0	100	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	57	0	3807	0	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	0	0	0	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	360	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	55	0	55	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	4130	0	0330	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	51	0	0251	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Permissive	12	12	12	12	12	12	12	12	12	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

(* = Coordination Recall)

Sync Phases <C Page>

Row		E	Row
0			0
1	Plan 1 - Sync	2 6	1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync	2 6	4
5	Plan 5 - Sync	2 6	5
6	Plan 6 - Sync	2 6	6
7	Plan 7 - Sync	2 6	7
8	Plan 8 - Sync	2 6	8
9	Plan 9 - Sync	2 6	9
A	Coord Ped *		A
B	NEMA Hold		B
C			C
D			D
E			E
F			F

Configuration <E Page>

Row	Column Numbers →	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1 3
F	IC Select (Interconnect)	2

Configuration <E Page>

	F
RR Overlap A - Phases	
RR Overlap B - Phases	
RR Overlap C - Phases	
RR Overlap D - Phases	
Ped 2P	2
Ped 6P	
Ped 4P	
Ped 8P	7 8
Yellow Flash Phases	
Overlap A - Phases	1 7
Overlap B - Phases	
Overlap C - Phases	
Overlap D - Phases	
Restricted Phases	
Assign 5 Outputs	

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 =
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Force-Off Adjust	0

Coord Force-Off Adjust for Ped Service <C+D+F>

Transition Type	0

TBC Transition <C+D+D>

Transition Type
0 = Shortway
Non-zero = Lengthen

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Lag Phases <C Page>

Row		F	Row
0	Free Lag	2 4 6 8	0
1	Plan 1 - Lag	2 4 6 8	1
2	Plan 2 - Lag	2 4 6 8	2
3	Plan 3 - Lag	2 4 6 8	3
4	Plan 4 - Lag	2 4 6 8	4
5	Plan 5 - Lag	2 4 6 8	5
6	Plan 6 - Lag	2 4 6 8	6
7	Plan 7 - Lag	2 4 6 8	7
8	Plan 8 - Lag	2 4 6 8	8
9	Plan 9 - Lag	2 4 6 8	9
A	Coord Max *		A
B	Coord Lag *		B
C			C
D			D
E			E
F			F

Row	Time	Plan	Offset	Day of Week
0	00:00	E	A	1234567
1	05:45	1	A	23456
2	14:29	E	A	23456
3	14:30	3	A	23456
4	20:00	E	A	1234567
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination
<9 Key with C+D+9=0>

Time	Funct.	Day of Week	Column F Phases/Bits
05:45	B	23456	12345678
20:00	B	23456	
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			

TOD Function
<7 Key>

<D Page>

Time	Plan	Offset	Day of Week
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			

Holiday # 1 TOD Coordination
<9 Key with C+D+9=1>

Time	Plan	Offset	Day of Week
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			
:			

Holiday # 2 TOD Coordination
<9 Key with C+D+9=2>

Time	Plan	Offset	Day of Week	Row
:				0
:				1
:				2
:				3
:				4
:				5
:				6
:				7
:				8
:				9
:				A
:				B
:				C
:				D
:				E
:				F

Holiday # 3 TOD Coordination
<9 Key with C+D+9=3>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row		Day	Year	Month	Day of Week
A	Holiday # 1 Date				
B	Holiday # 2 Date				
C	Holiday # 3 Date				

Holiday Dates
<8 Key>

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		I-1	14
1	4.5	5.0		I-2U	1
2	0.0	0.0		I-2L	5
3	0.0	0.0		I-3U	21
4	0.0	0.0		I-3L	25
5	0.0	0.0		I-4	9
6	0.0	0.0		I-5	16
7	0.0	0.0		I-6U	3
8	0.0	0.0		I-6L	7
9	0.0	0.0		I-7U	23
A	0.0	0.0		I-7L	27
B	0.0	0.0		I-8	11
C	0.0	0.0		I-9U	18
D	0.0	0.0		I-9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		J-1	13
1	0.0	0.0		J-2U	2
2	4.5	5.0		J-2L	6
3	0.0	0.0		J-3U	22
4	0.0	0.0		J-3L	26
5	0.0	0.0		J-4	10
6	0.0	0.0		J-5	15
7	0.0	0.0		J-6U	4
8	0.0	0.0		J-6L	8
9	0.0	0.0		J-7U	24
A	0.0	0.0		J-7L	28
B	0.0	0.0		J-8	12
C	0.0	0.0		J-9U	17
D	0.0	0.0		J-9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	3.0	0.0	1
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> <D Page>

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector Number
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (minutes)	5	<D+A+E>
Max OFF (minutes)	60	<D+A+F>

Detector Failure Monitor

Phase Number	0	<F+C+1>
Time Before Yellow	0.0	<F+C+3>

Advance Warning Beacon - Sign 1

Phase Number	0	<F+D+1>
Time Before Yellow	0.0	<F+D+3>

Advance Warning Beacon - Sign 2

Long Failure	0.0	<F+0+6>
Short Failure	0.0	<F+0+7>

Power Cycle Correction (Default = 0.5)

Disable Parity	0	<D+B+0>

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Row	Column Numbers →	Phase 1	2	3	4	5	6	7	8
	Phase Names →								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A		0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 2 <F Page>

Row	Column Numbers →	Phase 1	2	3	4	5	6	7	8
	Phase Names →								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	10	0	10	0	10	0	10
2	Min Green	3	7	3	7	3	7	3	7
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Added Initial	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
5	Veh Extension	0.5	3.5	0.5	3.5	0.5	3.5	0.5	3.5
6	Max Gap	0.5	5.0	0.5	5.0	0.5	5.0	0.5	5.0
7	Min Gap	0.5	2.0	0.5	2.0	0.5	2.0	0.5	2.0
8	Max Limit	17	40	17	40	17	40	17	40
9	Max Limit 2	30	70	30	70	30	70	30	70
A		0	0	0	0	0	0	0	0
B	Call To Phase	0	0	0	0	0	0	0	0
C	Reduce By	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
F	Red Clear	0.0	0.5	0.0	1.0	0.0	0.5	0.0	1.0

Phase Timing - Bank 3 <F Page>

Row		7 Time	8 Dwell	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0	Delay Only →	0	---	---	---	---	---	---	---	---
1		0	0							
2		0	0							
3		0	0							
4		0	0							
5		0	0							
6		0	0							
7		0	0							
8		0	0							
9	Limited Service Int. →	0	0							
A		---	0							
B		0	0							
C		0	0							
D		0	0							
E		0	0							
F		0	0							

Special Event Schedule <C Page with F+9+F=22>

<--- Limited Service Interval (Set Dwell = 255)

Reche Canyon @ Washington

UNOFFICIAL TIME CHART — FROM CONTROL MEMORY

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
W	0	6				0		8
Y/W	4	12				0		16
MIN	2	2				2		2
EXT	2	2				2		2
	↓	↓				↓		↓
MAX	20	30				30		~~30~~
YEL	3.0	3.5				3.5		3.5
RED	.5	.5				.5		.5

TOD
- 0000 EA - 1-7
- 0600 ~~AA~~ -2-6
- 1500 3A -2-6
- 1900 EA - 1-7

cycle	#2	#3
0	80	90
1	55	50
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	32	18
9	0	0
A	31	38
B	0	0
C	0	0
D	12	12
E	255	255
F	0	0

COM ADDRESS #9

MASTER: WASHINGTON/BLUFF C+E+0, 8

CFO	Lag Free	2, 4, 6, 8	Sync Ø
PLAN	2	2468	2+6
"	3	2468	2+6

APPENDIX C:

VOLUME DEVELOPMENT WORKSHEETS

LSA

Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour				PM Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
1 Reche Canyon Road/Crystal Ridge Lane								
NBL	0	0	0	0	0	0	0	0
NBT	1,327	18	0	1,345	820	28	0	848
NBR	1	1	0	2	4	1	0	5
SBL	9	0	0	9	30	0	0	30
SBT	371	20	0	391	1,301	28	0	1,329
SBR	0	0	0	0	5	0	0	5
EBL	1	0	0	1	1	0	0	1
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	3	1	0	4	0	1	0	1
WBT	0	0	0	0	0	0	0	0
WBR	41	0	0	41	23	0	0	23
North Leg								
Approach	380	20	0	400	1,336	28	0	1,364
Departure	1,369	18	0	1,387	844	28	0	872
Total	1,749	38	0	1,787	2,180	56	0	2,236
South Leg								
Approach	1,328	19	0	1,347	824	29	0	853
Departure	374	21	0	395	1,301	29	0	1,330
Total	1,702	40	0	1,742	2,125	58	0	2,183
East Leg								
Approach	44	1	0	45	23	1	0	24
Departure	10	1	0	11	34	1	0	35
Total	54	2	0	56	57	2	0	59
West Leg								
Approach	1	0	0	1	1	0	0	1
Departure	0	0	0	0	5	0	0	5
Total	1	0	0	1	6	0	0	6
Total Approaches								
Approach	1,753	40	0	1,793	2,184	58	0	2,242
Departure	1,753	40	0	1,793	2,184	58	0	2,242
Total	3,506	80	0	3,586	4,368	116	0	4,484

LSA

Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour				PM Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
2 Reche Canyon Road/Shadid Drive								
NBL	0	0	0	0	0	0	0	0
NBT	1,322	18	0	1,340	820	29	0	849
NBR	0	0	0	0	0	0	0	0
SBL	2	0	0	2	3	0	0	3
SBT	372	21	0	393	1,298	29	0	1,327
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	2	0	0	2	2	0	0	2
WBT	0	0	0	0	0	0	0	0
WBR	6	0	0	6	4	0	0	4
North Leg								
Approach	374	21	0	395	1,301	29	0	1,330
Departure	1,328	18	0	1,346	824	29	0	853
Total	1,702	39	0	1,741	2,125	58	0	2,183
South Leg								
Approach	1,322	18	0	1,340	820	29	0	849
Departure	374	21	0	395	1,300	29	0	1,329
Total	1,696	39	0	1,735	2,120	58	0	2,178
East Leg								
Approach	8	0	0	8	6	0	0	6
Departure	2	0	0	2	3	0	0	3
Total	10	0	0	10	9	0	0	9
West Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Total Approaches								
Approach	1,704	39	0	1,743	2,127	58	0	2,185
Departure	1,704	39	0	1,743	2,127	58	0	2,185
Total	3,408	78	0	3,486	4,253	116	0	4,369

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour				PM Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
3 Reche Canyon Road/Project Dwy 1								
NBL	0	0	0	0	0	0	0	0
NBT	1,322	19	0	1,341	820	29	0	849
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	374	0	-9	365	1,300	0	-34	1,266
SBR	0	21	9	30	0	29	34	63
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	8	9	17	0	12	32	44
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	374	21	0	395	1,300	29	0	1,329
Departure	1,322	19	0	1,341	820	29	0	849
Total	1,696	40	0	1,736	2,120	58	0	2,178
South Leg								
Approach	1,322	19	0	1,341	820	29	0	849
Departure	374	8	0	382	1,300	12	-2	1,310
Total	1,696	27	0	1,723	2,120	41	-2	2,159
East Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
West Leg								
Approach	0	8	9	17	0	12	32	44
Departure	0	21	9	30	0	29	34	63
Total	0	29	18	47	0	41	66	107
Total Approaches								
Approach	1,696	48	9	1,753	2,120	70	32	2,222
Departure	1,696	48	9	1,753	2,120	70	32	2,222
Total	3,392	96	18	3,506	4,239	140	64	4,443

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour				PM Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
4 Reche Canyon Road/Old Reche Canyon Road								
NBL	0	14	38	52	2	20	20	42
NBT	1,318	0	-38	1,280	817	0	-20	797
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	369	8	0	377	1,298	12	0	1,310
SBR	5	0	0	5	2	0	0	2
EBL	4	19	36	59	3	29	20	52
EBT	0	0	0	0	0	0	0	0
EBR	1	5	0	6	3	7	0	10
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	374	8	0	382	1,300	12	0	1,312
Departure	1,322	19	-2	1,339	820	29	0	849
Total	1,696	27	-2	1,721	2,120	41	0	2,161
South Leg								
Approach	1,318	14	0	1,332	819	20	0	839
Departure	370	13	0	383	1,301	19	0	1,320
Total	1,688	27	0	1,715	2,120	39	0	2,159
East Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
West Leg								
Approach	5	24	36	65	6	36	20	62
Departure	5	14	38	57	4	20	20	44
Total	10	38	74	122	10	56	40	106
Total Approaches								
Approach	1,697	46	36	1,779	2,125	68	20	2,213
Departure	1,697	46	36	1,779	2,125	68	20	2,213
Total	3,394	92	72	3,558	4,249	136	40	4,425

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour				PM Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
5 Reche Canyon Road/Shane Drive-Mobile Home Estates								
NBL	3	0	0	3	3	0	0	3
NBT	1,259	12	0	1,271	785	17	0	802
NBR	0	0	0	0	0	0	0	0
SBL	3	0	0	3	1	0	0	1
SBT	383	11	0	394	1,199	17	0	1,216
SBR	26	2	0	28	44	2	0	46
EBL	48	2	0	50	25	2	0	27
EBT	1	0	0	1	0	0	0	0
EBR	3	0	0	3	2	0	0	2
WBL	0	0	0	0	0	0	0	0
WBT	1	0	0	1	0	0	0	0
WBR	0	0	0	0	2	0	0	2
North Leg								
Approach	412	13	0	425	1,244	19	0	1,263
Departure	1,307	14	0	1,321	812	19	0	831
Total	1,719	27	0	1,746	2,056	38	0	2,094
South Leg								
Approach	1,262	12	0	1,274	788	17	0	805
Departure	386	11	0	397	1,201	17	0	1,218
Total	1,648	23	0	1,671	1,989	34	0	2,023
East Leg								
Approach	1	0	0	1	2	0	0	2
Departure	4	0	0	4	1	0	0	1
Total	5	0	0	5	3	0	0	3
West Leg								
Approach	52	2	0	54	27	2	0	29
Departure	30	2	0	32	47	2	0	49
Total	82	4	0	86	74	4	0	78
Total Approaches								
Approach	1,727	27	0	1,754	2,061	38	0	2,099
Departure	1,727	27	0	1,754	2,061	38	0	2,099
Total	3,454	54	0	3,508	4,122	76	0	4,198

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour				PM Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
6 Reche Canyon Road/Washington Street								
NBL	781	9	0	790	610	15	0	625
NBT	0	0	0	0	0	0	0	0
NBR	923	5	0	928	626	7	0	633
SBL	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	1,012	0	0	1,012	945	0	0	945
EBR	259	11	0	270	943	15	0	958
WBL	288	5	0	293	838	7	0	845
WBT	742	0	0	742	849	0	0	849
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
South Leg								
Approach	1,704	14	0	1,718	1,236	22	0	1,258
Departure	547	16	0	563	1,781	22	0	1,803
Total	2,251	30	0	2,281	3,017	44	0	3,061
East Leg								
Approach	1,030	5	0	1,035	1,687	7	0	1,694
Departure	1,935	5	0	1,940	1,571	7	0	1,578
Total	2,965	10	0	2,975	3,258	14	0	3,272
West Leg								
Approach	1,271	11	0	1,282	1,888	15	0	1,903
Departure	1,523	9	0	1,532	1,459	15	0	1,474
Total	2,794	20	0	2,814	3,347	30	0	3,377
Total Approaches								
Approach	4,005	30	0	4,035	4,811	44	0	4,855
Departure	4,005	30	0	4,035	4,811	44	0	4,855
Total	8,010	60	0	8,070	9,622	88	0	9,710

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour				PM Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
7 Hunts Lane/Washington Street								
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0
SBL	72	0	0	72	25	0	0	25
SBT	0	0	0	0	0	0	0	0
SBR	188	2	0	190	766	2	0	768
EBL	374	2	0	376	194	2	0	196
EBT	1,561	3	0	1,564	1,377	5	0	1,382
EBR	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0
WBT	842	4	0	846	921	5	0	926
WBR	68	0	0	68	55	0	0	55
North Leg								
Approach	260	2	0	262	791	2	0	793
Departure	442	2	0	444	249	2	0	251
Total	702	4	0	706	1,040	4	0	1,044
South Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
East Leg								
Approach	910	4	0	914	976	5	0	981
Departure	1,633	3	0	1,636	1,402	5	0	1,407
Total	2,543	7	0	2,550	2,378	10	0	2,388
West Leg								
Approach	1,935	5	0	1,940	1,571	7	0	1,578
Departure	1,030	6	0	1,036	1,687	7	0	1,694
Total	2,965	11	0	2,976	3,258	14	0	3,272
Total Approaches								
Approach	3,105	11	0	3,116	3,338	14	0	3,352
Departure	3,105	11	0	3,116	3,338	14	0	3,352
Total	6,210	22	0	6,232	6,676	28	0	6,704

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
1 Reche Canyon Road/Crystal Ridge Lane							
NBL	0	0	0	0	0	0	0
NBT	1,327	27	49	1,403	18	0	1,421
NBR	1	0	35	36	1	0	37
SBL	9	0	7	16	0	0	16
SBT	371	7	27	405	20	0	425
SBR	0	0	3	3	0	0	3
EBL	1	0	8	9	0	0	9
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	3	0	100	103	1	0	104
WBT	0	0	0	0	0	0	0
WBR	41	1	20	62	0	0	62
North Leg							
Approach	380	7	37	424	20	0	444
Departure	1,369	28	77	1,474	18	0	1,492
Total	1,749	35	114	1,898	38	0	1,936
South Leg							
Approach	1,328	27	84	1,439	19	0	1,458
Departure	374	7	127	508	21	0	529
Total	1,702	34	211	1,947	40	0	1,987
East Leg							
Approach	44	1	120	165	1	0	166
Departure	10	0	42	52	1	0	53
Total	54	1	162	217	2	0	219
West Leg							
Approach	1	0	8	9	0	0	9
Departure	0	0	3	3	0	0	3
Total	1	0	11	12	0	0	12
Total Approaches							
Approach	1,753	35	249	2,037	40	0	2,077
Departure	1,753	35	249	2,037	40	0	2,077
Total	3,506	70	498	4,074	80	0	4,154

LSA

Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
2 Reche Canyon Road/Shadid Drive							
NBL	0	0	0	0	0	0	0
NBT	1,322	26	85	1,433	18	0	1,451
NBR	0	0	0	0	0	0	0
SBL	2	0	0	2	0	0	2
SBT	372	7	126	505	21	0	526
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	2	0	1	3	0	0	3
WBT	0	0	0	0	0	0	0
WBR	6	0	0	6	0	0	6
North Leg							
Approach	374	7	126	507	21	0	528
Departure	1,328	26	85	1,439	18	0	1,457
Total	1,702	33	211	1,946	39	0	1,985
South Leg							
Approach	1,322	26	85	1,433	18	0	1,451
Departure	374	7	127	508	21	0	529
Total	1,696	33	212	1,941	39	0	1,980
East Leg							
Approach	8	0	1	9	0	0	9
Departure	2	0	0	2	0	0	2
Total	10	0	1	11	0	0	11
West Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Total Approaches							
Approach	1,704	33	212	1,949	39	0	1,988
Departure	1,704	33	212	1,949	39	0	1,988
Total	3,408	66	424	3,898	78	0	3,976

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
3 Reche Canyon Road/Project Dwy 1							
NBL	0	0	0	0	0	0	0
NBT	1,322	26	85	1,433	19	0	1,452
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	374	7	127	508	0	-9	499
SBR	0	0	0	0	21	9	30
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	8	9	17
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	374	7	127	508	21	0	529
Departure	1,322	26	85	1,433	19	0	1,452
Total	1,696	33	212	1,941	40	0	1,981
South Leg							
Approach	1,322	26	85	1,433	19	0	1,452
Departure	374	7	127	508	8	0	516
Total	1,696	33	212	1,941	27	0	1,968
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	0	0	0	0	8	9	17
Departure	0	0	0	0	21	9	30
Total	0	0	0	0	29	18	47
Total Approaches							
Approach	1,696	33	212	1,941	48	9	1,998
Departure	1,696	33	212	1,941	48	9	1,998
Total	3,392	66	424	3,882	96	18	3,996

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
4 Reche Canyon Road/Old Reche Canyon Road							
NBL	0	0	3	3	14	38	55
NBT	1,318	26	85	1,429	0	-38	1,391
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	369	7	127	503	8	0	511
SBR	5	0	0	5	0	0	5
EBL	4	0	0	4	19	36	59
EBT	0	0	0	0	0	0	0
EBR	1	0	8	9	5	0	14
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	374	7	127	508	8	0	516
Departure	1,322	26	85	1,433	19	-2	1,450
Total	1,696	33	212	1,941	27	-2	1,966
South Leg							
Approach	1,318	26	88	1,432	14	0	1,446
Departure	370	7	135	512	13	0	525
Total	1,688	33	223	1,944	27	0	1,971
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	5	0	8	13	24	36	73
Departure	5	0	3	8	14	38	60
Total	10	0	11	21	38	74	133
Total Approaches							
Approach	1,697	33	223	1,953	46	36	2,035
Departure	1,697	33	223	1,953	46	36	2,035
Total	3,394	66	446	3,906	92	72	4,070

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
5 Reche Canyon Road/Shane Drive-Mobile Home Estates							
NBL	3	0	1	4	0	0	4
NBT	1,259	25	88	1,372	12	0	1,384
NBR	0	0	0	0	0	0	0
SBL	3	0	0	3	0	0	3
SBT	383	8	135	526	11	0	537
SBR	26	1	0	27	2	0	29
EBL	48	1	0	49	2	0	51
EBT	1	0	0	1	0	0	1
EBR	3	0	3	6	0	0	6
WBL	0	0	0	0	0	0	0
WBT	1	0	0	1	0	0	1
WBR	0	0	0	0	0	0	0
North Leg							
Approach	412	9	135	556	13	0	569
Departure	1,307	26	88	1,421	14	0	1,435
Total	1,719	35	223	1,977	27	0	2,004
South Leg							
Approach	1,262	25	89	1,376	12	0	1,388
Departure	386	8	138	532	11	0	543
Total	1,648	33	227	1,908	23	0	1,931
East Leg							
Approach	1	0	0	1	0	0	1
Departure	4	0	0	4	0	0	4
Total	5	0	0	5	0	0	5
West Leg							
Approach	52	1	3	56	2	0	58
Departure	30	1	1	32	2	0	34
Total	82	2	4	88	4	0	92
Total Approaches							
Approach	1,727	35	227	1,989	27	0	2,016
Departure	1,727	35	227	1,989	27	0	2,016
Total	3,454	70	454	3,978	54	0	4,032

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
6 Reche Canyon Road/Washington Street							
NBL	781	16	63	860	9	0	869
NBT	0	0	0	0	0	0	0
NBR	923	18	94	1,035	5	0	1,040
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	1,012	20	89	1,121	0	0	1,121
EBR	259	5	21	285	11	0	296
WBL	288	6	36	330	5	0	335
WBT	742	15	54	811	0	0	811
WBR	0	0	0	0	0	0	0
North Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
South Leg							
Approach	1,704	34	157	1,895	14	0	1,909
Departure	547	11	57	615	16	0	631
Total	2,251	45	214	2,510	30	0	2,540
East Leg							
Approach	1,030	21	90	1,141	5	0	1,146
Departure	1,935	38	183	2,156	5	0	2,161
Total	2,965	59	273	3,297	10	0	3,307
West Leg							
Approach	1,271	25	110	1,406	11	0	1,417
Departure	1,523	31	117	1,671	9	0	1,680
Total	2,794	56	227	3,077	20	0	3,097
Total Approaches							
Approach	4,005	80	357	4,442	30	0	4,472
Departure	4,005	80	357	4,442	30	0	4,472
Total	8,010	160	714	8,884	60	0	8,944

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
7 Hunts Lane/Washington Street							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	72	1	13	86	0	0	86
SBT	0	0	0	0	0	0	0
SBR	188	4	10	202	2	0	204
EBL	374	7	25	406	2	0	408
EBT	1,561	31	157	1,749	3	0	1,752
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	842	17	82	941	4	0	945
WBR	68	1	6	75	0	0	75
North Leg							
Approach	260	5	23	288	2	0	290
Departure	442	8	31	481	2	0	483
Total	702	13	54	769	4	0	773
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	910	18	88	1,016	4	0	1,020
Departure	1,633	32	170	1,835	3	0	1,838
Total	2,543	50	258	2,851	7	0	2,858
West Leg							
Approach	1,935	38	182	2,155	5	0	2,160
Departure	1,030	21	92	1,143	6	0	1,149
Total	2,965	59	274	3,298	11	0	3,309
Total Approaches							
Approach	3,105	61	293	3,459	11	0	3,470
Departure	3,105	61	293	3,459	11	0	3,470
Total	6,210	122	586	6,918	22	0	6,940

LSA

Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
1 Reche Canyon Road/Crystal Ridge Lane							
NBL	0	0	0	0	0	0	0
NBT	820	16	37	873	28	0	901
NBR	4	0	115	119	1	0	120
SBL	30	1	23	54	0	0	54
SBT	1,301	26	59	1,386	28	0	1,414
SBR	5	0	9	14	0	0	14
EBL	1	0	5	6	0	0	6
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	0	0	69	69	1	0	70
WBT	0	0	0	0	0	0	0
WBR	23	0	13	36	0	0	36
North Leg							
Approach	1,336	27	91	1,454	28	0	1,482
Departure	844	16	55	915	28	0	943
Total	2,180	43	146	2,369	56	0	2,425
South Leg							
Approach	824	16	152	992	29	0	1,021
Departure	1,301	26	128	1,455	29	0	1,484
Total	2,125	42	280	2,447	58	0	2,505
East Leg							
Approach	23	0	82	105	1	0	106
Departure	34	1	138	173	1	0	174
Total	57	1	220	278	2	0	280
West Leg							
Approach	1	0	5	6	0	0	6
Departure	5	0	9	14	0	0	14
Total	6	0	14	20	0	0	20
Total Approaches							
Approach	2,184	43	330	2,557	58	0	2,615
Departure	2,184	43	330	2,557	58	0	2,615
Total	4,368	86	660	5,114	116	0	5,230

LSA

Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
2 Reche Canyon Road/Shadid Drive							
NBL	0	0	0	0	0	0	0
NBT	820	16	151	987	29	0	1,016
NBR	0	0	1	1	0	0	1
SBL	3	0	0	3	0	0	3
SBT	1,298	26	129	1,453	29	0	1,482
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	2	0	0	2	0	0	2
WBT	0	0	0	0	0	0	0
WBR	4	0	0	4	0	0	4
North Leg							
Approach	1,301	26	129	1,456	29	0	1,485
Departure	824	16	151	991	29	0	1,020
Total	2,125	42	280	2,447	58	0	2,505
South Leg							
Approach	820	16	152	988	29	0	1,017
Departure	1,300	26	129	1,455	29	0	1,484
Total	2,120	42	281	2,443	58	0	2,501
East Leg							
Approach	6	0	0	6	0	0	6
Departure	3	0	1	4	0	0	4
Total	9	0	1	10	0	0	10
West Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Total Approaches							
Approach	2,127	42	281	2,450	58	0	2,508
Departure	2,127	42	281	2,450	58	0	2,508
Total	4,253	84	562	4,899	116	0	5,016

LSA

Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
3 Reche Canyon Road/Project Dwy 1							
NBL	0	0	0	0	0	0	0
NBT	820	16	152	988	29	0	1,017
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	1,300	26	129	1,455	0	-34	1,421
SBR	0	0	0	0	29	34	63
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	12	32	44
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	1,300	26	129	1,455	29	0	1,484
Departure	820	16	152	988	29	0	1,017
Total	2,120	42	281	2,443	58	0	2,501
South Leg							
Approach	820	16	152	988	29	0	1,017
Departure	1,300	26	129	1,455	12	-2	1,465
Total	2,120	42	281	2,443	41	-2	2,482
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	0	0	0	0	12	32	44
Departure	0	0	0	0	29	34	63
Total	0	0	0	0	41	66	107
Total Approaches							
Approach	2,120	42	281	2,443	70	32	2,545
Departure	2,120	42	281	2,443	70	32	2,545
Total	4,239	84	562	4,885	140	64	5,090

LSA

Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
4 Reche Canyon Road/Old Reche Canyon Road							
NBL	2	0	9	11	20	20	51
NBT	817	16	152	985	0	-20	965
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	1,298	26	129	1,453	12	0	1,465
SBR	2	0	0	2	0	0	2
EBL	3	0	0	3	29	20	52
EBT	0	0	0	0	0	0	0
EBR	3	0	5	8	7	0	15
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	1,300	26	129	1,455	12	0	1,467
Departure	820	16	152	988	29	0	1,017
Total	2,120	42	281	2,443	41	0	2,484
South Leg							
Approach	819	16	161	996	20	0	1,016
Departure	1,301	26	134	1,461	19	0	1,480
Total	2,120	42	295	2,457	39	0	2,496
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	6	0	5	11	36	20	67
Departure	4	0	9	13	20	20	53
Total	10	0	14	24	56	40	120
Total Approaches							
Approach	2,125	42	295	2,462	68	20	2,550
Departure	2,125	42	295	2,462	68	20	2,550
Total	4,249	84	590	4,923	136	40	5,100

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
5 Reche Canyon Road/Shane Drive-Mobile Home Estates							
NBL	3	0	6	9	0	0	9
NBT	785	16	161	962	17	0	979
NBR	0	0	0	0	0	0	0
SBL	1	0	0	1	0	0	1
SBT	1,199	24	134	1,357	17	0	1,374
SBR	44	1	0	45	2	0	47
EBL	25	1	0	26	2	0	28
EBT	0	0	0	0	0	0	0
EBR	2	0	4	6	0	0	6
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	2	0	0	2	0	0	2
North Leg							
Approach	1,244	25	134	1,403	19	0	1,422
Departure	812	17	161	990	19	0	1,009
Total	2,056	42	295	2,393	38	0	2,431
South Leg							
Approach	788	16	167	971	17	0	988
Departure	1,201	24	138	1,363	17	0	1,380
Total	1,989	40	305	2,334	34	0	2,368
East Leg							
Approach	2	0	0	2	0	0	2
Departure	1	0	0	1	0	0	1
Total	3	0	0	3	0	0	3
West Leg							
Approach	27	1	4	32	2	0	34
Departure	47	1	6	54	2	0	56
Total	74	2	10	86	4	0	90
Total Approaches							
Approach	2,061	42	305	2,408	38	0	2,446
Departure	2,061	42	305	2,408	38	0	2,446
Total	4,122	84	610	4,816	76	0	4,892

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
6 Reche Canyon Road/Washington Street							
NBL	610	12	43	665	15	0	680
NBT	0	0	0	0	0	0	0
NBR	626	13	59	698	7	0	705
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	945	19	65	1,029	0	0	1,029
EBR	943	19	70	1,032	15	0	1,047
WBL	838	17	104	959	7	0	966
WBT	849	17	102	968	0	0	968
WBR	0	0	0	0	0	0	0
North Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
South Leg							
Approach	1,236	25	102	1,363	22	0	1,385
Departure	1,781	36	174	1,991	22	0	2,013
Total	3,017	61	276	3,354	44	0	3,398
East Leg							
Approach	1,687	34	206	1,927	7	0	1,934
Departure	1,571	32	124	1,727	7	0	1,734
Total	3,258	66	330	3,654	14	0	3,668
West Leg							
Approach	1,888	38	135	2,061	15	0	2,076
Departure	1,459	29	145	1,633	15	0	1,648
Total	3,347	67	280	3,694	30	0	3,724
Total Approaches							
Approach	4,811	97	443	5,351	44	0	5,395
Departure	4,811	97	443	5,351	44	0	5,395
Total	9,622	194	886	10,702	88	0	10,790

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Table C-3 - Cumulative (2023) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing Year 2021	2021-2,023 Growth	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-by Trips	Cumulative With Project
7 Hunts Lane/Washington Street							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	25	1	7	33	0	0	33
SBT	0	0	0	0	0	0	0
SBR	766	15	29	810	2	0	812
EBL	194	4	17	215	2	0	217
EBT	1,377	28	107	1,512	5	0	1,517
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	921	18	179	1,118	5	0	1,123
WBR	55	1	14	70	0	0	70
North Leg							
Approach	791	16	36	843	2	0	845
Departure	249	5	31	285	2	0	287
Total	1,040	21	67	1,128	4	0	1,132
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	976	19	193	1,188	5	0	1,193
Departure	1,402	29	114	1,545	5	0	1,550
Total	2,378	48	307	2,733	10	0	2,743
West Leg							
Approach	1,571	32	124	1,727	7	0	1,734
Departure	1,687	33	208	1,928	7	0	1,935
Total	3,258	65	332	3,655	14	0	3,669
Total Approaches							
Approach	3,338	67	353	3,758	14	0	3,772
Departure	3,338	67	353	3,758	14	0	3,772
Total	6,676	134	706	7,516	28	0	7,544

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Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
1 Reche Canyon Road/Crystal Ridge Lane								
NBL	0	0	0	0	0	0	0	0
NBT	1,634	18	0	1,652	1,344	28	0	1,372
NBR	38	1	0	39	125	1	0	126
SBL	17	0	0	17	57	0	0	57
SBT	661	20	0	681	1,618	28	0	1,646
SBR	3	0	0	3	15	0	0	15
EBL	9	0	0	9	6	0	0	6
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	108	1	0	109	72	1	0	73
WBT	0	0	0	0	0	0	0	0
WBR	65	0	0	65	38	0	0	38
North Leg								
Approach	681	20	0	701	1,690	28	0	1,718
Departure	1,708	18	0	1,726	1,388	28	0	1,416
Total	2,389	38	0	2,427	3,078	56	0	3,134
South Leg								
Approach	1,672	19	0	1,691	1,469	29	0	1,498
Departure	769	21	0	790	1,690	29	0	1,719
Total	2,441	40	0	2,481	3,159	58	0	3,217
East Leg								
Approach	173	1	0	174	110	1	0	111
Departure	55	1	0	56	182	1	0	183
Total	228	2	0	230	292	2	0	294
West Leg								
Approach	9	0	0	9	6	0	0	6
Departure	3	0	0	3	15	0	0	15
Total	12	0	0	12	21	0	0	21
Total Approaches								
Approach	2,535	40	0	2,575	3,275	58	0	3,333
Departure	2,535	40	0	2,575	3,275	58	0	3,333
Total	5,070	80	0	5,150	6,550	116	0	6,666

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Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
2 Reche Canyon Road/Shadid Drive								
NBL	0	0	0	0	0	0	0	0
NBT	1,666	18	0	1,684	1,465	29	0	1,494
NBR	0	0	0	0	1	0	0	1
SBL	2	0	0	2	3	0	0	3
SBT	767	21	0	788	1,687	29	0	1,716
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	3	0	0	3	2	0	0	2
WBT	0	0	0	0	0	0	0	0
WBR	6	0	0	6	4	0	0	4
North Leg								
Approach	769	21	0	790	1,690	29	0	1,719
Departure	1,672	18	0	1,690	1,469	29	0	1,498
Total	2,441	39	0	2,480	3,159	58	0	3,217
South Leg								
Approach	1,666	18	0	1,684	1,466	29	0	1,495
Departure	770	21	0	791	1,689	29	0	1,718
Total	2,436	39	0	2,475	3,155	58	0	3,213
East Leg								
Approach	9	0	0	9	6	0	0	6
Departure	2	0	0	2	4	0	0	4
Total	11	0	0	11	10	0	0	10
West Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Total Approaches								
Approach	2,444	39	0	2,483	3,162	58	0	3,220
Departure	2,444	39	0	2,483	3,162	58	0	3,220
Total	4,888	78	0	4,966	6,324	116	0	6,440

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Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
3 Reche Canyon Road/Project Dwy 1								
NBL	0	0	0	0	0	0	0	0
NBT	1,666	19	0	1,685	1,466	29	0	1,495
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	770	0	-9	761	1,689	0	-34	1,655
SBR	0	21	9	30	0	29	34	63
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	8	9	17	0	12	32	44
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	770	21	0	791	1,689	29	0	1,718
Departure	1,666	19	0	1,685	1,466	29	0	1,495
Total	2,436	40	0	2,476	3,155	58	0	3,213
South Leg								
Approach	1,666	19	0	1,685	1,466	29	0	1,495
Departure	770	8	0	778	1,689	12	-2	1,699
Total	2,436	27	0	2,463	3,155	41	-2	3,194
East Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
West Leg								
Approach	0	8	9	17	0	12	32	44
Departure	0	21	9	30	0	29	34	63
Total	0	29	18	47	0	41	66	107
Total Approaches								
Approach	2,436	48	9	2,493	3,155	70	32	3,257
Departure	2,436	48	9	2,493	3,155	70	32	3,257
Total	4,872	96	18	4,986	6,310	140	64	6,514

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Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
4 Reche Canyon Road/Old Reche Canyon Road								
NBL	3	14	38	55	12	20	20	52
NBT	1,662	0	-38	1,624	1,463	0	-20	1,443
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	764	8	0	772	1,687	12	0	1,699
SBR	6	0	0	6	2	0	0	2
EBL	4	19	36	59	3	29	20	52
EBT	0	0	0	0	0	0	0	0
EBR	9	5	0	14	8	7	0	15
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	770	8	0	778	1,689	12	0	1,701
Departure	1,666	19	-2	1,683	1,466	29	0	1,495
Total	2,436	27	-2	2,461	3,155	41	0	3,196
South Leg								
Approach	1,665	14	0	1,679	1,475	20	0	1,495
Departure	773	13	0	786	1,695	19	0	1,714
Total	2,438	27	0	2,465	3,170	39	0	3,209
East Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
West Leg								
Approach	13	24	36	73	11	36	20	67
Departure	9	14	38	61	14	20	20	54
Total	22	38	74	134	25	56	40	121
Total Approaches								
Approach	2,448	46	36	2,530	3,175	68	20	3,263
Departure	2,448	46	36	2,530	3,175	68	20	3,263
Total	4,896	92	72	5,060	6,350	136	40	6,526

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Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
5 Reche Canyon Road/Shane Drive-Mobile Home Estates								
NBL	4	0	0	4	9	0	0	9
NBT	1,566	12	0	1,578	1,309	17	0	1,326
NBR	0	0	0	0	0	0	0	0
SBL	3	0	0	3	1	0	0	1
SBT	673	11	0	684	1,516	17	0	1,533
SBR	27	2	0	29	47	2	0	49
EBL	51	2	0	53	27	2	0	29
EBT	1	0	0	1	0	0	0	0
EBR	6	0	0	6	6	0	0	6
WBL	0	0	0	0	0	0	0	0
WBT	1	0	0	1	0	0	0	0
WBR	0	0	0	0	2	0	0	2
North Leg								
Approach	703	13	0	716	1,564	19	0	1,583
Departure	1,617	14	0	1,631	1,338	19	0	1,357
Total	2,320	27	0	2,347	2,902	38	0	2,940
South Leg								
Approach	1,570	12	0	1,582	1,318	17	0	1,335
Departure	679	11	0	690	1,522	17	0	1,539
Total	2,249	23	0	2,272	2,840	34	0	2,874
East Leg								
Approach	1	0	0	1	2	0	0	2
Departure	4	0	0	4	1	0	0	1
Total	5	0	0	5	3	0	0	3
West Leg								
Approach	58	2	0	60	33	2	0	35
Departure	32	2	0	34	56	2	0	58
Total	90	4	0	94	89	4	0	93
Total Approaches								
Approach	2,332	27	0	2,359	2,917	38	0	2,955
Departure	2,332	27	0	2,359	2,917	38	0	2,955
Total	4,664	54	0	4,718	5,834	76	0	5,910

LSA

Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
6 Reche Canyon Road/Washington Street								
NBL	978	9	0	987	867	15	0	882
NBT	0	0	0	0	0	0	0	0
NBR	10	0	0	10	9	0	0	9
SBL	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	1,172	0	0	1,172	1,341	0	0	1,341
EBR	453	11	0	464	1,182	15	0	1,197
WBL	7	0	0	7	9	0	0	9
WBT	1,168	0	0	1,168	1,028	0	0	1,028
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
South Leg								
Approach	988	9	0	997	876	15	0	891
Departure	460	11	0	471	1,191	15	0	1,206
Total	1,448	20	0	1,468	2,067	30	0	2,097
East Leg								
Approach	1,175	0	0	1,175	1,037	0	0	1,037
Departure	1,182	0	0	1,182	1,350	0	0	1,350
Total	2,357	0	0	2,357	2,387	0	0	2,387
West Leg								
Approach	1,625	11	0	1,636	2,523	15	0	2,538
Departure	2,146	9	0	2,155	1,895	15	0	1,910
Total	3,771	20	0	3,791	4,418	30	0	4,448
Total Approaches								
Approach	3,788	20	0	3,808	4,436	30	0	4,466
Departure	3,788	20	0	3,808	4,436	30	0	4,466
Total	7,576	40	0	7,616	8,872	60	0	8,932

LSA

Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
7 Hunts Lane/Washington Street								
NBL	12	0	0	12	10	0	0	10
NBT	220	2	0	222	168	2	0	170
NBR	837	3	0	840	823	5	0	828
SBL	90	0	0	90	35	0	0	35
SBT	68	2	0	70	435	2	0	437
SBR	171	0	0	171	417	0	0	417
EBL	202	0	0	202	202	0	0	202
EBT	976	0	0	976	1,134	0	0	1,134
EBR	4	0	0	4	14	0	0	14
WBL	397	4	0	401	597	5	0	602
WBT	992	0	0	992	610	0	0	610
WBR	93	0	0	93	82	0	0	82
North Leg								
Approach	329	2	0	331	887	2	0	889
Departure	515	2	0	517	452	2	0	454
Total	844	4	0	848	1,339	4	0	1,343
South Leg								
Approach	1,069	5	0	1,074	1,001	7	0	1,008
Departure	469	6	0	475	1,046	7	0	1,053
Total	1,538	11	0	1,549	2,047	14	0	2,061
East Leg								
Approach	1,482	4	0	1,486	1,289	5	0	1,294
Departure	1,903	3	0	1,906	1,992	5	0	1,997
Total	3,385	7	0	3,392	3,281	10	0	3,291
West Leg								
Approach	1,182	0	0	1,182	1,350	0	0	1,350
Departure	1,175	0	0	1,175	1,037	0	0	1,037
Total	2,357	0	0	2,357	2,387	0	0	2,387
Total Approaches								
Approach	4,062	11	0	4,073	4,527	14	0	4,541
Departure	4,062	11	0	4,073	4,527	14	0	4,541
Total	8,124	22	0	8,146	9,054	28	0	9,082

LSA

Table C-4-Build-Out (2040) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project	Build-Out Without Project	Net Project Trips	Pass-by Trips	Build-Out With Project
8 Existing Reche Canyon Road/Future Realignment								
NBL	0	0	0	0	1	0	0	1
NBT	975	9	0	984	863	15	0	878
NBR	1,063	5	0	1,068	987	7	0	994
SBL	5	0	0	5	13	0	0	13
SBT	450	11	0	461	1,169	15	0	1,184
SBR	5	0	0	5	9	0	0	9
EBL	8	0	0	8	4	0	0	4
EBT	10	0	0	10	5	0	0	5
EBR	4	0	0	4	2	0	0	2
WBL	460	5	0	465	975	7	0	982
WBT	6	0	0	6	8	0	0	8
WBR	5	0	0	5	9	0	0	9
North Leg								
Approach	460	11	0	471	1,191	15	0	1,206
Departure	988	9	0	997	876	15	0	891
Total	1,448	20	0	1,468	2,067	30	0	2,097
South Leg								
Approach	2,038	14	0	2,052	1,851	22	0	1,873
Departure	914	16	0	930	2,146	22	0	2,168
Total	2,952	30	0	2,982	3,997	44	0	4,041
East Leg								
Approach	471	5	0	476	992	7	0	999
Departure	1,078	5	0	1,083	1,005	7	0	1,012
Total	1,549	10	0	1,559	1,997	14	0	2,011
West Leg								
Approach	22	0	0	22	11	0	0	11
Departure	11	0	0	11	18	0	0	18
Total	33	0	0	33	29	0	0	29
Total Approaches								
Approach	2,991	30	0	3,021	4,045	44	0	4,089
Departure	2,991	30	0	3,021	4,045	44	0	4,089
Total	5,982	60	0	6,042	8,090	88	0	8,178

APPENDIX D:

INTERSECTION LEVEL OF SERVICE WORKSHEETS

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	3	0	41	0	1327	1	9	371	0
Future Vol, veh/h	1	0	0	3	0	41	0	1327	1	9	371	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	0	3	0	42	0	1368	1	9	382	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1790	1769	382	1768	1768	1368	382	0	0	1369	0	0
Stage 1	400	400	-	1368	1368	-	-	-	-	-	-	-
Stage 2	1390	1369	-	400	400	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	64	84	670	66	84	181	1188	-	-	508	-	-
Stage 1	630	605	-	183	217	-	-	-	-	-	-	-
Stage 2	178	216	-	630	605	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	48	82	670	65	82	181	1188	-	-	508	-	-
Mov Cap-2 Maneuver	48	82	-	65	82	-	-	-	-	-	-	-
Stage 1	630	594	-	183	217	-	-	-	-	-	-	-
Stage 2	136	216	-	619	594	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	81.6	33	0	0.3
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1188	-	-	48	65	181	508	-	-
HCM Lane V/C Ratio	-	-	-	0.021	0.048	0.234	0.018	-	-
HCM Control Delay (s)	0	-	-	81.6	63.1	30.8	12.2	-	-
HCM Lane LOS	A	-	-	F	F	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	6	1322	0	2	372
Future Vol, veh/h	2	6	1322	0	2	372
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	55	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	6	1392	0	2	392

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1788	1392	0	0	1392	0
Stage 1	1392	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	90	176	-	-	498	-
Stage 1	233	-	-	-	-	-
Stage 2	684	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	90	176	-	-	498	-
Mov Cap-2 Maneuver	90	-	-	-	-	-
Stage 1	233	-	-	-	-	-
Stage 2	681	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.9	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	142	498	-
HCM Lane V/C Ratio	-	-	0.059	0.004	-
HCM Control Delay (s)	-	-	31.9	12.3	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1	0	1318	369	5
Future Vol, veh/h	4	1	0	1318	369	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	1	0	1387	388	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1778	391	393	0	-	0
Stage 1	391	-	-	-	-	-
Stage 2	1387	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	92	662	1177	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	234	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	92	662	1177	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	234	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	38.9	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1177	-	92	662	-	-
HCM Lane V/C Ratio	-	-	0.046	0.002	-	-
HCM Control Delay (s)	0	-	46	10.4	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1	3	0	1	0	3	1259	0	3	383	26
Future Volume (veh/h)	48	1	3	0	1	0	3	1259	0	3	383	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	50	1	3	0	1	0	3	1311	0	3	399	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	2	5	0	3	0	838	1574	1334	264	1574	1334
Arrive On Green	0.05	0.05	0.05	0.00	0.00	0.00	0.83	0.83	0.00	0.83	0.83	0.83
Sat Flow, veh/h	1665	33	100	0	1900	0	977	1900	1610	426	1900	1610
Grp Volume(v), veh/h	54	0	0	0	1	0	3	1311	0	3	399	27
Grp Sat Flow(s),veh/h/ln	1799	0	0	0	1900	0	977	1900	1610	426	1900	1610
Q Serve(g_s), s	2.9	0.0	0.0	0.0	0.1	0.0	0.1	37.3	0.0	0.4	4.5	0.3
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.0	0.1	0.0	4.5	37.3	0.0	37.7	4.5	0.3
Prop In Lane	0.93		0.06	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	0	0	0	3	0	838	1574	1334	264	1574	1334
V/C Ratio(X)	0.64	0.00	0.00	0.00	0.32	0.00	0.00	0.83	0.00	0.01	0.25	0.02
Avail Cap(c_a), veh/h	340	0	0	0	359	0	838	1574	1334	264	1574	1334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	0.0	0.0	48.8	0.0	2.3	4.6	0.0	15.1	1.8	1.5
Incr Delay (d2), s/veh	7.6	0.0	0.0	0.0	50.3	0.0	0.0	5.3	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	0.0	0.1	0.0	0.0	9.8	0.0	0.0	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	0.0	0.0	0.0	99.1	0.0	2.3	10.0	0.0	15.1	1.9	1.5
LnGrp LOS	D	A	A	A	F	A	A	A	A	B	A	A
Approach Vol, veh/h		54			1			1314			429	
Approach Delay, s/veh		53.4			99.1			9.9			2.0	
Approach LOS		D			F			A			A	

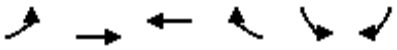
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.0		8.6		85.0		4.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		81.0		18.5		81.0		18.5				
Max Q Clear Time (g_c+I1), s		39.3		4.9		39.7		2.1				
Green Ext Time (p_c), s		20.3		0.1		2.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1012	259	288	742	781	923
Future Volume (veh/h)	1012	259	288	742	781	923
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1065	273	303	781	822	972
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1467	1178	438	2076	1141	1275
Arrive On Green	0.41	0.41	0.12	0.57	0.32	0.32
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1065	273	303	781	822	972
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	19.9	4.4	6.6	9.4	16.5	23.0
Cycle Q Clear(g_c), s	19.9	4.4	6.6	9.4	16.5	23.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1467	1178	438	2076	1141	1275
V/C Ratio(X)	0.73	0.23	0.69	0.38	0.72	0.76
Avail Cap(c_a), veh/h	1467	1178	724	2076	1141	1275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	3.5	33.5	9.2	23.8	18.4
Incr Delay (d2), s/veh	3.2	0.5	0.7	0.5	3.9	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	3.5	2.8	3.4	7.1	7.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	3.9	34.3	9.7	27.7	22.8
LnGrp LOS	C	A	C	A	C	C
Approach Vol, veh/h	1338			1084	1794	
Approach Delay, s/veh	19.2			16.6	25.1	
Approach LOS	B			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.5	36.5				50.0	30.0
Change Period (Y+Rc), s	3.5	4.0				4.0	4.0
Max Green Setting (Gmax), s	10.5	26.0				46.0	26.0
Max Q Clear Time (g_c+I1), s	8.6	21.9				11.4	25.0
Green Ext Time (p_c), s	0.4	2.3				4.0	0.6

Intersection Summary		
HCM 6th Ctrl Delay		21.0
HCM 6th LOS		C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	374	1561	842	68	72	188
Future Volume (veh/h)	374	1561	842	68	72	188
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	416	1734	936	0	140	144
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	524	2662	1943		294	262
Arrive On Green	0.15	0.74	0.54	0.00	0.16	0.16
Sat Flow, veh/h	3510	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	416	1734	936	0	140	144
Grp Sat Flow(s),veh/h/ln	1755	1805	1805	1610	1810	1610
Q Serve(g_s), s	9.1	19.4	12.9	0.0	5.6	6.6
Cycle Q Clear(g_c), s	9.1	19.4	12.9	0.0	5.6	6.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	524	2662	1943		294	262
V/C Ratio(X)	0.79	0.65	0.48		0.48	0.55
Avail Cap(c_a), veh/h	746	2662	1943		294	262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	5.3	11.5	0.0	30.4	30.8
Incr Delay (d2), s/veh	3.9	1.3	0.9	0.0	5.4	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	5.4	4.9	0.0	2.8	6.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.7	6.6	12.4	0.0	35.8	38.9
LnGrp LOS	D	A	B		D	D
Approach Vol, veh/h		2150	936	A	284	
Approach Delay, s/veh		12.4	12.4		37.4	
Approach LOS		B	B		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		63.0		17.0	16.0	47.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		59.0		13.0	17.0	38.0
Max Q Clear Time (g_c+I1), s		21.4		8.6	11.1	14.9
Green Ext Time (p_c), s		20.2		0.4	0.8	7.1

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	0	0	23	0	820	4	30	1301	5
Future Vol, veh/h	1	0	0	0	0	23	0	820	4	30	1301	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	0	0	0	24	0	854	4	31	1355	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2288	2278	1358	2274	2276	854	1360	0	0	858	0	0
Stage 1	1420	1420	-	854	854	-	-	-	-	-	-	-
Stage 2	868	858	-	1420	1422	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	28	40	184	29	41	361	512	-	-	791	-	-
Stage 1	171	204	-	356	378	-	-	-	-	-	-	-
Stage 2	350	376	-	171	204	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	25	38	184	28	39	361	512	-	-	791	-	-
Mov Cap-2 Maneuver	25	38	-	28	39	-	-	-	-	-	-	-
Stage 1	171	196	-	356	378	-	-	-	-	-	-	-
Stage 2	327	376	-	164	196	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	155.2	15.7	0	0.2
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	512	-	-	25	-	361	791	-	-
HCM Lane V/C Ratio	-	-	-	0.042	-	0.066	0.04	-	-
HCM Control Delay (s)	0	-	-	155.2	0	15.7	9.7	-	-
HCM Lane LOS	A	-	-	F	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	820	0	3	1298
Future Vol, veh/h	2	4	820	0	3	1298
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	55	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	863	0	3	1366

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2235	863	0	0	863	0
Stage 1	863	-	-	-	-	-
Stage 2	1372	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	47	357	-	-	788	-
Stage 1	416	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	47	357	-	-	788	-
Mov Cap-2 Maneuver	47	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	237	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	39.1	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	112	788	-
HCM Lane V/C Ratio	-	-	0.056	0.004	-
HCM Control Delay (s)	-	-	39.1	9.6	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	3	2	817	1298	2
Future Vol, veh/h	3	3	2	817	1298	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	3	2	860	1366	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2231	1367	1368	0	-	0
Stage 1	1367	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	48	182	508	-	-	-
Stage 1	239	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	48	182	508	-	-	-
Mov Cap-2 Maneuver	48	-	-	-	-	-
Stage 1	238	-	-	-	-	-
Stage 2	416	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	55.2	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	508	-	48	182	-	-
HCM Lane V/C Ratio	0.004	-	0.066	0.017	-	-
HCM Control Delay (s)	12.1	-	85.2	25.1	-	-
HCM Lane LOS	B	-	F	D	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	0	2	0	0	2	3	785	0	1	1199	44
Future Volume (veh/h)	25	0	2	0	0	2	3	785	0	1	1199	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	0	2	0	0	2	3	801	0	1	1223	45
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	0	4	0	0	5	320	1598	1354	574	1598	1354
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.00	0.84	0.84	0.00	0.84	0.84	0.84
Sat Flow, veh/h	1666	0	128	0	0	1610	444	1900	1610	690	1900	1610
Grp Volume(v), veh/h	28	0	0	0	0	2	3	801	0	1	1223	45
Grp Sat Flow(s),veh/h/ln	1794	0	0	0	0	1610	444	1900	1610	690	1900	1610
Q Serve(g_s), s	1.5	0.0	0.0	0.0	0.0	0.1	0.3	11.3	0.0	0.0	28.0	0.4
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.0	0.0	0.1	28.3	11.3	0.0	11.3	28.0	0.4
Prop In Lane	0.93		0.07	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	0	0	0	0	5	320	1598	1354	574	1598	1354
V/C Ratio(X)	0.48	0.00	0.00	0.00	0.00	0.38	0.01	0.50	0.00	0.00	0.77	0.03
Avail Cap(c_a), veh/h	331	0	0	0	0	297	320	1598	1354	574	1598	1354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0	0.0	0.0	48.5	9.8	2.1	0.0	3.7	3.5	1.3
Incr Delay (d2), s/veh	5.9	0.0	0.0	0.0	0.0	40.3	0.1	1.1	0.0	0.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	0.0	0.0	0.1	0.0	2.5	0.0	0.0	5.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	0.0	0.0	0.0	0.0	88.8	9.8	3.3	0.0	3.7	5.7	1.3
LnGrp LOS	D	A	A	A	A	F	A	A	A	A	A	A
Approach Vol, veh/h		28			2			804			1269	
Approach Delay, s/veh		52.2			88.8			3.3			5.6	
Approach LOS		D			F			A			A	

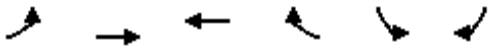
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.0		7.2		86.0		4.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		82.0		18.0		82.0		18.0				
Max Q Clear Time (g_c+I1), s		30.3		3.5		30.0		2.1				
Green Ext Time (p_c), s		7.5		0.1		18.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			5.4									
HCM 6th LOS			A									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	945	943	838	849	610	626
Future Volume (veh/h)	945	943	838	849	610	626
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	995	993	882	894	642	659
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1118	964	960	2246	1014	1594
Arrive On Green	0.31	0.31	0.27	0.62	0.29	0.29
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	995	993	882	894	642	659
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	23.6	27.9	21.9	11.2	14.3	11.9
Cycle Q Clear(g_c), s	23.6	27.9	21.9	11.2	14.3	11.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1118	964	960	2246	1014	1594
V/C Ratio(X)	0.89	1.03	0.92	0.40	0.63	0.41
Avail Cap(c_a), veh/h	1118	964	1034	2246	1014	1594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	12.8	31.7	8.5	27.8	11.2
Incr Delay (d2), s/veh	10.7	37.0	11.7	0.5	3.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	31.2	10.6	4.1	6.3	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.3	49.8	43.4	9.1	30.9	12.0
LnGrp LOS	D	F	D	A	C	B
Approach Vol, veh/h	1988			1776	1301	
Approach Delay, s/veh	45.0			26.1	21.3	
Approach LOS	D			C	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	28.1	31.9				60.0	30.0
Change Period (Y+Rc), s	3.5	4.0				4.0	4.0
Max Green Setting (Gmax), s	26.5	26.0				56.0	26.0
Max Q Clear Time (g_c+I1), s	23.9	29.9				13.2	16.3
Green Ext Time (p_c), s	0.7	0.0				4.9	2.4

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	194	1377	921	55	25	766
Future Volume (veh/h)	194	1377	921	55	25	766
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	202	1434	959	0	0	826
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	278	2086	1639		603	1073
Arrive On Green	0.08	0.58	0.45	0.00	0.00	0.33
Sat Flow, veh/h	3510	3705	3705	1610	1810	3220
Grp Volume(v), veh/h	202	1434	959	0	0	826
Grp Sat Flow(s),veh/h/ln	1755	1805	1805	1610	1810	1610
Q Serve(g_s), s	5.1	25.0	17.8	0.0	0.0	20.7
Cycle Q Clear(g_c), s	5.1	25.0	17.8	0.0	0.0	20.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	278	2086	1639		603	1073
V/C Ratio(X)	0.73	0.69	0.59		0.00	0.77
Avail Cap(c_a), veh/h	351	2086	1639		603	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	13.3	18.3	0.0	0.0	26.9
Incr Delay (d2), s/veh	5.5	1.9	1.5	0.0	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	9.6	7.4	0.0	0.0	18.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.0	15.2	19.8	0.0	0.0	32.2
LnGrp LOS	D	B	B		A	C
Approach Vol, veh/h		1636	959	A	826	
Approach Delay, s/veh		19.0	19.8		32.2	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		56.0		34.0	11.1	44.9
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		52.0		30.0	9.0	39.0
Max Q Clear Time (g_c+I1), s		27.0		22.7	7.1	19.8
Green Ext Time (p_c), s		12.6		2.3	0.1	6.8

Intersection Summary		
HCM 6th Ctrl Delay		22.4
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	35.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	0	103	0	62	0	1403	36	16	405	3
Future Vol, veh/h	9	0	0	103	0	62	0	1403	36	16	405	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	0	0	106	0	64	0	1446	37	16	418	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1949	1935	420	1898	1899	1446	421	0	0	1483	0	0
Stage 1	452	452	-	1446	1446	-	-	-	-	-	-	-
Stage 2	1497	1483	-	452	453	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	49	67	638	~ 53	70	163	1149	-	-	460	-	-
Stage 1	591	574	-	165	199	-	-	-	-	-	-	-
Stage 2	155	191	-	591	573	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	29	65	638	~ 52	68	163	1149	-	-	460	-	-
Mov Cap-2 Maneuver	29	65	-	~ 52	68	-	-	-	-	-	-	-
Stage 1	591	554	-	165	199	-	-	-	-	-	-	-
Stage 2	94	191	-	570	553	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	179.3	$ 423	0	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1149	-	-	29	52	163	460	-	-
HCM Lane V/C Ratio	-	-	-	0.32	2.042	0.392	0.036	-	-
HCM Control Delay (s)	0	-	-	179.3	$ 653.1	40.7	13.1	-	-
HCM Lane LOS	A	-	-	F	F	E	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1	10.5	1.7	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	6	1433	0	2	505
Future Vol, veh/h	3	6	1433	0	2	505
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	55	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	6	1508	0	2	532

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2044	1508	0	0	1508	0
Stage 1	1508	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	63	150	-	-	450	-
Stage 1	204	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	63	150	-	-	450	-
Mov Cap-2 Maneuver	63	-	-	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	589	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	43.5	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	103	450	-
HCM Lane V/C Ratio	-	-	0.092	0.005	-
HCM Control Delay (s)	-	-	43.5	13	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

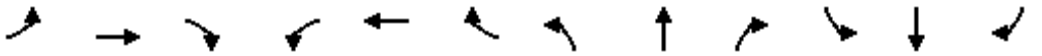
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	9	3	1429	503	5
Future Vol, veh/h	4	9	3	1429	503	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	9	3	1504	529	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2042	532	534	0	-	0
Stage 1	532	-	-	-	-	-
Stage 2	1510	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	63	551	1044	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	204	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	63	551	1044	-	-	-
Mov Cap-2 Maneuver	63	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	204	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.4	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1044	-	63	551	-	-
HCM Lane V/C Ratio	0.003	-	0.067	0.017	-	-
HCM Control Delay (s)	8.5	-	66.2	11.6	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	1	6	0	1	0	4	1372	0	3	526	27
Future Volume (veh/h)	49	1	6	0	1	0	4	1372	0	3	526	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	1	6	0	1	0	4	1429	0	3	548	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	1	8	0	3	0	730	1606	1361	208	1606	1361
Arrive On Green	0.04	0.04	0.04	0.00	0.00	0.00	0.85	0.85	0.00	0.85	0.85	0.85
Sat Flow, veh/h	1572	31	185	0	1900	0	850	1900	1610	381	1900	1610
Grp Volume(v), veh/h	58	0	0	0	1	0	4	1429	0	3	548	28
Grp Sat Flow(s),veh/h/ln	1788	0	0	0	1900	0	850	1900	1610	381	1900	1610
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.1	0.0	0.1	52.1	0.0	0.6	7.0	0.3
Cycle Q Clear(g_c), s	3.6	0.0	0.0	0.0	0.1	0.0	7.1	52.1	0.0	52.7	7.0	0.3
Prop In Lane	0.88		0.10	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	0	0	0	3	0	730	1606	1361	208	1606	1361
V/C Ratio(X)	0.72	0.00	0.00	0.00	0.32	0.00	0.01	0.89	0.00	0.01	0.34	0.02
Avail Cap(c_a), veh/h	96	0	0	0	308	0	730	1606	1361	208	1606	1361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	0.0	0.0	0.0	55.4	0.0	2.6	5.4	0.0	21.8	1.9	1.4
Incr Delay (d2), s/veh	18.9	0.0	0.0	0.0	50.5	0.0	0.0	7.8	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.0	0.1	0.0	0.0	14.4	0.0	0.1	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.3	0.0	0.0	0.0	106.0	0.0	2.6	13.2	0.0	21.8	2.0	1.4
LnGrp LOS	E	A	A	A	F	A	A	B	A	C	A	A
Approach Vol, veh/h		58			1			1433			579	
Approach Delay, s/veh		71.3			106.0			13.1			2.1	
Approach LOS		E			F			B			A	

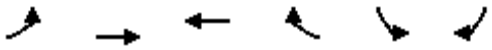
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		98.0		9.0		98.0		4.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		94.0		6.0		94.0		18.0				
Max Q Clear Time (g_c+I1), s		54.1		5.6		54.7		2.1				
Green Ext Time (p_c), s		24.5		0.0		4.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			11.7									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1121	285	330	811	860	1035
Future Volume (veh/h)	1121	285	330	811	860	1035
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1180	300	347	854	905	1089
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1463	1176	442	2076	1141	1278
Arrive On Green	0.41	0.41	0.13	0.57	0.32	0.32
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1180	300	347	854	905	1089
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	23.1	4.9	7.7	10.5	18.8	26.0
Cycle Q Clear(g_c), s	23.1	4.9	7.7	10.5	18.8	26.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1463	1176	442	2076	1141	1278
V/C Ratio(X)	0.81	0.26	0.78	0.41	0.79	0.85
Avail Cap(c_a), veh/h	1463	1176	724	2076	1141	1278
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	3.6	33.9	9.5	24.6	19.6
Incr Delay (d2), s/veh	4.9	0.5	1.2	0.6	5.7	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	4.0	3.3	3.8	8.3	9.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.9	4.1	35.1	10.1	30.3	26.9
LnGrp LOS	C	A	D	B	C	C
Approach Vol, veh/h	1480			1201	1994	
Approach Delay, s/veh	21.5			17.3	28.4	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.6	36.4				50.0	30.0
Change Period (Y+Rc), s	3.5	4.0				4.0	4.0
Max Green Setting (Gmax), s	16.5	26.0				46.0	26.0
Max Q Clear Time (g_c+I1), s	9.7	25.1				12.5	28.0
Green Ext Time (p_c), s	0.4	0.6				4.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	406	1749	941	75	86	202
Future Volume (veh/h)	406	1749	941	75	86	202
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	451	1943	1046	0	156	160
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	554	2708	1958		271	242
Arrive On Green	0.16	0.75	0.54	0.00	0.15	0.15
Sat Flow, veh/h	3510	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	451	1943	1046	0	156	160
Grp Sat Flow(s),veh/h/ln	1755	1805	1805	1610	1810	1610
Q Serve(g_s), s	9.9	23.3	14.9	0.0	6.4	7.5
Cycle Q Clear(g_c), s	9.9	23.3	14.9	0.0	6.4	7.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	554	2708	1958		271	242
V/C Ratio(X)	0.81	0.72	0.53		0.57	0.66
Avail Cap(c_a), veh/h	702	2708	1958		271	242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	5.4	11.8	0.0	31.6	32.1
Incr Delay (d2), s/veh	5.9	1.7	1.0	0.0	8.6	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	6.2	5.7	0.0	3.4	7.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.4	7.1	12.8	0.0	40.2	45.5
LnGrp LOS	D	A	B		D	D
Approach Vol, veh/h		2394	1046	A	316	
Approach Delay, s/veh		13.0	12.8		42.9	
Approach LOS		B	B		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		64.0		16.0	16.6	47.4
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		60.0		12.0	16.0	40.0
Max Q Clear Time (g_c+I1), s		25.3		9.5	11.9	16.9
Green Ext Time (p_c), s		22.6		0.3	0.7	8.2

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	43.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	0	69	0	36	0	873	119	54	1386	14
Future Vol, veh/h	6	0	0	69	0	36	0	873	119	54	1386	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	0	0	72	0	38	0	909	124	56	1444	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2554	2597	1452	2473	2480	909	1459	0	0	1033	0	0
Stage 1	1564	1564	-	909	909	-	-	-	-	-	-	-
Stage 2	990	1033	-	1564	1571	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	18	25	162	~ 21	30	336	469	-	-	681	-	-
Stage 1	141	174	-	332	357	-	-	-	-	-	-	-
Stage 2	299	312	-	141	173	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	15	23	162	~ 20	28	336	469	-	-	681	-	-
Mov Cap-2 Maneuver	15	23	-	~ 20	28	-	-	-	-	-	-	-
Stage 1	141	160	-	332	357	-	-	-	-	-	-	-
Stage 2	266	312	-	129	159	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 363.2	$ 1033.2	0	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	469	-	-	15	20	336	681	-	-
HCM Lane V/C Ratio	-	-	-	0.417	3.594	0.112	0.083	-	-
HCM Control Delay (s)	0	-	-	$ 363.2	$ 1563.4	17.1	10.8	-	-
HCM Lane LOS	A	-	-	F	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.1	9.4	0.4	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	987	1	3	1453
Future Vol, veh/h	2	4	987	1	3	1453
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	55	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	1039	1	3	1529

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2574	1039	0	0	1040	0
Stage 1	1039	-	-	-	-	-
Stage 2	1535	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	29	283	-	-	676	-
Stage 1	344	-	-	-	-	-
Stage 2	198	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	29	283	-	-	676	-
Mov Cap-2 Maneuver	29	-	-	-	-	-
Stage 1	344	-	-	-	-	-
Stage 2	197	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	59.8	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	72	676	-
HCM Lane V/C Ratio	-	-	0.088	0.005	-
HCM Control Delay (s)	-	-	59.8	10.3	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

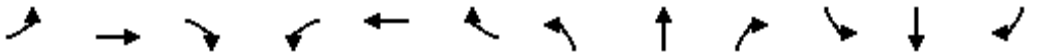
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	8	11	985	1453	2
Future Vol, veh/h	3	8	11	985	1453	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	8	12	1037	1529	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2591	1530	1531	0	-	0
Stage 1	1530	-	-	-	-	-
Stage 2	1061	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	28	146	441	-	-	-
Stage 1	199	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	27	146	441	-	-	-
Mov Cap-2 Maneuver	27	-	-	-	-	-
Stage 1	194	-	-	-	-	-
Stage 2	336	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	65	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	441	-	27	146	-	-
HCM Lane V/C Ratio	0.026	-	0.117	0.058	-	-
HCM Control Delay (s)	13.4	-	155.3	31.2	-	-
HCM Lane LOS	B	-	F	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	0	6	0	0	2	9	962	0	1	1357	45
Future Volume (veh/h)	26	0	6	0	0	2	9	962	0	1	1357	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	0	6	0	0	2	9	982	0	1	1385	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	53	0	12	0	0	5	226	1592	1349	460	1592	1349
Arrive On Green	0.04	0.00	0.04	0.00	0.00	0.00	0.84	0.84	0.00	0.84	0.84	0.84
Sat Flow, veh/h	1448	0	322	0	0	1610	380	1900	1610	582	1900	1610
Grp Volume(v), veh/h	33	0	0	0	0	2	9	982	0	1	1385	46
Grp Sat Flow(s),veh/h/ln	1770	0	0	0	0	1610	380	1900	1610	582	1900	1610
Q Serve(g_s), s	1.8	0.0	0.0	0.0	0.0	0.1	1.4	17.0	0.0	0.1	42.7	0.5
Cycle Q Clear(g_c), s	1.8	0.0	0.0	0.0	0.0	0.1	44.1	17.0	0.0	17.0	42.7	0.5
Prop In Lane	0.82		0.18	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	0	0	0	0	5	226	1592	1349	460	1592	1349
V/C Ratio(X)	0.51	0.00	0.00	0.00	0.00	0.38	0.04	0.62	0.00	0.00	0.87	0.03
Avail Cap(c_a), veh/h	325	0	0	0	0	296	226	1592	1349	460	1592	1349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0	0.0	0.0	48.7	17.9	2.7	0.0	5.5	4.7	1.3
Incr Delay (d2), s/veh	6.2	0.0	0.0	0.0	0.0	40.3	0.3	1.8	0.0	0.0	5.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.0	0.0	0.1	0.1	3.9	0.0	0.0	10.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	0.0	0.0	0.0	0.0	89.0	18.3	4.5	0.0	5.5	10.3	1.3
LnGrp LOS	D	A	A	A	A	F	B	A	A	A	B	A
Approach Vol, veh/h		33			2			991			1432	
Approach Delay, s/veh		52.5			89.0			4.6			10.0	
Approach LOS		D			F			A			A	

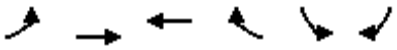
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.0		7.6		86.0		4.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		82.0		18.0		82.0		18.0				
Max Q Clear Time (g_c+I1), s		46.1		3.8		44.7		2.1				
Green Ext Time (p_c), s		10.5		0.1		22.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1029	1032	959	968	665	698
Future Volume (veh/h)	1029	1032	959	968	665	698
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1083	1086	1009	1019	700	735
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1043	930	1034	2246	1014	1653
Arrive On Green	0.29	0.29	0.29	0.62	0.29	0.29
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1083	1086	1009	1019	700	735
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	26.0	26.0	25.6	13.4	15.9	13.1
Cycle Q Clear(g_c), s	26.0	26.0	25.6	13.4	15.9	13.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1043	930	1034	2246	1014	1653
V/C Ratio(X)	1.04	1.17	0.98	0.45	0.69	0.44
Avail Cap(c_a), veh/h	1043	930	1034	2246	1014	1653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	13.5	31.4	8.9	28.4	10.5
Incr Delay (d2), s/veh	38.3	87.0	22.2	0.7	3.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	43.0	13.6	4.8	7.0	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.3	100.5	53.6	9.6	32.3	11.4
LnGrp LOS	F	F	D	A	C	B
Approach Vol, veh/h	2169			2028	1435	
Approach Delay, s/veh	85.4			31.5	21.6	
Approach LOS	F			C	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	30.0	30.0				60.0	30.0
Change Period (Y+Rc), s	3.5	4.0				4.0	4.0
Max Green Setting (Gmax), s	26.5	26.0				56.0	26.0
Max Q Clear Time (g_c+I1), s	27.6	28.0				15.4	17.9
Green Ext Time (p_c), s	0.0	0.0				5.8	2.5

Intersection Summary		
HCM 6th Ctrl Delay	49.8	
HCM 6th LOS	D	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	215	1512	1118	70	33	810
Future Volume (veh/h)	215	1512	1118	70	33	810
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	224	1575	1165	0	0	880
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	302	2126	1655		583	1038
Arrive On Green	0.09	0.59	0.46	0.00	0.00	0.32
Sat Flow, veh/h	3510	3705	3705	1610	1810	3220
Grp Volume(v), veh/h	224	1575	1165	0	0	880
Grp Sat Flow(s),veh/h/ln	1755	1805	1805	1610	1810	1610
Q Serve(g_s), s	5.6	28.6	23.2	0.0	0.0	22.9
Cycle Q Clear(g_c), s	5.6	28.6	23.2	0.0	0.0	22.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	302	2126	1655		583	1038
V/C Ratio(X)	0.74	0.74	0.70		0.00	0.85
Avail Cap(c_a), veh/h	390	2126	1655		583	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	40.1	13.5	19.5	0.0	0.0	28.4
Incr Delay (d2), s/veh	5.4	2.4	2.5	0.0	0.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	11.0	9.7	0.0	0.0	19.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.6	15.9	22.0	0.0	0.0	37.0
LnGrp LOS	D	B	C		A	D
Approach Vol, veh/h		1799	1165	A	880	
Approach Delay, s/veh		19.6	22.0		37.0	
Approach LOS		B	C		D	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	57.0		33.0	11.7	45.3
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	53.0		29.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	30.6		24.9	7.6	25.2
Green Ext Time (p_c), s	13.2		1.6	0.2	7.0

Intersection Summary	
HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	38.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	0	104	0	62	0	1421	37	16	425	3
Future Vol, veh/h	9	0	0	104	0	62	0	1421	37	16	425	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	0	0	107	0	64	0	1465	38	16	438	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1988	1975	440	1937	1938	1465	441	0	0	1503	0	0
Stage 1	472	472	-	1465	1465	-	-	-	-	-	-	-
Stage 2	1516	1503	-	472	473	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	46	63	621	~ 50	66	159	1130	-	-	452	-	-
Stage 1	576	562	-	161	194	-	-	-	-	-	-	-
Stage 2	151	186	-	576	562	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	27	61	621	~ 49	64	159	1130	-	-	452	-	-
Mov Cap-2 Maneuver	27	61	-	~ 49	64	-	-	-	-	-	-	-
Stage 1	576	542	-	161	194	-	-	-	-	-	-	-
Stage 2	90	186	-	556	542	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	196.6	$ 469.9	0	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1130	-	-	27	49	159	452	-	-
HCM Lane V/C Ratio	-	-	-	0.344	2.188	0.402	0.036	-	-
HCM Control Delay (s)	0	-	-	196.6	$ 725	42.1	13.3	-	-
HCM Lane LOS	A	-	-	F	F	E	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.1	10.9	1.8	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	6	1451	0	2	526
Future Vol, veh/h	3	6	1451	0	2	526
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	55	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	6	1527	0	2	554

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2085	1527	0	0	1527	0
Stage 1	1527	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	59	146	-	-	442	-
Stage 1	200	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	59	146	-	-	442	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	200	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.6	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	156	442	-
HCM Lane V/C Ratio	-	-	0.061	0.005	-
HCM Control Delay (s)	-	-	29.6	13.2	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	17	0	1452	499	30
Future Vol, veh/h	0	17	0	1452	499	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	18	0	1528	525	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	279	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	724	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	724	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	724	-	-
HCM Lane V/C Ratio	-	0.025	-	-
HCM Control Delay (s)	-	10.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	11.3

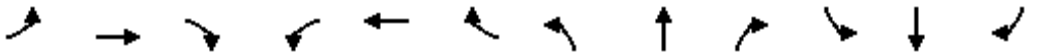
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	59	14	55	1391	511	5
Future Vol, veh/h	59	14	55	1391	511	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	15	58	1464	538	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2121	272	543	0	-	0
Stage 1	541	-	-	-	-	-
Stage 2	1580	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 50	732	1036	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 47	732	1036	-	-	-
Mov Cap-2 Maneuver	~ 47	-	-	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	188	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 308.4	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1036	-	47	732	-	-
HCM Lane V/C Ratio	0.056	-	1.321	0.02	-	-
HCM Control Delay (s)	8.7	-	$ 379.2	10	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	5.9	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1	6	0	1	0	4	1384	0	3	537	29
Future Volume (veh/h)	51	1	6	0	1	0	4	1384	0	3	537	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	53	1	6	0	1	0	4	1442	0	3	559	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	1	8	0	3	0	720	1605	1361	199	1605	1361
Arrive On Green	0.05	0.05	0.05	0.00	0.00	0.00	0.84	0.84	0.00	0.84	0.84	0.84
Sat Flow, veh/h	1580	30	179	0	1900	0	840	1900	1610	376	1900	1610
Grp Volume(v), veh/h	60	0	0	0	1	0	4	1442	0	3	559	30
Grp Sat Flow(s),veh/h/ln	1789	0	0	0	1900	0	840	1900	1610	376	1900	1610
Q Serve(g_s), s	3.7	0.0	0.0	0.0	0.1	0.0	0.1	54.3	0.0	0.6	7.2	0.3
Cycle Q Clear(g_c), s	3.7	0.0	0.0	0.0	0.1	0.0	7.3	54.3	0.0	54.9	7.2	0.3
Prop In Lane	0.88		0.10	0.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	0	0	0	3	0	720	1605	1361	199	1605	1361
V/C Ratio(X)	0.74	0.00	0.00	0.00	0.32	0.00	0.01	0.90	0.00	0.02	0.35	0.02
Avail Cap(c_a), veh/h	96	0	0	0	307	0	720	1605	1361	199	1605	1361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	0.0	0.0	0.0	55.5	0.0	2.7	5.5	0.0	23.2	1.9	1.4
Incr Delay (d2), s/veh	21.4	0.0	0.0	0.0	50.5	0.0	0.0	8.4	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	0.0	0.1	0.0	0.0	15.2	0.0	0.1	1.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.8	0.0	0.0	0.0	106.0	0.0	2.7	13.9	0.0	23.2	2.0	1.4
LnGrp LOS	E	A	A	A	F	A	A	B	A	C	A	A
Approach Vol, veh/h		60			1			1446			592	
Approach Delay, s/veh		73.8			106.0			13.9			2.1	
Approach LOS		E			F			B			A	

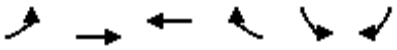
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		98.0		9.1		98.0		4.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		94.0		6.0		94.0		18.0				
Max Q Clear Time (g_c+I1), s		56.3		5.7		56.9		2.1				
Green Ext Time (p_c), s		24.1		0.0		4.3		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1121	296	335	811	869	1040
Future Volume (veh/h)	1121	296	335	811	869	1040
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1180	312	353	854	915	1095
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1457	1173	448	2076	1141	1283
Arrive On Green	0.40	0.40	0.13	0.57	0.32	0.32
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1180	312	353	854	915	1095
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	23.2	5.2	7.8	10.5	19.0	26.0
Cycle Q Clear(g_c), s	23.2	5.2	7.8	10.5	19.0	26.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1457	1173	448	2076	1141	1283
V/C Ratio(X)	0.81	0.27	0.79	0.41	0.80	0.85
Avail Cap(c_a), veh/h	1457	1173	724	2076	1141	1283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	3.7	33.8	9.5	24.6	19.5
Incr Delay (d2), s/veh	5.0	0.6	1.2	0.6	6.0	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	4.2	3.3	3.8	8.4	9.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	4.2	35.0	10.1	30.6	26.9
LnGrp LOS	C	A	D	B	C	C
Approach Vol, veh/h	1492			1207	2010	
Approach Delay, s/veh	21.5			17.4	28.6	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.7	36.3			50.0	30.0
Change Period (Y+Rc), s	3.5	4.0			4.0	4.0
Max Green Setting (Gmax), s	16.5	26.0			46.0	26.0
Max Q Clear Time (g_c+I1), s	9.8	25.2			12.5	28.0
Green Ext Time (p_c), s	0.4	0.6			4.5	0.0

Intersection Summary		
HCM 6th Ctrl Delay	23.5	
HCM 6th LOS	C	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	408	1752	945	75	86	204
Future Volume (veh/h)	408	1752	945	75	86	204
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	453	1947	1050	0	157	162
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	555	2708	1956		271	242
Arrive On Green	0.16	0.75	0.54	0.00	0.15	0.15
Sat Flow, veh/h	3510	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	453	1947	1050	0	157	162
Grp Sat Flow(s),veh/h/ln	1755	1805	1805	1610	1810	1610
Q Serve(g_s), s	10.0	23.4	15.0	0.0	6.5	7.6
Cycle Q Clear(g_c), s	10.0	23.4	15.0	0.0	6.5	7.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	555	2708	1956		271	242
V/C Ratio(X)	0.82	0.72	0.54		0.58	0.67
Avail Cap(c_a), veh/h	702	2708	1956		271	242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	5.4	11.8	0.0	31.6	32.1
Incr Delay (d2), s/veh	5.9	1.7	1.1	0.0	8.7	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	6.3	5.7	0.0	3.4	7.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.5	7.1	12.9	0.0	40.3	46.0
LnGrp LOS	D	A	B		D	D
Approach Vol, veh/h		2400	1050	A	319	
Approach Delay, s/veh		13.0	12.9		43.2	
Approach LOS		B	B		D	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	64.0		16.0	16.7	47.3
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	60.0		12.0	16.0	40.0
Max Q Clear Time (g_c+I1), s	25.4		9.6	12.0	17.0
Green Ext Time (p_c), s	22.6		0.3	0.7	8.2

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	49.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	0	70	0	36	0	901	120	54	1414	14
Future Vol, veh/h	6	0	0	70	0	36	0	901	120	54	1414	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	0	0	73	0	38	0	939	125	56	1473	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2614	2657	1481	2532	2539	939	1488	0	0	1064	0	0
Stage 1	1593	1593	-	939	939	-	-	-	-	-	-	-
Stage 2	1021	1064	-	1593	1600	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	16	23	156	~ 19	28	323	458	-	-	662	-	-
Stage 1	136	168	-	320	345	-	-	-	-	-	-	-
Stage 2	288	302	-	136	167	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	13	21	156	~ 18	26	323	458	-	-	662	-	-
Mov Cap-2 Maneuver	13	21	-	~ 18	26	-	-	-	-	-	-	-
Stage 1	136	154	-	320	345	-	-	-	-	-	-	-
Stage 2	255	302	-	124	153	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 436.3	$ 1198.4	0	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	458	-	-	13	18	323	662	-	-
HCM Lane V/C Ratio	-	-	-	0.481	4.051	0.116	0.085	-	-
HCM Control Delay (s)	0	-	-	$ 436.3	$ 1805.7	17.6	10.9	-	-
HCM Lane LOS	A	-	-	F	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.2	9.7	0.4	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	1016	1	3	1482
Future Vol, veh/h	2	4	1016	1	3	1482
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	55	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	1069	1	3	1560

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2635	1069	0	0	1070	0
Stage 1	1069	-	-	-	-	-
Stage 2	1566	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	26	272	-	-	659	-
Stage 1	333	-	-	-	-	-
Stage 2	191	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	26	272	-	-	659	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	333	-	-	-	-	-
Stage 2	190	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	218	659	-
HCM Lane V/C Ratio	-	-	0.029	0.005	-
HCM Control Delay (s)	-	-	22	10.5	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	44	0	1017	1421	63
Future Vol, veh/h	0	44	0	1017	1421	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	46	0	1071	1496	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	781	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	342	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	342	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	342	-	-
HCM Lane V/C Ratio	-	0.135	-	-
HCM Control Delay (s)	-	17.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Intersection	
Int Delay, s/veh	26.3

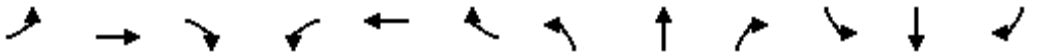
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	15	51	965	1465	2
Future Vol, veh/h	52	15	51	965	1465	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	55	16	54	1016	1542	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2667	772	1544	0	-	0
Stage 1	1543	-	-	-	-	-
Stage 2	1124	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 22	347	436	-	-	-
Stage 1	165	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 19	347	436	-	-	-
Mov Cap-2 Maneuver	~ 19	-	-	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	313	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 988.8	0.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	436	-	19	347	-	-
HCM Lane V/C Ratio	0.123	-	2.881	0.046	-	-
HCM Control Delay (s)	14.4	-	$ 1269.4	15.9	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	7.3	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	0	6	0	0	2	9	979	0	1	1374	47
Future Volume (veh/h)	28	0	6	0	0	2	9	979	0	1	1374	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	0	6	0	0	2	9	999	0	1	1402	48
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	0	11	0	0	5	214	1590	1347	449	1590	1347
Arrive On Green	0.04	0.00	0.04	0.00	0.00	0.00	0.84	0.84	0.00	0.84	0.84	0.84
Sat Flow, veh/h	1468	0	304	0	0	1610	373	1900	1610	573	1900	1610
Grp Volume(v), veh/h	35	0	0	0	0	2	9	999	0	1	1402	48
Grp Sat Flow(s),veh/h/ln	1772	0	0	0	0	1610	373	1900	1610	573	1900	1610
Q Serve(g_s), s	1.9	0.0	0.0	0.0	0.0	0.1	1.5	17.7	0.0	0.1	45.1	0.5
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	0.0	0.1	46.6	17.7	0.0	17.8	45.1	0.5
Prop In Lane	0.83		0.17	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	0	0	0	0	5	214	1590	1347	449	1590	1347
V/C Ratio(X)	0.53	0.00	0.00	0.00	0.00	0.38	0.04	0.63	0.00	0.00	0.88	0.04
Avail Cap(c_a), veh/h	325	0	0	0	0	296	214	1590	1347	449	1590	1347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0	0.0	0.0	48.7	19.5	2.8	0.0	5.8	5.0	1.3
Incr Delay (d2), s/veh	6.3	0.0	0.0	0.0	0.0	40.3	0.4	1.9	0.0	0.0	6.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.0	0.0	0.1	0.2	4.2	0.0	0.0	11.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	0.0	0.0	0.0	0.0	89.1	19.9	4.6	0.0	5.8	11.2	1.4
LnGrp LOS	D	A	A	A	A	F	B	A	A	A	B	A
Approach Vol, veh/h		35			2			1008			1451	
Approach Delay, s/veh		52.6			89.1			4.8			10.8	
Approach LOS		D			F			A			B	

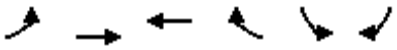
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.0		7.7		86.0		4.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		82.0		18.0		82.0		18.0				
Max Q Clear Time (g_c+I1), s		48.6		3.9		47.1		2.1				
Green Ext Time (p_c), s		10.6		0.1		21.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1029	1047	966	968	680	705
Future Volume (veh/h)	1029	1047	966	968	680	705
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1083	1102	1017	1019	716	742
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1043	930	1034	2246	1014	1653
Arrive On Green	0.29	0.29	0.29	0.62	0.29	0.29
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1083	1102	1017	1019	716	742
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	26.0	26.0	25.9	13.4	16.4	13.3
Cycle Q Clear(g_c), s	26.0	26.0	25.9	13.4	16.4	13.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1043	930	1034	2246	1014	1653
V/C Ratio(X)	1.04	1.18	0.98	0.45	0.71	0.45
Avail Cap(c_a), veh/h	1043	930	1034	2246	1014	1653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	13.5	31.5	8.9	28.6	10.6
Incr Delay (d2), s/veh	38.3	94.0	24.0	0.7	4.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	44.9	14.0	4.8	7.3	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.3	107.5	55.5	9.6	32.7	11.5
LnGrp LOS	F	F	E	A	C	B
Approach Vol, veh/h	2185			2036	1458	
Approach Delay, s/veh	89.1			32.5	21.9	
Approach LOS	F			C	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	30.0	30.0				60.0	30.0
Change Period (Y+Rc), s	3.5	4.0				4.0	4.0
Max Green Setting (Gmax), s	26.5	26.0				56.0	26.0
Max Q Clear Time (g_c+I1), s	27.9	28.0				15.4	18.4
Green Ext Time (p_c), s	0.0	0.0				5.8	2.5

Intersection Summary		
HCM 6th Ctrl Delay	51.6	
HCM 6th LOS	D	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	217	1517	1123	70	33	812
Future Volume (veh/h)	217	1517	1123	70	33	812
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	226	1580	1170	0	0	882
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	304	2126	1653		583	1038
Arrive On Green	0.09	0.59	0.46	0.00	0.00	0.32
Sat Flow, veh/h	3510	3705	3705	1610	1810	3220
Grp Volume(v), veh/h	226	1580	1170	0	0	882
Grp Sat Flow(s),veh/h/ln	1755	1805	1805	1610	1810	1610
Q Serve(g_s), s	5.7	28.8	23.4	0.0	0.0	23.0
Cycle Q Clear(g_c), s	5.7	28.8	23.4	0.0	0.0	23.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	304	2126	1653		583	1038
V/C Ratio(X)	0.74	0.74	0.71		0.00	0.85
Avail Cap(c_a), veh/h	390	2126	1653		583	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	40.1	13.5	19.6	0.0	0.0	28.5
Incr Delay (d2), s/veh	5.6	2.4	2.6	0.0	0.0	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	11.1	9.8	0.0	0.0	19.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.7	15.9	22.2	0.0	0.0	37.2
LnGrp LOS	D	B	C		A	D
Approach Vol, veh/h		1806	1170	A	882	
Approach Delay, s/veh		19.6	22.2		37.2	
Approach LOS		B	C		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		57.0		33.0	11.8	45.2
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		53.0		29.0	10.0	39.0
Max Q Clear Time (g_c+I1), s		30.8		25.0	7.7	25.4
Green Ext Time (p_c), s		13.2		1.6	0.2	7.0

Intersection Summary		
HCM 6th Ctrl Delay		24.4
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	97.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	0	108	0	65	0	1634	38	17	661	3
Future Vol, veh/h	9	0	0	108	0	65	0	1634	38	17	661	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	0	0	111	0	67	0	1685	39	18	681	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2457	2443	683	2404	2405	1685	684	0	0	1724	0	0
Stage 1	719	719	-	1685	1685	-	-	-	-	-	-	-
Stage 2	1738	1724	-	719	720	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	21	32	453	~ 23	34	118	919	-	-	372	-	-
Stage 1	423	436	-	120	152	-	-	-	-	-	-	-
Stage 2	112	145	-	423	435	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	30	453	~ 22	32	118	919	-	-	372	-	-
Mov Cap-2 Maneuver	~ 9	30	-	~ 22	32	-	-	-	-	-	-	-
Stage 1	423	415	-	120	152	-	-	-	-	-	-	-
Stage 2	48	145	-	403	414	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 842.8	$ 1387.8	0	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	919	-	-	9	22	118	372	-	-
HCM Lane V/C Ratio	-	-	-	1.031	5.061	0.568	0.047	-	-
HCM Control Delay (s)	0	-	-	$ 842.8	$ 2181.2	69.6	15.2	-	-
HCM Lane LOS	A	-	-	F	F	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	1.9	14.1	2.8	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	6	1666	0	2	767
Future Vol, veh/h	3	6	1666	0	2	767
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	55	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	6	1754	0	2	807

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2565	1754	0	0	1754	0
Stage 1	1754	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	29	107	-	-	362	-
Stage 1	154	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	29	107	-	-	362	-
Mov Cap-2 Maneuver	29	-	-	-	-	-
Stage 1	154	-	-	-	-	-
Stage 2	437	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	81.9	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	56	362	-
HCM Lane V/C Ratio	-	-	0.169	0.006	-
HCM Control Delay (s)	-	-	81.9	15	-
HCM Lane LOS	-	-	F	C	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

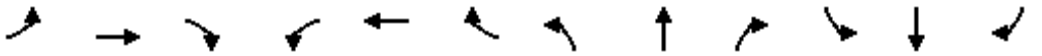
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	9	3	1662	764	6
Future Vol, veh/h	4	9	3	1662	764	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	9	3	1749	804	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2562	807	810	0	-	0
Stage 1	807	-	-	-	-	-
Stage 2	1755	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	29	385	825	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	154	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	29	385	825	-	-	-
Mov Cap-2 Maneuver	29	-	-	-	-	-
Stage 1	440	-	-	-	-	-
Stage 2	154	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	56	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	825	-	29	385	-	-
HCM Lane V/C Ratio	0.004	-	0.145	0.025	-	-
HCM Control Delay (s)	9.4	-	149.2	14.6	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1	6	0	1	0	4	1566	0	3	673	27
Future Volume (veh/h)	51	1	6	0	1	0	4	1566	0	3	673	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	53	1	6	0	1	0	4	1631	0	3	701	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1	8	0	3	0	628	1640	0	66	1566	63
Arrive On Green	0.04	0.04	0.04	0.00	0.00	0.00	0.86	0.86	0.00	0.86	0.86	0.86
Sat Flow, veh/h	1580	30	179	0	1900	0	738	1900	0	313	1814	72
Grp Volume(v), veh/h	60	0	0	0	1	0	4	1631	0	3	0	729
Grp Sat Flow(s),veh/h/ln	1789	0	0	0	1900	0	738	1900	0	313	0	1887
Q Serve(g_s), s	4.3	0.0	0.0	0.0	0.1	0.0	0.2	108.0	0.0	1.2	0.0	11.2
Cycle Q Clear(g_c), s	4.3	0.0	0.0	0.0	0.1	0.0	11.4	108.0	0.0	109.2	0.0	11.2
Prop In Lane	0.88		0.10	0.00		0.00	1.00		0.00	1.00		0.04
Lane Grp Cap(c), veh/h	77	0	0	0	3	0	628	1640	0	66	0	1628
V/C Ratio(X)	0.78	0.00	0.00	0.00	0.32	0.00	0.01	0.99	0.00	0.05	0.00	0.45
Avail Cap(c_a), veh/h	83	0	0	0	263	0	628	1640	0	66	0	1628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.6	0.0	0.0	0.0	64.8	0.0	3.3	8.6	0.0	61.4	0.0	2.0
Incr Delay (d2), s/veh	34.9	0.0	0.0	0.0	50.8	0.0	0.0	21.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	0.0	0.1	0.0	0.0	33.5	0.0	0.1	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.5	0.0	0.0	0.0	115.6	0.0	3.3	29.6	0.0	61.7	0.0	2.2
LnGrp LOS	F	A	A	A	F	A	A	C	A	E	A	A
Approach Vol, veh/h		60			1			1635			732	
Approach Delay, s/veh		96.5			115.6			29.5			2.4	
Approach LOS		F			F			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		116.2		9.6		116.2		4.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		94.0		6.0		94.0		18.0				
Max Q Clear Time (g_c+I1), s		110.0		6.3		111.2		2.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1172	453	7	1168	978	10
Future Volume (veh/h)	1172	453	7	1168	978	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1234	477	7	1229	1029	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1818	1428	61	1986	1346	1135
Arrive On Green	0.50	0.50	0.02	0.55	0.38	0.38
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1234	477	7	1229	1029	11
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	30.9	5.7	0.2	27.9	30.7	0.3
Cycle Q Clear(g_c), s	30.9	5.7	0.2	27.9	30.7	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1818	1428	61	1986	1346	1135
V/C Ratio(X)	0.68	0.33	0.11	0.62	0.76	0.01
Avail Cap(c_a), veh/h	1818	1428	293	1986	1346	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	1.1	58.1	18.4	32.3	21.6
Incr Delay (d2), s/veh	2.1	0.6	0.3	1.5	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	9.5	0.1	11.7	13.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.5	1.7	58.4	19.9	36.5	21.7
LnGrp LOS	C	A	E	B	D	C
Approach Vol, veh/h	1711			1236	1040	
Approach Delay, s/veh	18.2			20.1	36.3	
Approach LOS	B			C	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.6	64.4			70.0	50.0
Change Period (Y+Rc), s	3.5	4.0			4.0	4.0
Max Green Setting (Gmax), s	10.0	52.5			66.0	46.0
Max Q Clear Time (g_c+I1), s	2.2	32.9			29.9	32.7
Green Ext Time (p_c), s	0.0	7.6			7.5	2.1

Intersection Summary		
HCM 6th Ctrl Delay	23.5	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	976	4	397	992	93	12	220	837	90	68	171
Future Volume (veh/h)	202	976	4	397	992	93	12	220	837	90	68	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	213	1027	4	418	1044	0	13	232	881	95	72	180
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	1199	5	437	1685		422	421	376	70	53	107
Arrive On Green	0.10	0.32	0.32	0.24	0.47	0.00	0.23	0.23	0.23	0.07	0.07	0.07
Sat Flow, veh/h	3510	3688	14	1810	3610	1610	1810	1805	1610	1051	797	1610
Grp Volume(v), veh/h	213	503	528	418	1044	0	13	232	881	167	0	180
Grp Sat Flow(s),veh/h/ln	1755	1805	1897	1810	1805	1610	1810	1805	1610	1847	0	1610
Q Serve(g_s), s	7.0	31.3	31.3	27.3	26.0	0.0	0.7	13.6	28.0	8.0	0.0	8.0
Cycle Q Clear(g_c), s	7.0	31.3	31.3	27.3	26.0	0.0	0.7	13.6	28.0	8.0	0.0	8.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	0.57		1.00
Lane Grp Cap(c), veh/h	351	587	617	437	1685		422	421	376	123	0	107
V/C Ratio(X)	0.61	0.86	0.86	0.96	0.62		0.03	0.55	2.34	1.36	0.00	1.68
Avail Cap(c_a), veh/h	351	587	617	437	1685		422	421	376	123	0	107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.68	0.68	0.68	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.7	37.9	37.9	44.9	24.0	0.0	35.5	40.5	46.0	56.0	0.0	56.0
Incr Delay (d2), s/veh	3.0	14.9	14.3	31.9	1.7	0.0	0.0	1.0	610.8	203.9	0.0	341.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	16.1	16.8	16.0	11.3	0.0	0.3	6.2	74.9	10.7	0.0	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	52.8	52.2	76.7	25.7	0.0	35.5	41.5	656.8	259.9	0.0	397.6
LnGrp LOS	D	D	D	E	C		D	D	F	F	A	F
Approach Vol, veh/h		1244			1462	A		1126			347	
Approach Delay, s/veh		52.9			40.3			522.9			331.3	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	33.0	43.0		12.0	16.0	60.0		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	29.0	39.0		8.0	12.0	56.0		28.0
Max Q Clear Time (g_c+I1), s	29.3	33.3		10.0	9.0	28.0		30.0
Green Ext Time (p_c), s	0.0	3.1		0.0	0.2	8.8		0.0

Intersection Summary		
HCM 6th Ctrl Delay	198.2	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	4	460	6	5	0	975	1063	5	450	5
Future Volume (veh/h)	8	10	4	460	6	5	0	975	1063	5	450	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	9	11	4	484	7	5	0	1026	0	5	474	5
Peak Hour Factor	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	42	15	422	443	376	271	1013		90	813	9
Arrive On Green	0.05	0.05	0.05	0.23	0.23	0.23	0.00	0.53	0.00	0.05	0.43	0.43
Sat Flow, veh/h	679	830	302	1810	1900	1610	1810	1900	1610	1810	1877	20
Grp Volume(v), veh/h	24	0	0	484	7	5	0	1026	0	5	0	479
Grp Sat Flow(s),veh/h/ln	1812	0	0	1810	1900	1610	1810	1900	1610	1810	0	1896
Q Serve(g_s), s	1.5	0.0	0.0	28.0	0.3	0.3	0.0	64.0	0.0	0.3	0.0	23.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	28.0	0.3	0.3	0.0	64.0	0.0	0.3	0.0	23.0
Prop In Lane	0.37		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	91	0	0	422	443	376	271	1013		90	0	822
V/C Ratio(X)	0.26	0.00	0.00	1.15	0.02	0.01	0.00	1.01		0.06	0.00	0.58
Avail Cap(c_a), veh/h	91	0	0	422	443	376	271	1013		271	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.23	0.23	0.23	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.9	0.0	0.0	46.0	35.4	35.4	0.0	28.0	0.0	54.3	0.0	25.8
Incr Delay (d2), s/veh	7.0	0.0	0.0	72.8	0.0	0.0	0.0	31.4	0.0	0.3	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	21.0	0.2	0.1	0.0	36.3	0.0	0.2	0.0	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	0.0	0.0	118.8	35.4	35.4	0.0	59.4	0.0	54.6	0.0	28.8
LnGrp LOS	E	A	A	F	D	D	A	F		D	A	C
Approach Vol, veh/h		24			496			1026	A		484	
Approach Delay, s/veh		61.9			116.8			59.4			29.1	
Approach LOS		E			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	68.0		10.0	22.0	56.0		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	18.0	52.0		6.0	18.0	52.0		28.0
Max Q Clear Time (g_c+I1), s	2.3	66.0		3.5	0.0	25.0		30.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.2		0.0

Intersection Summary	
HCM 6th Ctrl Delay	66.2
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	175

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	0	72	0	38	0	1344	125	57	1618	15
Future Vol, veh/h	6	0	0	72	0	38	0	1344	125	57	1618	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	0	0	75	0	40	0	1400	130	59	1685	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3296	3341	1693	3211	3219	1400	1701	0	0	1530	0	0
Stage 1	1811	1811	-	1400	1400	-	-	-	-	-	-	-
Stage 2	1485	1530	-	1811	1819	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 5	8	116	~ 6	10	174	379	-	-	441	-	-
Stage 1	102	131	-	176	209	-	-	-	-	-	-	-
Stage 2	157	181	-	102	130	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	7	116	~ 5	9	174	379	-	-	441	-	-
Mov Cap-2 Maneuver	~ 3	7	-	~ 5	9	-	-	-	-	-	-	-
Stage 1	102	113	-	176	209	-	-	-	-	-	-	-
Stage 2	121	181	-	88	113	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	2537.1	$ 5063.9	0	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	379	-	-	3	5	174	441	-	-
HCM Lane V/C Ratio	-	-	-	2.083	15	0.227	0.135	-	-
HCM Control Delay (s)	0	-	-	$ 2537.$	$ 7719.8	31.7	14.4	-	-
HCM Lane LOS	A	-	-	F	F	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.7	11.2	0.8	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	1465	1	3	1687
Future Vol, veh/h	2	4	1465	1	3	1687
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	55	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	1542	1	3	1776

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3325	1543	0	0	1543	0
Stage 1	1543	-	-	-	-	-
Stage 2	1782	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	9	143	-	-	436	-
Stage 1	196	-	-	-	-	-
Stage 2	149	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	9	143	-	-	436	-
Mov Cap-2 Maneuver	9	-	-	-	-	-
Stage 1	196	-	-	-	-	-
Stage 2	148	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	201.9	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	24	436	-
HCM Lane V/C Ratio	-	-	0.263	0.007	-
HCM Control Delay (s)	-	-	201.9	13.3	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0	-

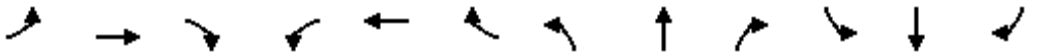
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	8	12	1463	1687	2
Future Vol, veh/h	3	8	12	1463	1687	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	8	13	1540	1776	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3343	1777	1778	0	-	0
Stage 1	1777	-	-	-	-	-
Stage 2	1566	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	9	104	354	-	-	-
Stage 1	150	-	-	-	-	-
Stage 2	191	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	9	104	354	-	-	-
Mov Cap-2 Maneuver	9	-	-	-	-	-
Stage 1	144	-	-	-	-	-
Stage 2	191	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	180.9	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	354	-	9	104	-	-
HCM Lane V/C Ratio	0.036	-	0.351	0.081	-	-
HCM Control Delay (s)	15.5	-	$ 549.6	42.6	-	-
HCM Lane LOS	C	-	F	E	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	6	0	0	2	9	1309	0	1	1516	47
Future Volume (veh/h)	27	0	6	0	0	2	9	1309	0	1	1516	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	0	6	0	0	2	9	1336	0	1	1547	48
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	0	10	0	0	5	113	1657	0	292	1598	50
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.00	0.87	0.87	0.00	0.87	0.87	0.87
Sat Flow, veh/h	1458	0	312	0	0	1610	324	1900	0	416	1833	57
Grp Volume(v), veh/h	34	0	0	0	0	2	9	1336	0	1	0	1595
Grp Sat Flow(s),veh/h/ln	1771	0	0	0	0	1610	324	1900	0	416	0	1890
Q Serve(g_s), s	2.5	0.0	0.0	0.0	0.0	0.2	3.0	39.5	0.0	0.1	0.0	90.2
Cycle Q Clear(g_c), s	2.5	0.0	0.0	0.0	0.0	0.2	93.2	39.5	0.0	39.6	0.0	90.2
Prop In Lane	0.82		0.18	0.00		1.00	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	58	0	0	0	0	5	113	1657	0	292	0	1648
V/C Ratio(X)	0.59	0.00	0.00	0.00	0.00	0.39	0.08	0.81	0.00	0.00	0.00	0.97
Avail Cap(c_a), veh/h	245	0	0	0	0	223	113	1657	0	292	0	1648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.0	0.0	0.0	0.0	0.0	64.7	45.1	3.6	0.0	12.1	0.0	6.8
Incr Delay (d2), s/veh	9.2	0.0	0.0	0.0	0.0	41.1	1.4	4.3	0.0	0.0	0.0	15.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.0	0.0	0.1	0.3	9.9	0.0	0.0	0.0	24.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.2	0.0	0.0	0.0	0.0	105.8	46.5	7.9	0.0	12.1	0.0	22.1
LnGrp LOS	E	A	A	A	A	F	D	A	A	B	A	C
Approach Vol, veh/h		34			2			1345			1596	
Approach Delay, s/veh		71.2			105.8			8.2			22.1	
Approach LOS		E			F			A			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		117.3		8.2		117.3		4.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		82.0		18.0		82.0		18.0				
Max Q Clear Time (g_c+I1), s		95.2		4.5		92.2		2.2				
Green Ext Time (p_c), s		0.0		0.1		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1341	1182	9	1028	867	9
Future Volume (veh/h)	1341	1182	9	1028	867	9
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1412	1244	9	1082	913	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1569	1344	257	1944	1404	1341
Arrive On Green	0.43	0.43	0.07	0.54	0.40	0.40
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1412	1244	9	1082	913	9
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	47.2	56.5	0.3	25.7	27.4	0.0
Cycle Q Clear(g_c), s	47.2	56.5	0.3	25.7	27.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1569	1344	257	1944	1404	1341
V/C Ratio(X)	0.90	0.93	0.04	0.56	0.65	0.01
Avail Cap(c_a), veh/h	1569	1344	270	1944	1404	1341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	6.5	56.0	19.8	31.6	18.1
Incr Delay (d2), s/veh	8.7	12.2	0.0	1.2	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.2	45.9	0.1	11.0	12.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.8	18.7	56.0	20.9	34.0	18.1
LnGrp LOS	D	B	E	C	C	B
Approach Vol, veh/h	2656			1091	922	
Approach Delay, s/veh	31.5			21.2	33.8	
Approach LOS	C			C	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.5	60.5			74.0	56.0
Change Period (Y+Rc), s	4.0	* 4			4.0	4.0
Max Green Setting (Gmax), s	10.0	* 57			70.0	52.0
Max Q Clear Time (g_c+I1), s	2.3	58.5			27.7	29.4
Green Ext Time (p_c), s	0.0	0.0			6.3	1.9

Intersection Summary		
HCM 6th Ctrl Delay	29.5	
HCM 6th LOS	C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1134	14	597	610	82	10	168	823	35	435	417
Future Volume (veh/h)	202	1134	14	597	610	82	10	168	823	35	435	417
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	210	1181	15	622	635	0	10	175	857	36	453	434
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	1039	13	515	1694		251	250	223	24	297	272
Arrive On Green	0.10	0.28	0.28	0.28	0.47	0.00	0.14	0.14	0.14	0.17	0.17	0.17
Sat Flow, veh/h	3510	3650	46	1810	3610	1610	1810	1805	1610	139	1754	1610
Grp Volume(v), veh/h	210	584	612	622	635	0	10	175	857	489	0	434
Grp Sat Flow(s),veh/h/ln	1755	1805	1892	1810	1805	1610	1810	1805	1610	1893	0	1610
Q Serve(g_s), s	7.4	37.0	37.0	37.0	14.7	0.0	0.6	12.0	18.0	22.0	0.0	22.0
Cycle Q Clear(g_c), s	7.4	37.0	37.0	37.0	14.7	0.0	0.6	12.0	18.0	22.0	0.0	22.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	0.07		1.00
Lane Grp Cap(c), veh/h	351	514	538	515	1694		251	250	223	320	0	272
V/C Ratio(X)	0.60	1.14	1.14	1.21	0.37		0.04	0.70	3.84	1.53	0.00	1.59
Avail Cap(c_a), veh/h	351	514	538	515	1694		251	250	223	320	0	272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.73	0.73	0.73	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	46.5	46.5	46.5	22.2	0.0	48.5	53.4	56.0	54.0	0.0	54.0
Incr Delay (d2), s/veh	2.8	83.1	82.4	110.6	0.6	0.0	0.0	6.2	1287.7	252.2	0.0	283.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	28.3	29.6	32.3	6.4	0.0	0.3	5.9	87.0	32.9	0.0	30.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	129.6	128.9	157.1	22.9	0.0	48.6	59.6	1343.7	306.2	0.0	337.4
LnGrp LOS	E	F	F	F	C		D	E	F	F	A	F
Approach Vol, veh/h		1406			1257	A		1042			923	
Approach Delay, s/veh		118.7			89.3			1115.6			320.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	41.0	41.0		26.0	17.0	65.0		22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	37.0	37.0		22.0	13.0	61.0		18.0
Max Q Clear Time (g_c+I1), s	39.0	39.0		24.0	9.4	16.7		20.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.2	5.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	375.5
HCM 6th LOS	F

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	2	975	8	9	1	863	987	13	1169	9
Future Volume (veh/h)	4	5	2	975	8	9	1	863	987	13	1169	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	5	2	1026	9	9	1	908	0	14	1231	10
Peak Hour Factor	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	38	15	612	643	545	251	848		84	666	5
Arrive On Green	0.05	0.05	0.05	0.34	0.34	0.34	0.14	0.45	0.00	0.05	0.35	0.35
Sat Flow, veh/h	657	822	329	1810	1900	1610	1810	1900	1610	1810	1882	15
Grp Volume(v), veh/h	11	0	0	1026	9	9	1	908	0	14	0	1241
Grp Sat Flow(s),veh/h/ln	1808	0	0	1810	1900	1610	1810	1900	1610	1810	0	1897
Q Serve(g_s), s	0.8	0.0	0.0	44.0	0.4	0.5	0.1	58.0	0.0	1.0	0.0	46.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	44.0	0.4	0.5	0.1	58.0	0.0	1.0	0.0	46.0
Prop In Lane	0.36		0.18	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	83	0	0	612	643	545	251	848		84	0	671
V/C Ratio(X)	0.13	0.00	0.00	1.68	0.01	0.02	0.00	1.07		0.17	0.00	1.85
Avail Cap(c_a), veh/h	83	0	0	612	643	545	251	848		251	0	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	0.0	0.0	43.0	28.6	28.6	48.3	36.0	0.0	59.6	0.0	42.0
Incr Delay (d2), s/veh	3.2	0.0	0.0	304.5	0.0	0.0	0.0	51.8	0.0	0.9	0.0	387.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	71.2	0.2	0.2	0.0	38.4	0.0	0.5	0.0	93.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	0.0	0.0	347.5	28.6	28.6	48.3	87.8	0.0	60.5	0.0	429.6
LnGrp LOS	E	A	A	F	C	C	D	F		E	A	F
Approach Vol, veh/h		11			1044			909	A		1255	
Approach Delay, s/veh		62.7			342.0			87.7			425.5	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	62.0		10.0	22.0	50.0		48.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	18.0	46.0		6.0	18.0	46.0		44.0
Max Q Clear Time (g_c+I1), s	3.0	60.0		2.8	2.1	48.0		46.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	301.8	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	103.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	0	109	0	65	0	1652	39	17	681	3
Future Vol, veh/h	9	0	0	109	0	65	0	1652	39	17	681	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	0	0	112	0	67	0	1703	40	18	702	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2497	2483	704	2443	2444	1703	705	0	0	1743	0	0
Stage 1	740	740	-	1703	1703	-	-	-	-	-	-	-
Stage 2	1757	1743	-	740	741	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	20	30	440	~ 22	32	115	902	-	-	365	-	-
Stage 1	412	426	-	117	149	-	-	-	-	-	-	-
Stage 2	109	142	-	412	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 8	29	440	~ 21	30	115	902	-	-	365	-	-
Mov Cap-2 Maneuver	~ 8	29	-	~ 21	30	-	-	-	-	-	-	-
Stage 1	412	405	-	117	149	-	-	-	-	-	-	-
Stage 2	45	142	-	392	405	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 976.9	$ 1484.6	0	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	902	-	-	8	21	115	365	-	-
HCM Lane V/C Ratio	-	-	-	1.16	5.351	0.583	0.048	-	-
HCM Control Delay (s)	0	-	-	$ 976.9	$ 2326.4	72.9	15.4	-	-
HCM Lane LOS	A	-	-	F	F	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	1.9	14.4	2.8	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	6	1684	0	2	788
Future Vol, veh/h	3	6	1684	0	2	788
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	55	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	6	1773	0	2	829

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2606	1773	0	0	1773	0
Stage 1	1773	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	28	104	-	-	356	-
Stage 1	151	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	28	104	-	-	356	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	151	-	-	-	-	-
Stage 2	427	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	39.8	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	113	356	-
HCM Lane V/C Ratio	-	-	0.084	0.006	-
HCM Control Delay (s)	-	-	39.8	15.2	-
HCM Lane LOS	-	-	E	C	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	17	0	1685	761	30
Future Vol, veh/h	0	17	0	1685	761	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	18	0	1774	801	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	417	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	590	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	590	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	590	-	-
HCM Lane V/C Ratio	-	0.03	-	-
HCM Control Delay (s)	-	11.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	29.8

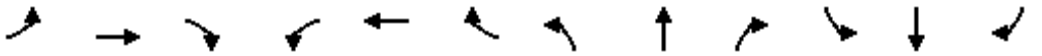
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	59	14	55	1624	772	6
Future Vol, veh/h	59	14	55	1624	772	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	15	58	1709	813	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2641	410	819	0	-	0
Stage 1	816	-	-	-	-	-
Stage 2	1825	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 23	596	818	-	-	-
Stage 1	400	-	-	-	-	-
Stage 2	142	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 21	596	818	-	-	-
Mov Cap-2 Maneuver	~ 21	-	-	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	142	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, $	1025.8	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	818	-	21	596	-	-
HCM Lane V/C Ratio	0.071	-	2.957	0.025	-	-
HCM Control Delay (s)	9.7	-	$ 1266.5	11.2	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	8	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	1	6	0	1	0	4	1578	0	3	684	29
Future Volume (veh/h)	53	1	6	0	1	0	4	1578	0	3	684	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	1	6	0	1	0	4	1644	0	3	712	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	1	8	0	3	0	618	1637	0	55	1560	66
Arrive On Green	0.04	0.04	0.04	0.00	0.00	0.00	0.86	0.86	0.00	0.86	0.86	0.86
Sat Flow, veh/h	1587	29	173	0	1900	0	729	1900	0	309	1810	76
Grp Volume(v), veh/h	62	0	0	0	1	0	4	1644	0	3	0	742
Grp Sat Flow(s),veh/h/ln	1789	0	0	0	1900	0	729	1900	0	309	0	1886
Q Serve(g_s), s	4.5	0.0	0.0	0.0	0.1	0.0	0.2	112.0	0.0	0.0	0.0	11.7
Cycle Q Clear(g_c), s	4.5	0.0	0.0	0.0	0.1	0.0	11.8	112.0	0.0	112.0	0.0	11.7
Prop In Lane	0.89		0.10	0.00		0.00	1.00		0.00	1.00		0.04
Lane Grp Cap(c), veh/h	79	0	0	0	3	0	618	1637	0	55	0	1625
V/C Ratio(X)	0.78	0.00	0.00	0.00	0.32	0.00	0.01	1.00	0.00	0.05	0.00	0.46
Avail Cap(c_a), veh/h	83	0	0	0	263	0	618	1637	0	55	0	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.5	0.0	0.0	0.0	64.8	0.0	3.4	9.0	0.0	65.0	0.0	2.1
Incr Delay (d2), s/veh	36.0	0.0	0.0	0.0	50.8	0.0	0.0	23.2	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	0.0	0.1	0.0	0.0	35.5	0.0	0.1	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.5	0.0	0.0	0.0	115.6	0.0	3.4	32.2	0.0	65.4	0.0	2.3
LnGrp LOS	F	A	A	A	F	A	A	F	A	E	A	A
Approach Vol, veh/h		62			1			1648			745	
Approach Delay, s/veh		97.5			115.6			32.2			2.5	
Approach LOS		F			F			C			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		116.0		9.8		116.0		4.2				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		94.0		6.0		94.0		18.0				
Max Q Clear Time (g_c+I1), s		114.0		6.5		114.0		2.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1172	464	7	1168	987	10
Future Volume (veh/h)	1172	464	7	1168	987	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1234	488	7	1229	1039	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1818	1428	61	1986	1346	1135
Arrive On Green	0.50	0.50	0.02	0.55	0.38	0.38
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1234	488	7	1229	1039	11
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	30.9	5.9	0.2	27.9	31.1	0.3
Cycle Q Clear(g_c), s	30.9	5.9	0.2	27.9	31.1	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1818	1428	61	1986	1346	1135
V/C Ratio(X)	0.68	0.34	0.11	0.62	0.77	0.01
Avail Cap(c_a), veh/h	1818	1428	293	1986	1346	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	1.1	58.1	18.4	32.4	21.6
Incr Delay (d2), s/veh	2.1	0.7	0.3	1.5	4.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	9.8	0.1	11.7	13.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.5	1.8	58.4	19.9	36.8	21.7
LnGrp LOS	C	A	E	B	D	C
Approach Vol, veh/h	1722			1236	1050	
Approach Delay, s/veh	18.1			20.1	36.6	
Approach LOS	B			C	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	15.6	64.4			70.0	50.0
Change Period (Y+Rc), s	3.5	4.0			4.0	4.0
Max Green Setting (Gmax), s	10.0	52.5			66.0	46.0
Max Q Clear Time (g_c+I1), s	12.2	32.9			29.9	33.1
Green Ext Time (p_c), s	0.0	7.6			7.5	2.1

Intersection Summary		
HCM 6th Ctrl Delay	23.6	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	976	4	401	992	93	12	222	840	90	70	171
Future Volume (veh/h)	202	976	4	401	992	93	12	222	840	90	70	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	213	1027	4	422	1044	0	13	234	884	95	74	180
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	1181	5	446	1685		422	421	376	69	54	107
Arrive On Green	0.10	0.32	0.32	0.25	0.47	0.00	0.23	0.23	0.23	0.07	0.07	0.07
Sat Flow, veh/h	3510	3688	14	1810	3610	1610	1810	1805	1610	1039	809	1610
Grp Volume(v), veh/h	213	503	528	422	1044	0	13	234	884	169	0	180
Grp Sat Flow(s),veh/h/ln	1755	1805	1897	1810	1805	1610	1810	1805	1610	1848	0	1610
Q Serve(g_s), s	7.0	31.5	31.5	27.5	26.0	0.0	0.7	13.7	28.0	8.0	0.0	8.0
Cycle Q Clear(g_c), s	7.0	31.5	31.5	27.5	26.0	0.0	0.7	13.7	28.0	8.0	0.0	8.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	0.56		1.00
Lane Grp Cap(c), veh/h	351	578	607	446	1685		422	421	376	123	0	107
V/C Ratio(X)	0.61	0.87	0.87	0.95	0.62		0.03	0.56	2.35	1.37	0.00	1.68
Avail Cap(c_a), veh/h	351	578	607	452	1685		422	421	376	123	0	107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.67	0.67	0.67	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.7	38.4	38.4	44.4	24.0	0.0	35.5	40.5	46.0	56.0	0.0	56.0
Incr Delay (d2), s/veh	3.0	16.3	15.6	28.9	1.7	0.0	0.0	1.1	614.3	210.2	0.0	341.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	16.4	17.1	15.8	11.3	0.0	0.3	6.2	75.2	10.9	0.0	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	54.7	54.1	73.3	25.7	0.0	35.5	41.6	660.3	266.2	0.0	397.6
LnGrp LOS	D	D	D	E	C		D	D	F	F	A	F
Approach Vol, veh/h		1244			1466	A		1131			349	
Approach Delay, s/veh		54.5			39.4			525.1			334.0	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	33.6	42.4		12.0	16.0	60.0		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	30.0	38.0		8.0	12.0	56.0		28.0
Max Q Clear Time (g_c+I1), s	29.5	33.5		10.0	9.0	28.0		30.0
Green Ext Time (p_c), s	0.1	2.6		0.0	0.2	8.8		0.0

Intersection Summary		
HCM 6th Ctrl Delay	199.5	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	4	465	6	5	0	984	1068	5	461	5
Future Volume (veh/h)	8	10	4	465	6	5	0	984	1068	5	461	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	9	11	4	489	7	5	0	1036	0	5	485	5
Peak Hour Factor	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	42	15	407	428	362	2	1029		90	1173	12
Arrive On Green	0.05	0.05	0.05	0.22	0.22	0.22	0.00	0.54	0.00	0.05	0.63	0.63
Sat Flow, veh/h	679	830	302	1810	1900	1610	1810	1900	1610	1810	1877	19
Grp Volume(v), veh/h	24	0	0	489	7	5	0	1036	0	5	0	490
Grp Sat Flow(s),veh/h/ln	1812	0	0	1810	1900	1610	1810	1900	1610	1810	0	1897
Q Serve(g_s), s	1.5	0.0	0.0	27.0	0.3	0.3	0.0	65.0	0.0	0.3	0.0	15.7
Cycle Q Clear(g_c), s	1.5	0.0	0.0	27.0	0.3	0.3	0.0	65.0	0.0	0.3	0.0	15.7
Prop In Lane	0.37		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	91	0	0	407	428	362	2	1029		90	0	1185
V/C Ratio(X)	0.26	0.00	0.00	1.20	0.02	0.01	0.00	1.01		0.06	0.00	0.41
Avail Cap(c_a), veh/h	91	0	0	407	428	362	90	1029		271	0	1185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.24	0.24	0.24	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.9	0.0	0.0	46.5	36.2	36.1	0.0	27.5	0.0	54.3	0.0	11.4
Incr Delay (d2), s/veh	7.0	0.0	0.0	96.4	0.0	0.0	0.0	29.7	0.0	0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	22.9	0.2	0.1	0.0	36.3	0.0	0.2	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	0.0	0.0	142.9	36.2	36.2	0.0	57.2	0.0	54.6	0.0	12.4
LnGrp LOS	E	A	A	F	D	D	A	F		D	A	B
Approach Vol, veh/h		24			501			1036	A		495	
Approach Delay, s/veh		61.9			140.4			57.2			12.9	
Approach LOS		E			F			E			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	69.0		10.0	0.0	79.0		31.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	18.0	53.0		6.0	6.0	65.0		27.0
Max Q Clear Time (g_c+I1), s	2.3	67.0		3.5	0.0	17.7		29.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	66.8
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	221.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	0	73	0	38	0	1372	126	57	1646	15
Future Vol, veh/h	6	0	0	73	0	38	0	1372	126	57	1646	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	65	85	-	75	85	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	0	0	76	0	40	0	1429	131	59	1715	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3356	3401	1723	3270	3278	1429	1731	0	0	1560	0	0
Stage 1	1841	1841	-	1429	1429	-	-	-	-	-	-	-
Stage 2	1515	1560	-	1841	1849	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 5	7	112	~ 5	9	167	369	-	-	430	-	-
Stage 1	98	127	-	169	202	-	-	-	-	-	-	-
Stage 2	151	175	-	98	126	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	6	112	~ 4	8	167	369	-	-	430	-	-
Mov Cap-2 Maneuver	~ 3	6	-	~ 4	8	-	-	-	-	-	-	-
Stage 1	98	110	-	169	202	-	-	-	-	-	-	-
Stage 2	115	175	-	85	109	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 2537.1	$ 6501.5	0	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	369	-	-	3	4	167	430	-	-
HCM Lane V/C Ratio	-	-	-	2.083	19.01	0.237	0.138	-	-
HCM Control Delay (s)	0	-	-	$ 2537.3	$ 9868.6	33.1	14.7	-	-
HCM Lane LOS	A	-	-	F	F	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	1.7	11.5	0.9	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	1494	1	3	1716
Future Vol, veh/h	2	4	1494	1	3	1716
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	55	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	1573	1	3	1806

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3386	1574	0	0	1574	0
Stage 1	1574	-	-	-	-	-
Stage 2	1812	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	9	137	-	-	424	-
Stage 1	189	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	9	137	-	-	424	-
Mov Cap-2 Maneuver	105	-	-	-	-	-
Stage 1	189	-	-	-	-	-
Stage 2	143	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.6	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	124	424	-
HCM Lane V/C Ratio	-	-	0.051	0.007	-
HCM Control Delay (s)	-	-	35.6	13.6	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	44	0	1495	1655	63
Future Vol, veh/h	0	44	0	1495	1655	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	46	0	1574	1742	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	904	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	284	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	284	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	284	-	-
HCM Lane V/C Ratio	-	0.163	-	-
HCM Control Delay (s)	-	20.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-

Intersection	
Int Delay, s/veh	77.5

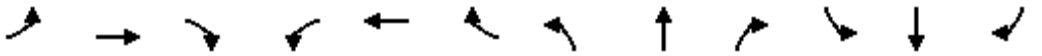
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	15	52	1443	1699	2
Future Vol, veh/h	52	15	52	1443	1699	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	50	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	55	16	55	1519	1788	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3418	895	1790	0	-	0
Stage 1	1789	-	-	-	-	-
Stage 2	1629	-	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 7	288	350	-	-	-
Stage 1	122	-	-	-	-	-
Stage 2	178	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	288	350	-	-	-
Mov Cap-2 Maneuver	~ 6	-	-	-	-	-
Stage 1	103	-	-	-	-	-
Stage 2	178	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, $	3761.8	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	350	-	6	288	-	-
HCM Lane V/C Ratio	0.156	-	9.123	0.055	-	-
HCM Control Delay (s)	17.2	-	$ 4841.7	18.2	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.5	-	8.5	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	0	6	0	0	2	9	1326	0	1	1533	49
Future Volume (veh/h)	29	0	6	0	0	2	9	1326	0	1	1533	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	0	6	0	0	2	9	1353	0	1	1564	50
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	50	0	10	0	0	5	92	1655	0	281	1595	51
Arrive On Green	0.03	0.00	0.03	0.00	0.00	0.00	0.87	0.87	0.00	0.87	0.87	0.87
Sat Flow, veh/h	1477	0	295	0	0	1610	318	1900	0	409	1831	59
Grp Volume(v), veh/h	36	0	0	0	0	2	9	1353	0	1	0	1614
Grp Sat Flow(s),veh/h/ln	1773	0	0	0	0	1610	318	1900	0	409	0	1889
Q Serve(g_s), s	2.6	0.0	0.0	0.0	0.0	0.2	3.3	41.5	0.0	0.1	0.0	98.3
Cycle Q Clear(g_c), s	2.6	0.0	0.0	0.0	0.0	0.2	101.7	41.5	0.0	41.7	0.0	98.3
Prop In Lane	0.83		0.17	0.00		1.00	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	60	0	0	0	0	5	92	1655	0	281	0	1646
V/C Ratio(X)	0.60	0.00	0.00	0.00	0.00	0.39	0.10	0.82	0.00	0.00	0.00	0.98
Avail Cap(c_a), veh/h	245	0	0	0	0	223	92	1655	0	281	0	1646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.0	0.0	0.0	0.0	0.0	64.7	52.5	3.8	0.0	13.1	0.0	7.4
Incr Delay (d2), s/veh	9.5	0.0	0.0	0.0	0.0	41.1	2.1	4.6	0.0	0.0	0.0	17.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.0	0.0	0.1	0.3	10.5	0.0	0.0	0.0	27.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.5	0.0	0.0	0.0	0.0	105.8	54.6	8.4	0.0	13.1	0.0	25.2
LnGrp LOS	E	A	A	A	A	F	D	A	A	B	A	C
Approach Vol, veh/h		36			2			1362			1615	
Approach Delay, s/veh		71.5			105.8			8.7			25.2	
Approach LOS		E			F			A			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		117.2		8.4		117.2		4.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		82.0		18.0		82.0		18.0				
Max Q Clear Time (g_c+I1), s		103.7		4.6		100.3		2.2				
Green Ext Time (p_c), s		0.0		0.1		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1341	1197	9	1028	882	9
Future Volume (veh/h)	1341	1197	9	1028	882	9
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1412	1260	9	1082	928	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1569	1344	257	1944	1404	1341
Arrive On Green	0.43	0.43	0.07	0.54	0.40	0.40
Sat Flow, veh/h	3705	1610	3510	3705	3510	2834
Grp Volume(v), veh/h	1412	1260	9	1082	928	9
Grp Sat Flow(s),veh/h/ln	1805	1610	1755	1805	1755	1417
Q Serve(g_s), s	47.2	56.5	0.3	25.7	28.0	0.0
Cycle Q Clear(g_c), s	47.2	56.5	0.3	25.7	28.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1569	1344	257	1944	1404	1341
V/C Ratio(X)	0.90	0.94	0.04	0.56	0.66	0.01
Avail Cap(c_a), veh/h	1569	1344	270	1944	1404	1341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	6.5	56.0	19.8	31.8	18.1
Incr Delay (d2), s/veh	8.7	13.6	0.0	1.2	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.2	46.9	0.1	11.0	12.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.8	20.0	56.0	20.9	34.3	18.1
LnGrp LOS	D	C	E	C	C	B
Approach Vol, veh/h	2672			1091	937	
Approach Delay, s/veh	32.0			21.2	34.1	
Approach LOS	C			C	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.5	60.5			74.0	56.0
Change Period (Y+Rc), s	4.0	* 4			4.0	4.0
Max Green Setting (Gmax), s	10.0	* 57			70.0	52.0
Max Q Clear Time (g_c+I1), s	2.3	58.5			27.7	30.0
Green Ext Time (p_c), s	0.0	0.0			6.3	2.0

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1134	14	602	610	82	10	170	828	35	437	417
Future Volume (veh/h)	202	1134	14	602	610	82	10	170	828	35	437	417
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	210	1181	15	627	635	0	10	177	862	36	455	434
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	1039	13	501	1666		251	250	223	25	310	285
Arrive On Green	0.10	0.28	0.28	0.28	0.46	0.00	0.14	0.14	0.14	0.18	0.18	0.18
Sat Flow, veh/h	3510	3650	46	1810	3610	1610	1810	1805	1610	139	1754	1610
Grp Volume(v), veh/h	210	584	612	627	635	0	10	177	862	491	0	434
Grp Sat Flow(s),veh/h/ln	1755	1805	1892	1810	1805	1610	1810	1805	1610	1893	0	1610
Q Serve(g_s), s	7.4	37.0	37.0	36.0	14.9	0.0	0.6	12.2	18.0	23.0	0.0	23.0
Cycle Q Clear(g_c), s	7.4	37.0	37.0	36.0	14.9	0.0	0.6	12.2	18.0	23.0	0.0	23.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	0.07		1.00
Lane Grp Cap(c), veh/h	351	514	538	501	1666		251	250	223	335	0	285
V/C Ratio(X)	0.60	1.14	1.14	1.25	0.38		0.04	0.71	3.87	1.47	0.00	1.52
Avail Cap(c_a), veh/h	351	514	538	501	1666		251	250	223	335	0	285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.73	0.73	0.73	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	46.5	46.5	47.0	22.9	0.0	48.5	53.5	56.0	53.5	0.0	53.5
Incr Delay (d2), s/veh	2.8	83.1	82.4	128.8	0.7	0.0	0.0	6.6	1297.8	225.4	0.0	252.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	28.3	29.6	34.0	6.5	0.0	0.3	6.0	87.7	31.9	0.0	29.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	129.6	128.9	175.8	23.5	0.0	48.6	60.1	1353.8	278.9	0.0	306.2
LnGrp LOS	E	F	F	F	C		D	E	F	F	A	F
Approach Vol, veh/h		1406			1262	A		1049			925	
Approach Delay, s/veh		118.7			99.2			1123.0			291.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	41.0		27.0	17.0	64.0		22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	36.0	37.0		23.0	13.0	60.0		18.0
Max Q Clear Time (g_c+I1), s	38.0	39.0		25.0	9.4	16.9		20.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.2	5.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	374.8	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

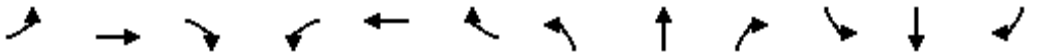
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	2	982	8	9	1	878	994	13	1184	9
Future Volume (veh/h)	4	5	2	982	8	9	1	878	994	13	1184	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	5	2	1034	9	9	1	924	0	14	1246	10
Peak Hour Factor	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	38	15	612	643	545	251	848		84	666	5
Arrive On Green	0.05	0.05	0.05	0.34	0.34	0.34	0.14	0.45	0.00	0.05	0.35	0.35
Sat Flow, veh/h	657	822	329	1810	1900	1610	1810	1900	1610	1810	1882	15
Grp Volume(v), veh/h	11	0	0	1034	9	9	1	924	0	14	0	1256
Grp Sat Flow(s),veh/h/ln	1808	0	0	1810	1900	1610	1810	1900	1610	1810	0	1897
Q Serve(g_s), s	0.8	0.0	0.0	44.0	0.4	0.5	0.1	58.0	0.0	1.0	0.0	46.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	44.0	0.4	0.5	0.1	58.0	0.0	1.0	0.0	46.0
Prop In Lane	0.36		0.18	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	83	0	0	612	643	545	251	848		84	0	671
V/C Ratio(X)	0.13	0.00	0.00	1.69	0.01	0.02	0.00	1.09		0.17	0.00	1.87
Avail Cap(c_a), veh/h	83	0	0	612	643	545	251	848		251	0	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	0.0	0.0	43.0	28.6	28.6	48.3	36.0	0.0	59.6	0.0	42.0
Incr Delay (d2), s/veh	3.2	0.0	0.0	310.4	0.0	0.0	0.0	58.4	0.0	0.9	0.0	397.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	72.2	0.2	0.2	0.0	39.9	0.0	0.5	0.0	95.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	0.0	0.0	353.4	28.6	28.6	48.3	94.4	0.0	60.5	0.0	439.6
LnGrp LOS	E	A	A	F	C	C	D	F		E	A	F
Approach Vol, veh/h		11			1052			925	A		1270	
Approach Delay, s/veh		62.7			347.8			94.3			435.4	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	62.0		10.0	22.0	50.0		48.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	18.0	46.0		6.0	18.0	46.0		44.0
Max Q Clear Time (g_c+I1), s	13.0	60.0		2.8	2.1	48.0		46.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	309.0	
HCM 6th LOS	F	

Notes

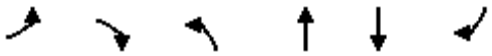
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	0	104	0	62	0	1421	37	16	425	3
Future Volume (veh/h)	9	0	0	104	0	62	0	1421	37	16	425	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	9	0	0	107	0	64	0	1465	38	16	438	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	0	0	194	0	128	1	1535	1301	37	1619	11
Arrive On Green	0.08	0.00	0.00	0.08	0.00	0.08	0.00	0.81	0.81	0.02	0.86	0.86
Sat Flow, veh/h	372	0	0	1739	0	1610	1810	1900	1610	1810	1885	13
Grp Volume(v), veh/h	9	0	0	107	0	64	0	1465	38	16	0	441
Grp Sat Flow(s),veh/h/ln	372	0	0	1739	0	1610	1810	1900	1610	1810	0	1898
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	5.0	0.0	84.2	0.6	1.1	0.0	5.6
Cycle Q Clear(g_c), s	8.4	0.0	0.0	7.5	0.0	5.0	0.0	84.2	0.6	1.1	0.0	5.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	85	0	0	194	0	128	1	1535	1301	37	0	1630
V/C Ratio(X)	0.11	0.00	0.00	0.55	0.00	0.50	0.00	0.95	0.03	0.44	0.00	0.27
Avail Cap(c_a), veh/h	165	0	0	279	0	223	84	1535	1301	84	0	1630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.6	0.0	0.0	58.5	0.0	57.3	0.0	10.5	2.5	63.0	0.0	1.7
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.4	0.0	3.0	0.0	14.4	0.0	8.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	3.6	0.0	2.1	0.0	32.1	0.2	0.6	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	0.0	0.0	61.0	0.0	60.3	0.0	24.9	2.5	70.9	0.0	2.1
LnGrp LOS	E	A	A	E	A	E	A	C	A	E	A	A
Approach Vol, veh/h		9			171			1503			457	
Approach Delay, s/veh		63.1			60.7			24.4			4.5	
Approach LOS		E			E			C			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	109.0		14.4	0.0	115.6		14.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	94.0		18.0	6.0	94.0		18.0				
Max Q Clear Time (g_c+I1), s	3.1	86.2		10.4	0.0	7.6		9.5				
Green Ext Time (p_c), s	0.0	6.8		0.0	0.0	3.2		0.4				

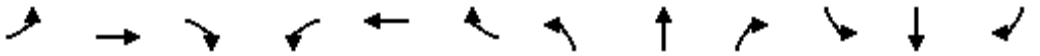
Intersection Summary												
HCM 6th Ctrl Delay			23.2									
HCM 6th LOS			C									



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	59	14	55	1391	511	5
Future Volume (veh/h)	59	14	55	1391	511	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	62	15	58	1464	538	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	85	76	75	1694	3002	28
Arrive On Green	0.05	0.05	0.04	0.89	0.82	0.82
Sat Flow, veh/h	1810	1610	1810	1900	3760	34
Grp Volume(v), veh/h	62	15	58	1464	265	278
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	1805	1894
Q Serve(g_s), s	4.4	1.2	4.1	47.4	4.0	4.0
Cycle Q Clear(g_c), s	4.4	1.2	4.1	47.4	4.0	4.0
Prop In Lane	1.00	1.00	1.00			0.02
Lane Grp Cap(c), veh/h	85	76	75	1694	1479	1552
V/C Ratio(X)	0.73	0.20	0.77	0.86	0.18	0.18
Avail Cap(c_a), veh/h	251	223	125	1694	1479	1552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.1	59.6	61.7	3.3	2.5	2.5
Incr Delay (d2), s/veh	11.3	1.3	15.3	6.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.1	2.2	9.6	1.2	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.4	60.9	77.0	9.5	2.8	2.7
LnGrp LOS	E	E	E	A	A	A
Approach Vol, veh/h	77			1522	543	
Approach Delay, s/veh	70.2			12.1	2.7	
Approach LOS	E			B	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		119.9		10.1	9.4	110.5
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		104.0		18.0	9.0	91.0
Max Q Clear Time (g_c+I1), s		49.4		6.4	6.1	6.0
Green Ext Time (p_c), s		31.3		0.1	0.0	3.7

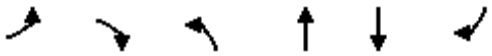
Intersection Summary		
HCM 6th Ctrl Delay		11.8
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	0	70	0	36	0	901	120	54	1414	14
Future Volume (veh/h)	6	0	0	70	0	36	0	901	120	54	1414	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	0	73	0	38	0	939	125	56	1473	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	0	0	156	0	94	1	1538	1303	73	1652	17
Arrive On Green	0.06	0.00	0.00	0.06	0.00	0.06	0.00	0.81	0.81	0.04	0.88	0.88
Sat Flow, veh/h	448	0	0	1717	0	1610	1810	1900	1610	1810	1877	19
Grp Volume(v), veh/h	6	0	0	73	0	38	0	939	125	56	0	1488
Grp Sat Flow(s),veh/h/ln	448	0	0	1717	0	1610	1810	1900	1610	1810	0	1897
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	3.0	0.0	24.2	2.1	4.0	0.0	56.8
Cycle Q Clear(g_c), s	5.7	0.0	0.0	5.1	0.0	3.0	0.0	24.2	2.1	4.0	0.0	56.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	82	0	0	156	0	94	1	1538	1303	73	0	1669
V/C Ratio(X)	0.07	0.00	0.00	0.47	0.00	0.40	0.00	0.61	0.10	0.77	0.00	0.89
Avail Cap(c_a), veh/h	193	0	0	271	0	223	84	1538	1303	125	0	1669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.9	0.0	0.0	60.1	0.0	59.0	0.0	4.7	2.6	61.8	0.0	4.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.2	0.0	2.8	0.0	1.8	0.1	15.7	0.0	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.5	0.0	1.3	0.0	8.2	0.6	2.2	0.0	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	0.0	0.0	62.2	0.0	61.8	0.0	6.5	2.7	77.5	0.0	12.0
LnGrp LOS	E	A	A	E	A	E	A	A	A	E	A	B
Approach Vol, veh/h		6			111			1064			1544	
Approach Delay, s/veh		63.2			62.1			6.1			14.4	
Approach LOS		E			E			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	109.2		11.6	0.0	118.4		11.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	91.0		18.0	6.0	94.0		18.0				
Max Q Clear Time (g_c+I1), s	6.0	26.2		7.7	0.0	58.8		7.1				
Green Ext Time (p_c), s	0.0	10.9		0.0	0.0	24.6		0.3				

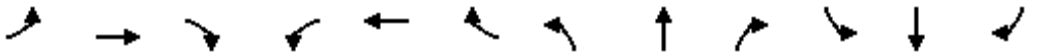
Intersection Summary												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			B									



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	52	15	51	965	1465	2
Future Volume (veh/h)	52	15	51	965	1465	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	16	54	1016	1542	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	77	69	72	1702	3054	4
Arrive On Green	0.04	0.04	0.04	0.90	0.83	0.83
Sat Flow, veh/h	1810	1610	1810	1900	3794	5
Grp Volume(v), veh/h	55	16	54	1016	752	792
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	1805	1899
Q Serve(g_s), s	3.9	1.2	3.8	15.6	16.2	16.2
Cycle Q Clear(g_c), s	3.9	1.2	3.8	15.6	16.2	16.2
Prop In Lane	1.00	1.00	1.00			0.00
Lane Grp Cap(c), veh/h	77	69	72	1702	1490	1568
V/C Ratio(X)	0.71	0.23	0.75	0.60	0.50	0.50
Avail Cap(c_a), veh/h	251	223	139	1702	1490	1568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	60.2	61.8	1.5	3.4	3.4
Incr Delay (d2), s/veh	11.5	1.7	14.7	1.6	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.2	2.1	2.7	4.9	5.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.9	61.9	76.5	3.1	4.6	4.6
LnGrp LOS	E	E	E	A	A	A
Approach Vol, veh/h	71			1070	1544	
Approach Delay, s/veh	70.5			6.8	4.6	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		120.5		9.5	9.1	111.3
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		104.0		18.0	10.0	90.0
Max Q Clear Time (g_c+I1), s		17.6		5.9	5.8	18.2
Green Ext Time (p_c), s		12.3		0.1	0.0	18.7

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	0	109	0	65	0	1652	39	17	681	3
Future Volume (veh/h)	9	0	0	109	0	65	0	1652	39	17	681	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	9	0	0	112	0	67	0	1703	40	18	702	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	0	0	199	0	133	1	1526	1293	40	1618	7
Arrive On Green	0.08	0.00	0.00	0.08	0.00	0.08	0.00	0.80	0.80	0.02	0.86	0.86
Sat Flow, veh/h	360	0	0	1741	0	1610	1810	1900	1610	1810	1890	8
Grp Volume(v), veh/h	9	0	0	112	0	67	0	1703	40	18	0	705
Grp Sat Flow(s),veh/h/ln	360	0	0	1741	0	1610	1810	1900	1610	1810	0	1899
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	5.2	0.0	104.4	0.7	1.3	0.0	11.1
Cycle Q Clear(g_c), s	8.7	0.0	0.0	7.9	0.0	5.2	0.0	104.4	0.7	1.3	0.0	11.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	85	0	0	199	0	133	1	1526	1293	40	0	1625
V/C Ratio(X)	0.11	0.00	0.00	0.56	0.00	0.50	0.00	1.12	0.03	0.45	0.00	0.43
Avail Cap(c_a), veh/h	161	0	0	280	0	223	84	1526	1293	84	0	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.6	0.0	0.0	58.3	0.0	57.1	0.0	12.8	2.6	62.8	0.0	2.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.5	0.0	3.0	0.0	61.7	0.0	7.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	3.7	0.0	2.2	0.0	58.9	0.2	0.7	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	0.0	0.0	60.8	0.0	60.1	0.0	74.5	2.6	70.5	0.0	3.0
LnGrp LOS	E	A	A	E	A	E	A	F	A	E	A	A
Approach Vol, veh/h		9			179			1743			723	
Approach Delay, s/veh		63.1			60.5			72.9			4.7	
Approach LOS		E			E			E			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	108.4		14.7	0.0	115.3		14.7				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	94.0		18.0	6.0	94.0		18.0				
Max Q Clear Time (g_c+I1), s	3.3	106.4		10.7	0.0	13.1		9.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.1		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		53.4	
HCM 6th LOS		D	

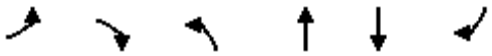
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	6	1684	0	2	788
Future Vol, veh/h	3	6	1684	0	2	788
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	55	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	6	1773	0	2	829

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2606	1773	0	0	1773	0
Stage 1	1773	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	28	104	-	-	356	-
Stage 1	151	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	28	104	-	-	356	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	151	-	-	-	-	-
Stage 2	427	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	39.8	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	113	356	-
HCM Lane V/C Ratio	-	-	0.084	0.006	-
HCM Control Delay (s)	-	-	39.8	15.2	-
HCM Lane LOS	-	-	E	C	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	59	14	55	1624	772	6
Future Volume (veh/h)	59	14	55	1624	772	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	62	15	58	1709	813	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	85	76	291	1694	2571	19
Arrive On Green	0.05	0.05	0.16	0.89	0.70	0.70
Sat Flow, veh/h	1810	1610	1810	1900	3768	27
Grp Volume(v), veh/h	62	15	58	1709	400	419
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	1805	1895
Q Serve(g_s), s	4.4	1.2	3.6	115.9	11.1	11.1
Cycle Q Clear(g_c), s	4.4	1.2	3.6	115.9	11.1	11.1
Prop In Lane	1.00	1.00	1.00			0.01
Lane Grp Cap(c), veh/h	85	76	291	1694	1264	1327
V/C Ratio(X)	0.73	0.20	0.20	1.01	0.32	0.32
Avail Cap(c_a), veh/h	251	223	291	1694	1264	1327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.1	59.6	47.3	7.1	7.5	7.5
Incr Delay (d2), s/veh	11.3	1.3	0.3	24.1	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.1	1.7	27.8	4.3	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.4	60.9	47.6	31.1	8.2	8.1
LnGrp LOS	E	E	D	F	A	A
Approach Vol, veh/h	77			1767	819	
Approach Delay, s/veh	70.2			31.7	8.2	
Approach LOS	E			C	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		119.9		10.1	24.9	95.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		104.0		18.0	9.0	91.0
Max Q Clear Time (g_c+I1), s		117.9		6.4	5.6	13.1
Green Ext Time (p_c), s		0.0		0.1	0.0	6.2

Intersection Summary		
HCM 6th Ctrl Delay		25.5
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	976	4	401	992	93	12	222	840	90	70	171
Future Volume (veh/h)	202	976	4	401	992	93	12	222	840	90	70	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	213	1027	4	422	1044	0	13	234	884	95	74	180
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	390	1457	6	505	1544		121	391	990	141	412	349
Arrive On Green	0.11	0.40	0.40	0.14	0.43	0.00	0.07	0.21	0.21	0.08	0.22	0.22
Sat Flow, veh/h	3510	3688	14	3510	3610	1610	1810	1900	2834	1810	1900	1610
Grp Volume(v), veh/h	213	503	528	422	1044	0	13	234	884	95	74	180
Grp Sat Flow(s),veh/h/ln	1755	1805	1897	1755	1805	1610	1810	1900	1417	1810	1900	1610
Q Serve(g_s), s	5.2	21.0	21.0	10.5	21.0	0.0	0.6	10.0	18.5	4.6	2.9	6.6
Cycle Q Clear(g_c), s	5.2	21.0	21.0	10.5	21.0	0.0	0.6	10.0	18.5	4.6	2.9	6.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	713	750	505	1544		121	391	990	141	412	349
V/C Ratio(X)	0.55	0.70	0.70	0.84	0.68		0.11	0.60	0.89	0.67	0.18	0.52
Avail Cap(c_a), veh/h	390	713	750	585	1544		362	391	990	141	412	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.67	0.67	0.67	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	22.8	22.8	37.5	20.7	0.0	39.5	32.4	27.7	40.4	28.7	17.2
Incr Delay (d2), s/veh	1.6	5.8	5.5	9.1	2.4	0.0	0.3	1.7	7.3	23.0	1.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	9.7	10.1	5.1	8.9	0.0	0.3	4.7	9.6	2.9	1.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	28.6	28.3	46.6	23.1	0.0	39.7	34.1	35.0	63.4	29.7	22.6
LnGrp LOS	D	C	C	D	C		D	C	D	E	C	C
Approach Vol, veh/h		1244			1466	A		1131			349	
Approach Delay, s/veh		30.3			29.9			34.9			35.2	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	39.6	10.0	23.5	14.0	42.5	11.0	22.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	33.5	18.0	7.5	10.0	38.5	7.0	18.5
Max Q Clear Time (g_c+I1), s	12.5	23.0	2.6	8.6	7.2	23.0	6.6	20.5
Green Ext Time (p_c), s	0.4	4.8	0.0	0.0	0.2	6.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	4	465	6	5	0	984	1068	5	461	5
Future Volume (veh/h)	8	10	4	465	6	5	0	984	1068	5	461	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	9	11	4	494	0	5	0	1036	0	5	485	5
Peak Hour Factor	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	42	15	875	0	389	2	1895		90	2227	23
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.24	0.00	0.52	0.00	0.05	0.61	0.61
Sat Flow, veh/h	679	830	302	3619	0	1610	1810	3610	1610	1810	3660	38
Grp Volume(v), veh/h	24	0	0	494	0	5	0	1036	0	5	239	251
Grp Sat Flow(s),veh/h/ln	1812	0	0	1810	0	1610	1810	1805	1610	1810	1805	1893
Q Serve(g_s), s	1.5	0.0	0.0	14.4	0.0	0.3	0.0	22.9	0.0	0.3	7.2	7.2
Cycle Q Clear(g_c), s	1.5	0.0	0.0	14.4	0.0	0.3	0.0	22.9	0.0	0.3	7.2	7.2
Prop In Lane	0.37		0.17	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	91	0	0	875	0	389	2	1895		90	1098	1152
V/C Ratio(X)	0.26	0.00	0.00	0.56	0.00	0.01	0.00	0.55		0.06	0.22	0.22
Avail Cap(c_a), veh/h	91	0	0	875	0	389	90	1895		271	1098	1152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.71	0.00	0.71	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	0.0	0.0	40.0	0.0	34.6	0.0	19.0	0.0	54.3	10.6	10.6
Incr Delay (d2), s/veh	7.0	0.0	0.0	1.9	0.0	0.0	0.0	1.1	0.0	0.3	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	6.6	0.0	0.1	0.0	9.7	0.0	0.2	2.9	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	0.0	0.0	41.8	0.0	34.7	0.0	20.1	0.0	54.6	11.1	11.0
LnGrp LOS	E	A	A	D	A	C	A	C		D	B	B
Approach Vol, veh/h		24			499			1036	A		495	
Approach Delay, s/veh		61.9			41.8			20.1			11.5	
Approach LOS		E			D			C			B	

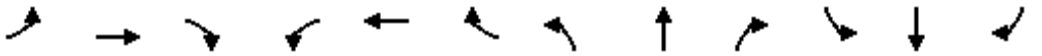
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	67.0		10.0	0.0	77.0		33.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	18.0	51.0		6.0	6.0	63.0		29.0
Max Q Clear Time (g_c+I1), s	2.3	24.9		3.5	0.0	9.2		16.4
Green Ext Time (p_c), s	0.0	8.5		0.0	0.0	3.3		1.5

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	0	73	0	38	0	1372	126	57	1646	15
Future Volume (veh/h)	6	0	0	73	0	38	0	1372	126	57	1646	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	0	0	76	0	40	0	1429	131	59	1715	16
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	0	0	159	0	97	1	1531	1297	76	1651	15
Arrive On Green	0.06	0.00	0.00	0.06	0.00	0.06	0.00	0.81	0.81	0.04	0.88	0.88
Sat Flow, veh/h	437	0	0	1719	0	1610	1810	1900	1610	1810	1879	18
Grp Volume(v), veh/h	6	0	0	76	0	40	0	1429	131	59	0	1731
Grp Sat Flow(s),veh/h/ln	437	0	0	1719	0	1610	1810	1900	1610	1810	0	1897
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	3.1	0.0	76.7	2.2	4.2	0.0	114.2
Cycle Q Clear(g_c), s	5.9	0.0	0.0	5.4	0.0	3.1	0.0	76.7	2.2	4.2	0.0	114.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	82	0	0	159	0	97	1	1531	1297	76	0	1666
V/C Ratio(X)	0.07	0.00	0.00	0.48	0.00	0.41	0.00	0.93	0.10	0.78	0.00	1.04
Avail Cap(c_a), veh/h	190	0	0	272	0	223	84	1531	1297	84	0	1666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.8	0.0	0.0	59.9	0.0	58.9	0.0	9.9	2.7	61.7	0.0	7.9
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.2	0.0	2.8	0.0	11.8	0.2	33.3	0.0	32.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	2.6	0.0	1.3	0.0	28.9	0.6	2.6	0.0	36.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	0.0	0.0	62.2	0.0	61.7	0.0	21.8	2.8	95.0	0.0	40.8
LnGrp LOS	E	A	A	E	A	E	A	C	A	F	A	F
Approach Vol, veh/h		6			116			1560			1790	
Approach Delay, s/veh		63.2			62.0			20.2			42.6	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	108.7		11.8	0.0	118.2		11.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	94.0		18.0	6.0	94.0		18.0				
Max Q Clear Time (g_c+I1), s	6.2	78.7		7.9	0.0	116.2		7.4				
Green Ext Time (p_c), s	0.0	12.2		0.0	0.0	0.0		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		33.2	
HCM 6th LOS		C	

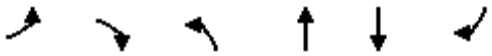
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	1494	1	3	1716
Future Vol, veh/h	2	4	1494	1	3	1716
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	55	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	1573	1	3	1806

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3386	1574	0	0	1574	0
Stage 1	1574	-	-	-	-	-
Stage 2	1812	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	9	137	-	-	424	-
Stage 1	189	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	9	137	-	-	424	-
Mov Cap-2 Maneuver	105	-	-	-	-	-
Stage 1	189	-	-	-	-	-
Stage 2	143	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.6	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	124	424	-
HCM Lane V/C Ratio	-	-	0.051	0.007	-
HCM Control Delay (s)	-	-	35.6	13.6	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	52	15	52	1443	1699	2
Future Volume (veh/h)	52	15	52	1443	1699	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	16	55	1519	1788	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	77	69	72	1702	3054	3
Arrive On Green	0.04	0.04	0.04	0.90	0.83	0.83
Sat Flow, veh/h	1810	1610	1810	1900	3795	4
Grp Volume(v), veh/h	55	16	55	1519	872	918
Grp Sat Flow(s),veh/h/ln	1810	1610	1810	1900	1805	1899
Q Serve(g_s), s	3.9	1.2	3.9	54.0	21.2	21.2
Cycle Q Clear(g_c), s	3.9	1.2	3.9	54.0	21.2	21.2
Prop In Lane	1.00	1.00	1.00			0.00
Lane Grp Cap(c), veh/h	77	69	72	1702	1490	1567
V/C Ratio(X)	0.71	0.23	0.76	0.89	0.59	0.59
Avail Cap(c_a), veh/h	251	223	125	1702	1490	1567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	60.2	61.8	3.5	3.8	3.8
Incr Delay (d2), s/veh	11.5	1.7	15.2	7.6	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.2	2.1	10.3	6.5	6.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.9	61.9	77.0	11.1	5.5	5.5
LnGrp LOS	E	E	E	B	A	A
Approach Vol, veh/h	71			1574	1790	
Approach Delay, s/veh	70.5			13.4	5.5	
Approach LOS	E			B	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		120.5		9.5	9.2	111.3
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		104.0		18.0	9.0	91.0
Max Q Clear Time (g_c+I1), s		56.0		5.9	5.9	23.2
Green Ext Time (p_c), s		31.9		0.1	0.0	26.0

Intersection Summary		
HCM 6th Ctrl Delay		10.5
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1134	14	602	610	82	10	170	828	35	437	417
Future Volume (veh/h)	202	1134	14	602	610	82	10	170	828	35	437	417
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	210	1181	15	627	635	0	10	177	862	36	455	434
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	1320	17	702	1666		84	512	1330	84	512	434
Arrive On Green	0.10	0.36	0.36	0.20	0.46	0.00	0.05	0.27	0.27	0.05	0.27	0.27
Sat Flow, veh/h	3510	3650	46	3510	3610	1610	1810	1900	2834	1810	1900	1610
Grp Volume(v), veh/h	210	584	612	627	635	0	10	177	862	36	455	434
Grp Sat Flow(s),veh/h/ln	1755	1805	1892	1755	1805	1610	1810	1900	1417	1810	1900	1610
Q Serve(g_s), s	7.4	39.7	39.7	22.6	14.9	0.0	0.7	9.8	4.4	2.5	29.9	27.3
Cycle Q Clear(g_c), s	7.4	39.7	39.7	22.6	14.9	0.0	0.7	9.8	4.4	2.5	29.9	27.3
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	653	684	702	1666		84	512	1330	84	512	434
V/C Ratio(X)	0.60	0.89	0.89	0.89	0.38		0.12	0.35	0.65	0.43	0.89	1.00
Avail Cap(c_a), veh/h	351	653	684	702	1666		84	512	1330	84	512	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	39.2	39.2	50.6	22.9	0.0	59.5	38.3	14.9	60.3	45.6	28.8
Incr Delay (d2), s/veh	2.8	17.2	16.6	13.8	0.7	0.0	0.5	0.3	0.8	15.4	20.2	43.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	20.5	21.4	11.3	6.5	0.0	0.3	4.6	7.1	1.5	16.9	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	56.4	55.8	64.5	23.5	0.0	59.9	38.6	15.7	75.7	65.8	72.3
LnGrp LOS	E	E	E	E	C		E	D	B	E	E	F
Approach Vol, veh/h		1406			1262	A		1049			925	
Approach Delay, s/veh		56.5			43.9			20.0			69.2	
Approach LOS		E			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	51.0	10.0	39.0	17.0	64.0	10.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	26.0	47.0	6.0	35.0	13.0	60.0	6.0	35.0
Max Q Clear Time (g_c+I1), s	24.6	41.7	2.7	31.9	9.4	16.9	4.5	11.8
Green Ext Time (p_c), s	0.4	3.3	0.0	1.4	0.2	5.0	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	47.4
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	2	982	8	9	1	878	994	13	1184	9
Future Volume (veh/h)	4	5	2	982	8	9	1	878	994	13	1184	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	5	2	1040	0	9	1	924	0	14	1246	10
Peak Hour Factor	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	38	15	1364	0	607	138	1472		84	1386	11
Arrive On Green	0.05	0.05	0.05	0.38	0.00	0.38	0.08	0.41	0.00	0.05	0.38	0.38
Sat Flow, veh/h	657	822	329	3619	0	1610	1810	3610	1610	1810	3670	29
Grp Volume(v), veh/h	11	0	0	1040	0	9	1	924	0	14	613	643
Grp Sat Flow(s),veh/h/ln	1808	0	0	1810	0	1610	1810	1805	1610	1810	1805	1895
Q Serve(g_s), s	0.8	0.0	0.0	32.7	0.0	0.5	0.1	26.5	0.0	1.0	41.6	41.6
Cycle Q Clear(g_c), s	0.8	0.0	0.0	32.7	0.0	0.5	0.1	26.5	0.0	1.0	41.6	41.6
Prop In Lane	0.36		0.18	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	83	0	0	1364	0	607	138	1472		84	681	715
V/C Ratio(X)	0.13	0.00	0.00	0.76	0.00	0.01	0.01	0.63		0.17	0.90	0.90
Avail Cap(c_a), veh/h	83	0	0	1364	0	607	138	1472		251	736	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.45	0.00	0.45	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	0.0	0.0	35.4	0.0	25.4	55.5	30.6	0.0	59.6	38.1	38.1
Incr Delay (d2), s/veh	3.2	0.0	0.0	1.9	0.0	0.0	0.0	2.0	0.0	0.9	13.4	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	14.7	0.0	0.2	0.0	11.9	0.0	0.5	20.7	21.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	0.0	0.0	37.3	0.0	25.4	55.5	32.7	0.0	60.5	51.5	51.1
LnGrp LOS	E	A	A	D	A	C	E	C		E	D	D
Approach Vol, veh/h		11			1049			925	A		1270	
Approach Delay, s/veh		62.7			37.2			32.7			51.4	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	57.0		10.0	13.9	53.1		53.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	41.0		6.0	6.0	53.0		49.0				
Max Q Clear Time (g_c+I1), s	3.0	28.5		2.8	2.1	43.6		34.7				
Green Ext Time (p_c), s	0.0	5.2		0.0	0.0	5.5		3.8				

Intersection Summary		
HCM 6th Ctrl Delay	41.5	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX E:

QUEUING ANALYSIS WORKSHEETS

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	WB	WB	SB
Directions Served	LT	R	L
Maximum Queue (ft)	24	59	27
Average Queue (ft)	1	23	9
95th Queue (ft)	9	48	29
Link Distance (ft)	235		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		65	85
Storage Blk Time (%)		2	
Queuing Penalty (veh)		0	

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	23
Average Queue (ft)	4
95th Queue (ft)	18
Link Distance (ft)	432
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB
Directions Served	L
Maximum Queue (ft)	11
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	242
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	NB	SB	SB	SB
Directions Served	LTR	T	L	T	R
Maximum Queue (ft)	106	238	28	115	24
Average Queue (ft)	44	188	6	42	1
95th Queue (ft)	92	324	22	103	9
Link Distance (ft)	149	223		751	
Upstream Blk Time (%)		13			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)			50		50
Storage Blk Time (%)		13		4	
Queuing Penalty (veh)		0		1	

Zone Summary

Zone wide Queuing Penalty: 2

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	1	3	1311	3	399	27
v/c Ratio	0.32	0.01	0.00	0.82	0.02	0.25	0.02
Control Delay	52.5	48.0	3.7	13.1	4.0	3.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	48.0	3.7	13.1	4.0	3.4	0.8
Queue Length 50th (ft)	36	1	0	353	0	42	0
Queue Length 95th (ft)	77	6	3	#1248	4	140	5
Internal Link Dist (ft)	116	177		174		725	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	302	316	826	1608	148	1608	1373
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.00	0.00	0.82	0.02	0.25	0.02

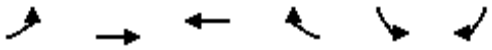
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1065	273	303	781	822	972
v/c Ratio	0.79	0.22	0.54	0.38	0.72	0.64
Control Delay	28.8	2.0	24.2	5.5	28.2	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	2.0	24.2	5.5	28.2	14.8
Queue Length 50th (ft)	241	12	55	115	184	180
Queue Length 95th (ft)	#384	37	68	60	248	217
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1343	1246	722	2075	1138	1660
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.22	0.42	0.38	0.72	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	416	1734	936	76	149	140
v/c Ratio	0.67	0.64	0.50	0.05	0.50	0.40
Control Delay	32.0	4.9	13.7	0.1	28.0	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	4.9	13.7	0.1	28.0	9.7
Queue Length 50th (ft)	82	182	150	0	47	0
Queue Length 95th (ft)	m119	57	208	0	104	50
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	700	2707	1890	1615	297	349
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.64	0.50	0.05	0.50	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	WB	SB	B15	B15	B16
Directions Served	R	L	T		T
Maximum Queue (ft)	22	27	1123	797	41
Average Queue (ft)	11	10	625	262	2
95th Queue (ft)	29	31	1235	766	16
Link Distance (ft)			1174	1174	474
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65	85			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	23
Average Queue (ft)	3
95th Queue (ft)	14
Link Distance (ft)	432
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	NB
Directions Served	L	L
Maximum Queue (ft)	11	31
Average Queue (ft)	0	3
95th Queue (ft)	4	18
Link Distance (ft)	242	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		125
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	T	R
Maximum Queue (ft)	64	23	28	238	336	74
Average Queue (ft)	27	4	1	71	116	5
95th Queue (ft)	59	18	11	183	268	31
Link Distance (ft)	149	208		223	751	
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)			55			50
Storage Blk Time (%)				5	9	0
Queuing Penalty (veh)				0	4	0

Zone Summary

Zone wide Queuing Penalty: 4

Lane Group	EBT	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	28	2	3	801	1	1223	45
v/c Ratio	0.14	0.00	0.01	0.48	0.00	0.73	0.03
Control Delay	10.1	0.0	3.3	4.4	3.0	9.2	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	0.0	3.3	4.4	3.0	9.2	1.2
Queue Length 50th (ft)	0	0	0	116	0	288	0
Queue Length 95th (ft)	19	0	3	346	2	#941	10
Internal Link Dist (ft)	116	177		174		725	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	340	550	246	1676	533	1676	1430
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.00	0.01	0.48	0.00	0.73	0.03

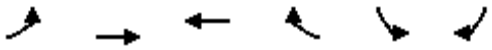
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	995	993	882	894	642	659
v/c Ratio	0.92	0.97	0.89	0.40	0.64	0.38
Control Delay	45.4	38.3	35.4	7.3	31.3	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	38.3	35.4	7.3	31.3	9.0
Queue Length 50th (ft)	291	491	251	164	163	90
Queue Length 95th (ft)	#421	#817	#346	147	220	125
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1084	1029	1031	2246	1011	1790
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.97	0.86	0.40	0.64	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	202	1434	959	57	417	407
v/c Ratio	0.52	0.67	0.61	0.04	0.59	0.60
Control Delay	43.9	8.7	21.8	0.0	12.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	8.7	21.8	0.0	12.8	12.9
Queue Length 50th (ft)	46	154	214	0	63	62
Queue Length 95th (ft)	m61	m324	278	0	158	163
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	389	2125	1564	1615	705	675
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.67	0.61	0.04	0.59	0.60

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	EB	WB	WB	SB
Directions Served	LTR	LT	R	L
Maximum Queue (ft)	20	250	90	27
Average Queue (ft)	2	247	58	8
95th Queue (ft)	11	258	126	27
Link Distance (ft)	277	235		
Upstream Blk Time (%)		100		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)			65	85
Storage Blk Time (%)		100	15	
Queuing Penalty (veh)		62	16	

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	24
Average Queue (ft)	4
95th Queue (ft)	19
Link Distance (ft)	432
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	NB
Directions Served	L	L
Maximum Queue (ft)	11	31
Average Queue (ft)	1	4
95th Queue (ft)	6	19
Link Distance (ft)	242	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		125
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	NB	SB	SB
Directions Served	LTR	T	T	R
Maximum Queue (ft)	108	238	159	59
Average Queue (ft)	42	193	32	5
95th Queue (ft)	92	333	101	28
Link Distance (ft)	149	223	751	
Upstream Blk Time (%)		14		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				50
Storage Blk Time (%)		14	2	0
Queuing Penalty (veh)		1	1	0

Zone Summary

Zone wide Queuing Penalty: 79

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	58	1	4	1429	3	548	28
v/c Ratio	0.34	0.01	0.01	0.89	0.04	0.34	0.02
Control Delay	51.4	48.0	3.5	17.7	5.3	3.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	48.0	3.5	17.7	5.3	3.9	0.9
Queue Length 50th (ft)	38	1	0	483	0	64	0
Queue Length 95th (ft)	80	6	4	#1434	4	209	5
Internal Link Dist (ft)	116	177		174		725	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	302	317	692	1607	69	1607	1372
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.00	0.01	0.89	0.04	0.34	0.02

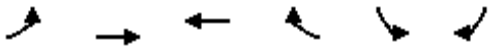
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1180	300	347	854	905	1089
v/c Ratio	0.90	0.25	0.59	0.41	0.80	0.70
Control Delay	36.6	2.8	23.6	5.3	30.9	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	2.8	23.6	5.3	30.9	15.9
Queue Length 50th (ft)	291	22	55	87	209	206
Queue Length 95th (ft)	#453	51	75	65	280	259
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1307	1221	722	2075	1138	1657
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.25	0.48	0.41	0.80	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	451	1943	1046	83	165	155
v/c Ratio	0.71	0.72	0.56	0.05	0.57	0.43
Control Delay	32.9	5.4	14.8	0.1	32.6	9.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	32.9	5.6	14.8	0.1	32.6	9.7
Queue Length 50th (ft)	94	130	180	0	59	0
Queue Length 95th (ft)	m121	m64	241	0	120	52
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	700	2707	1872	1615	291	361
Starvation Cap Reductn	0	155	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.76	0.56	0.05	0.57	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	EB	WB	WB	NB	SB	B15	B15	B16	B16
Directions Served	LTR	LT	R	R	L	T		T	T
Maximum Queue (ft)	20	250	90	19	46	1244	1242	398	402
Average Queue (ft)	4	246	37	1	20	1094	765	151	134
95th Queue (ft)	15	256	110	7	41	1470	1416	411	398
Link Distance (ft)	277	235				1174	1174	474	474
Upstream Blk Time (%)		100				56	1		
Queuing Penalty (veh)		0				559	9		
Storage Bay Dist (ft)			65	75	85				
Storage Blk Time (%)		100	0						
Queuing Penalty (veh)		36	0						

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	24
Average Queue (ft)	3
95th Queue (ft)	16
Link Distance (ft)	432
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	125
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	T	R
Maximum Queue (ft)	83	23	29	207	204	71
Average Queue (ft)	19	3	9	79	83	4
95th Queue (ft)	55	16	30	177	186	30
Link Distance (ft)	149	208		223	751	
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)			55			50
Storage Blk Time (%)				7	7	0
Queuing Penalty (veh)				1	3	0

Zone Summary

Zone wide Queuing Penalty: 609

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	33	2	9	982	1	1385	46
v/c Ratio	0.16	0.01	0.07	0.59	0.00	0.83	0.03
Control Delay	12.9	0.0	5.0	5.9	3.0	13.0	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	0.0	5.0	5.9	3.0	13.0	1.3
Queue Length 50th (ft)	0	0	1	170	0	428	0
Queue Length 95th (ft)	24	0	8	521	2	#1336	11
Internal Link Dist (ft)	116	177		174		725	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	339	505	120	1673	407	1673	1427
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.00	0.07	0.59	0.00	0.83	0.03

Intersection Summary

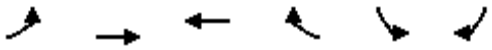
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1083	1086	1009	1019	700	735
v/c Ratio	1.04	1.08	0.98	0.45	0.69	0.41
Control Delay	71.3	71.0	45.0	6.8	32.7	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.3	71.0	45.0	6.8	32.7	9.1
Queue Length 50th (ft)	~353	~695	300	157	181	105
Queue Length 95th (ft)	#478	#940	#431	141	243	144
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1042	1008	1031	2246	1011	1788
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	1.08	0.98	0.45	0.69	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	224	1575	1165	73	439	439
v/c Ratio	0.58	0.74	0.74	0.05	0.64	0.67
Control Delay	45.8	9.4	25.0	0.1	15.8	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	9.4	25.0	0.1	15.8	16.8
Queue Length 50th (ft)	52	266	283	0	88	94
Queue Length 95th (ft)	m64	m394	362	0	191	209
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	389	2125	1564	1615	691	660
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.74	0.74	0.05	0.64	0.67

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	EB	WB	WB	SB
Directions Served	LTR	LT	R	L
Maximum Queue (ft)	17	250	90	101
Average Queue (ft)	1	246	54	20
95th Queue (ft)	7	262	117	62
Link Distance (ft)	277	235		
Upstream Blk Time (%)		95		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)			65	85
Storage Blk Time (%)		99	10	3
Queuing Penalty (veh)		62	11	13

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB
Directions Served	LR
Maximum Queue (ft)	23
Average Queue (ft)	6
95th Queue (ft)	21
Link Distance (ft)	432
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement	EB
Directions Served	R
Maximum Queue (ft)	53
Average Queue (ft)	13
95th Queue (ft)	40
Link Distance (ft)	95
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	241	150	31
Average Queue (ft)	207	27	21
95th Queue (ft)	308	123	44
Link Distance (ft)	226		
Upstream Blk Time (%)	75		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		50	125
Storage Blk Time (%)	94		
Queuing Penalty (veh)	13		

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	WB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	L	T	R
Maximum Queue (ft)	101	23	27	238	73	139	74
Average Queue (ft)	35	1	1	199	10	63	7
95th Queue (ft)	83	9	11	315	42	147	34
Link Distance (ft)	150	208		223		365	
Upstream Blk Time (%)				12			
Queuing Penalty (veh)				0			
Storage Bay Dist (ft)			55		50		50
Storage Blk Time (%)				13	5	5	
Queuing Penalty (veh)				1	28	2	

Zone Summary

Zone wide Queuing Penalty: 128

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	60	1	4	1442	3	559	30
v/c Ratio	0.35	0.01	0.01	0.90	0.04	0.35	0.02
Control Delay	51.6	48.0	3.5	18.5	5.3	4.0	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	48.0	3.5	18.5	5.3	4.0	0.9
Queue Length 50th (ft)	39	1	0	500	0	66	0
Queue Length 95th (ft)	82	6	4	#1459	4	216	6
Internal Link Dist (ft)	116	177		174		345	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	303	317	683	1606	69	1606	1371
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.00	0.01	0.90	0.04	0.35	0.02

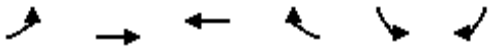
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1180	312	353	854	915	1095
v/c Ratio	0.91	0.26	0.59	0.41	0.80	0.70
Control Delay	37.0	3.0	23.6	5.3	31.3	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	3.0	23.6	5.3	31.3	15.9
Queue Length 50th (ft)	293	25	56	87	212	206
Queue Length 95th (ft)	#453	55	75	64	284	262
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1303	1218	722	2075	1138	1657
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.26	0.49	0.41	0.80	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	453	1947	1050	83	166	157
v/c Ratio	0.71	0.72	0.56	0.05	0.57	0.43
Control Delay	33.0	5.4	14.8	0.1	32.4	9.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	33.0	5.6	14.8	0.1	32.4	9.7
Queue Length 50th (ft)	94	120	181	0	59	0
Queue Length 95th (ft)	m121	m65	243	0	120	53
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	700	2707	1872	1615	292	363
Starvation Cap Reductn	0	156	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.76	0.56	0.05	0.57	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	EB	WB	WB	NB	SB	B15	B15	B16	B16
Directions Served	LTR	LT	R	T	L	T		T	T
Maximum Queue (ft)	20	250	90	16	43	1244	1170	480	467
Average Queue (ft)	1	231	25	1	19	1177	914	209	190
95th Queue (ft)	8	280	91	6	41	1380	1160	494	478
Link Distance (ft)	277	235		378		1174	1174	474	474
Upstream Blk Time (%)		77				65	0	0	0
Queuing Penalty (veh)		0				658	1	2	0
Storage Bay Dist (ft)			65		85				
Storage Blk Time (%)		99							
Queuing Penalty (veh)		36							

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	46	31
Average Queue (ft)	8	4
95th Queue (ft)	28	21
Link Distance (ft)	432	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		55
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement	EB	NB
Directions Served	R	LT
Maximum Queue (ft)	31	204
Average Queue (ft)	21	22
95th Queue (ft)	43	113
Link Distance (ft)	95	213
Upstream Blk Time (%)		0
Queuing Penalty (veh)		1
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	241	150	72
Average Queue (ft)	168	20	34
95th Queue (ft)	302	105	73
Link Distance (ft)	226		
Upstream Blk Time (%)	53		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		50	125
Storage Blk Time (%)	85		
Queuing Penalty (veh)	13		

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	T	R
Maximum Queue (ft)	66	23	29	238	230	74
Average Queue (ft)	23	1	8	99	110	6
95th Queue (ft)	52	9	28	223	207	33
Link Distance (ft)	149	208		223	256	
Upstream Blk Time (%)				2		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)			55			50
Storage Blk Time (%)				6	8	
Queuing Penalty (veh)				1	4	

Zone Summary

Zone wide Queuing Penalty: 715

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	35	2	9	999	1	1402	48
v/c Ratio	0.17	0.01	0.08	0.60	0.00	0.84	0.03
Control Delay	14.0	0.0	5.6	6.1	3.0	13.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.0	0.0	5.6	6.1	3.0	13.6	1.3
Queue Length 50th (ft)	0	0	1	177	0	447	1
Queue Length 95th (ft)	27	0	8	542	2	#1355	11
Internal Link Dist (ft)	116	177		174		235	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	340	500	106	1672	394	1672	1426
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.00	0.08	0.60	0.00	0.84	0.03

Intersection Summary

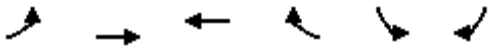
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1083	1102	1017	1019	716	742
v/c Ratio	1.04	1.09	0.99	0.45	0.71	0.41
Control Delay	71.3	76.8	46.7	6.7	33.2	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.3	76.8	46.7	6.7	33.2	9.1
Queue Length 50th (ft)	~353	~715	303	156	187	106
Queue Length 95th (ft)	#478	#960	#437	141	249	146
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1042	1008	1031	2246	1011	1788
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	1.09	0.99	0.45	0.71	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	226	1580	1170	73	440	440
v/c Ratio	0.58	0.74	0.75	0.05	0.64	0.67
Control Delay	45.9	9.4	25.1	0.1	15.8	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	9.4	25.1	0.1	15.8	16.9
Queue Length 50th (ft)	53	272	285	0	88	94
Queue Length 95th (ft)	m65	m396	364	0	192	209
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	389	2125	1564	1615	691	660
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.74	0.75	0.05	0.64	0.67

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	T	R	L
Maximum Queue (ft)	20	250	90	371	100	50
Average Queue (ft)	4	247	39	85	10	14
95th Queue (ft)	14	252	109	321	57	38
Link Distance (ft)	277	235		378		
Upstream Blk Time (%)		100		0		
Queuing Penalty (veh)		0		3		
Storage Bay Dist (ft)			65		75	85
Storage Blk Time (%)		100	12	12	0	
Queuing Penalty (veh)		65	13	5	0	

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	67	440	30
Average Queue (ft)	13	96	2
95th Queue (ft)	41	369	14
Link Distance (ft)	444	451	
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		1	
Storage Bay Dist (ft)			55
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement	NB
Directions Served	T
Maximum Queue (ft)	192
Average Queue (ft)	30
95th Queue (ft)	134
Link Distance (ft)	221
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	NB	NB
Directions Served	L	L	T
Maximum Queue (ft)	11	148	691
Average Queue (ft)	1	12	89
95th Queue (ft)	6	64	431
Link Distance (ft)	242		751
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		125	
Storage Blk Time (%)			9
Queuing Penalty (veh)			0

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	TR
Maximum Queue (ft)	112	30	154	239	174
Average Queue (ft)	51	2	8	228	54
95th Queue (ft)	90	14	62	310	134
Link Distance (ft)	163	221		224	751
Upstream Blk Time (%)				19	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)			55		
Storage Blk Time (%)				16	5
Queuing Penalty (veh)				1	0

Zone Summary

Zone wide Queuing Penalty: 87

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	1	4	1631	3	729
v/c Ratio	0.39	0.01	0.01	1.00	0.05	0.45
Control Delay	60.2	56.0	3.2	33.9	5.7	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	56.0	3.2	33.9	5.7	4.4
Queue Length 50th (ft)	46	1	0	964	0	99
Queue Length 95th (ft)	90	7	4	#1907	4	323
Internal Link Dist (ft)	116	177		174		725
Turn Bay Length (ft)			55		50	
Base Capacity (vph)	265	270	567	1636	60	1627
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.00	0.01	1.00	0.05	0.45

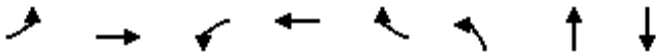
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1234	477	7	1229	1029	11
v/c Ratio	0.68	0.31	0.02	0.62	0.77	0.01
Control Delay	25.9	0.6	65.4	9.6	42.0	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	0.6	65.4	9.6	42.0	14.4
Queue Length 50th (ft)	328	0	3	115	262	0
Queue Length 95th (ft)	511	11	m4	161	m371	m1
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1823	1549	291	1985	1342	1426
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.31	0.02	0.62	0.77	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	213	1031	418	1044	98	13	1113	347
v/c Ratio	0.66	1.00	1.07	0.70	0.06	0.03	1.20dr	0.53
Control Delay	36.1	43.9	110.1	32.3	0.1	38.3	63.3	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	43.9	110.1	32.3	0.1	38.3	63.3	25.2
Queue Length 50th (ft)	83	419	~359	346	0	8	~320	61
Queue Length 95th (ft)	116	#561	#558	425	0	m12	#458	111
Internal Link Dist (ft)		198		678			1355	620
Turn Bay Length (ft)	175		175		300	100		
Base Capacity (vph)	321	1036	391	1489	1615	376	1060	658
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	1.00	1.07	0.70	0.06	0.03	1.05	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	484	7	5	1026	1119	5	479
v/c Ratio	0.15	1.24	0.02	0.01	0.94	0.69	0.03	0.61
Control Delay	47.3	171.2	68.5	0.0	40.4	2.5	51.4	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	171.2	68.5	0.0	40.4	2.5	51.4	31.4
Queue Length 50th (ft)	15	~438	5	0	652	0	4	288
Queue Length 95th (ft)	43	m#428	m5	m0	#1168	0	m11	400
Internal Link Dist (ft)	142		1355		498			888
Turn Bay Length (ft)		85				310	70	
Base Capacity (vph)	155	391	411	414	1096	1615	270	790
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	1.24	0.02	0.01	0.94	0.69	0.02	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	R	L
Maximum Queue (ft)	37	250	90	20	92
Average Queue (ft)	2	240	25	4	31
95th Queue (ft)	16	259	90	16	68
Link Distance (ft)	277	235			
Upstream Blk Time (%)		100			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)			65	75	85
Storage Blk Time (%)		100	2		1
Queuing Penalty (veh)		38	2		10

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	24	31
Average Queue (ft)	7	1
95th Queue (ft)	23	12
Link Distance (ft)	444	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		55
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	NB
Directions Served	L	L
Maximum Queue (ft)	11	48
Average Queue (ft)	0	7
95th Queue (ft)	4	30
Link Distance (ft)	242	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		125
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	TR
Maximum Queue (ft)	94	31	30	239	282
Average Queue (ft)	27	0	6	108	75
95th Queue (ft)	66	0	26	258	208
Link Distance (ft)	163	221		224	751
Upstream Blk Time (%)				4	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)			55		
Storage Blk Time (%)				9	6
Queuing Penalty (veh)				1	0

Zone Summary

Zone wide Queuing Penalty: 51

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	2	9	1336	1	1595
v/c Ratio	0.19	0.01	0.15	0.79	0.01	0.94
Control Delay	15.0	0.0	9.4	10.5	2.0	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	0.0	9.4	10.5	2.0	16.5
Queue Length 50th (ft)	0	0	1	377	0	1435
Queue Length 95th (ft)	27	0	11	#1350	m0	m373
Internal Link Dist (ft)	116	177		174		725
Turn Bay Length (ft)			55		50	
Base Capacity (vph)	296	415	61	1701	190	1692
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.00	0.15	0.79	0.01	0.94

Intersection Summary

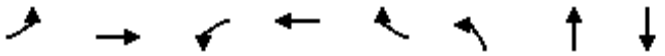
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1412	1244	9	1082	913	9
v/c Ratio	0.79	0.79	0.03	0.56	0.65	0.01
Control Delay	32.2	4.8	40.4	11.8	60.2	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	4.8	40.4	11.8	60.2	20.2
Queue Length 50th (ft)	457	0	3	179	423	2
Queue Length 95th (ft)	680	50	m5	m184	m413	m2
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1793	1579	269	1943	1400	1447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.79	0.03	0.56	0.65	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	210	1196	622	635	85	10	1032	923
v/c Ratio	0.60	1.17	1.36	0.40	0.11	0.04	1.17dr	1.20
Control Delay	59.5	103.4	212.8	25.8	4.6	50.1	69.7	141.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	103.4	212.8	25.8	4.6	50.1	69.7	141.2
Queue Length 50th (ft)	97	~632	~688	188	0	7	~273	~440
Queue Length 95th (ft)	m124	#746	#919	238	31	m11	#408	#575
Internal Link Dist (ft)		198		678			1315	620
Turn Bay Length (ft)	175		175		300	100		
Base Capacity (vph)	350	1026	458	1582	755	263	961	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.17	1.36	0.40	0.11	0.04	1.07	1.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	11	1026	9	9	1	908	1039	14	1241
v/c Ratio	0.08	1.76	0.01	0.02	0.00	1.03	0.64	0.10	1.93
Control Delay	50.4	376.9	43.6	0.0	50.0	69.3	1.8	59.1	449.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	376.9	43.6	0.0	50.0	69.3	1.8	59.1	449.8
Queue Length 50th (ft)	7	~1323	8	0	1	701	0	11	~1610
Queue Length 95th (ft)	27	m#910	m6	m0	m2	#1182	0	m15	#1892
Internal Link Dist (ft)	159		1315			506			880
Turn Bay Length (ft)		85			85		310	70	
Base Capacity (vph)	141	583	613	595	249	882	1615	249	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	1.76	0.01	0.02	0.00	1.03	0.64	0.06	1.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	EB	WB	WB	SB
Directions Served	LTR	LT	R	L
Maximum Queue (ft)	20	250	90	45
Average Queue (ft)	2	242	41	10
95th Queue (ft)	11	260	108	34
Link Distance (ft)	277	235		
Upstream Blk Time (%)		100		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)			65	85
Storage Blk Time (%)		100	7	
Queuing Penalty (veh)		65	8	

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	43	31
Average Queue (ft)	7	2
95th Queue (ft)	27	14
Link Distance (ft)	444	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		55
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement	EB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	12
95th Queue (ft)	35
Link Distance (ft)	95
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	241	150	76
Average Queue (ft)	233	41	21
95th Queue (ft)	250	151	54
Link Distance (ft)	226		
Upstream Blk Time (%)	98		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		50	125
Storage Blk Time (%)	100		
Queuing Penalty (veh)	14		

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	140	31	29	239	29	223
Average Queue (ft)	59	4	1	209	3	78
95th Queue (ft)	120	20	11	325	18	178
Link Distance (ft)	163	221		224		338
Upstream Blk Time (%)				12		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)			55		50	
Storage Blk Time (%)				13		6
Queuing Penalty (veh)				1		0

Zone Summary

Zone wide Queuing Penalty: 87

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	1	4	1644	3	743
v/c Ratio	0.41	0.01	0.01	1.01	0.05	0.46
Control Delay	61.5	56.0	3.2	36.4	5.7	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	56.0	3.2	36.4	5.7	4.6
Queue Length 50th (ft)	48	1	0	~1054	0	102
Queue Length 95th (ft)	94	7	4	#1934	4	336
Internal Link Dist (ft)	116	177		174		316
Turn Bay Length (ft)			55		50	
Base Capacity (vph)	265	270	556	1635	60	1626
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.00	0.01	1.01	0.05	0.46

Intersection Summary

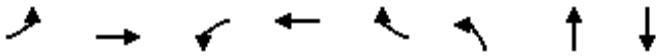
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1234	488	7	1229	1039	11
v/c Ratio	0.68	0.32	0.02	0.62	0.77	0.01
Control Delay	25.9	0.7	65.4	9.6	42.2	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	0.7	65.4	9.6	42.2	14.6
Queue Length 50th (ft)	328	0	3	115	266	0
Queue Length 95th (ft)	511	11	m4	161	m363	m1
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1823	1549	291	1985	1342	1426
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.32	0.02	0.62	0.77	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	213	1031	422	1044	98	13	1118	349
v/c Ratio	0.66	1.00	1.08	0.70	0.06	0.03	1.20dr	0.53
Control Delay	36.1	43.9	113.0	32.3	0.1	38.3	64.8	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	43.9	113.0	32.3	0.1	38.3	64.8	25.4
Queue Length 50th (ft)	83	419	~365	346	0	8	~324	62
Queue Length 95th (ft)	116	#561	#565	425	0	m12	#462	111
Internal Link Dist (ft)		198		678			1323	620
Turn Bay Length (ft)	175		175		300	100		
Base Capacity (vph)	321	1036	391	1489	1615	376	1060	659
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	1.00	1.08	0.70	0.06	0.03	1.05	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	489	7	5	1036	1124	5	490
v/c Ratio	0.14	1.25	0.02	0.01	0.96	0.70	0.03	0.44
Control Delay	46.1	174.2	66.7	0.0	45.0	2.5	51.4	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	174.2	66.7	0.0	45.0	2.5	51.4	15.0
Queue Length 50th (ft)	14	~437	5	0	680	0	4	203
Queue Length 95th (ft)	42	m#423	m5	m0	#1196	0	m11	280
Internal Link Dist (ft)	158		1323		505			885
Turn Bay Length (ft)		85				310	70	
Base Capacity (vph)	170	391	411	414	1080	1615	270	1122
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	1.25	0.02	0.01	0.96	0.70	0.02	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 1: Reche Canyon Rd & Fern Ln/Crystal Ridge Ln

Movement	WB	WB	NB	NB	SB
Directions Served	LT	R	T	R	L
Maximum Queue (ft)	250	90	15	28	67
Average Queue (ft)	198	25	1	2	27
95th Queue (ft)	295	90	6	14	59
Link Distance (ft)	235		378		
Upstream Blk Time (%)	49				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)		65		75	85
Storage Blk Time (%)	100	0			0
Queuing Penalty (veh)	38	0			0

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	24	31
Average Queue (ft)	4	4
95th Queue (ft)	17	20
Link Distance (ft)	444	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		55
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Reche Canyon Rd & Proj Dwy 1

Movement	EB	NB
Directions Served	R	LT
Maximum Queue (ft)	52	226
Average Queue (ft)	26	0
95th Queue (ft)	48	0
Link Distance (ft)	95	213
Upstream Blk Time (%)		0
Queuing Penalty (veh)		5
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Reche Canyon Rd & Old Reche Canyon Rd

Movement	EB	EB	NB	NB
Directions Served	L	R	L	T
Maximum Queue (ft)	241	150	75	227
Average Queue (ft)	212	20	29	0
95th Queue (ft)	281	103	62	0
Link Distance (ft)	226			391
Upstream Blk Time (%)	75			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		50	125	
Storage Blk Time (%)	100			0
Queuing Penalty (veh)	15			0

Intersection: 5: Reche Canyon Rd & Shane Dr

Movement	EB	NB	NB	SB	SB
Directions Served	LTR	L	TR	L	TR
Maximum Queue (ft)	97	30	239	27	255
Average Queue (ft)	41	5	107	1	80
95th Queue (ft)	83	24	258	11	198
Link Distance (ft)	163		224		311
Upstream Blk Time (%)			3		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)		55		50	
Storage Blk Time (%)			7		7
Queuing Penalty (veh)			1		0

Zone Summary

Zone wide Queuing Penalty: 59

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	36	2	9	1353	1	1614
v/c Ratio	0.21	0.01	0.15	0.80	0.01	0.95
Control Delay	16.4	0.0	9.4	10.8	2.0	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.4	0.0	9.4	10.8	2.0	16.8
Queue Length 50th (ft)	0	0	1	393	0	1450
Queue Length 95th (ft)	30	0	11	#1379	m0	m389
Internal Link Dist (ft)	116	177		174		290
Turn Bay Length (ft)			55		50	
Base Capacity (vph)	296	412	61	1701	179	1692
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.00	0.15	0.80	0.01	0.95

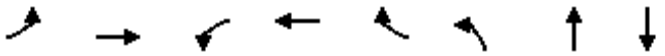
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1412	1260	9	1082	928	9
v/c Ratio	0.79	0.80	0.03	0.56	0.66	0.01
Control Delay	32.2	5.1	40.6	11.8	60.3	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	5.1	40.6	11.8	60.3	20.4
Queue Length 50th (ft)	457	0	3	179	430	2
Queue Length 95th (ft)	680	53	m5	m184	m412	m1
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1793	1579	269	1943	1400	1447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.80	0.03	0.56	0.66	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	210	1196	627	635	85	10	1040	925
v/c Ratio	0.60	1.17	1.37	0.40	0.11	0.04	1.17dr	1.21
Control Delay	59.5	103.4	217.2	25.8	4.6	50.3	72.8	142.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	103.4	217.2	25.8	4.6	50.3	72.8	142.2
Queue Length 50th (ft)	97	~632	~697	188	0	7	~280	~442
Queue Length 95th (ft)	m124	#746	#929	238	31	m11	#415	#577
Internal Link Dist (ft)		198		678			1324	620
Turn Bay Length (ft)	175		175		300	100		
Base Capacity (vph)	350	1026	458	1582	755	263	961	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.17	1.37	0.40	0.11	0.04	1.08	1.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	11	1034	9	9	1	924	1046	14	1256
v/c Ratio	0.08	1.77	0.01	0.02	0.00	1.05	0.65	0.10	1.96
Control Delay	50.4	382.8	43.4	0.0	52.0	74.6	1.8	59.7	460.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	382.8	43.4	0.0	52.0	74.6	1.8	59.7	460.0
Queue Length 50th (ft)	7	~1337	8	0	1	726	0	11	~1637
Queue Length 95th (ft)	27	m#914	m6	m0	m3	#1209	0	m14	#1920
Internal Link Dist (ft)	145		1324			509			880
Turn Bay Length (ft)		85			85		310	70	
Base Capacity (vph)	141	583	613	595	249	882	1615	249	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	1.77	0.01	0.02	0.00	1.05	0.65	0.06	1.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	107	64	1465	38	16	441
v/c Ratio	0.08	0.68	0.27	0.97	0.03	0.19	0.28
Control Delay	51.4	76.5	14.7	22.2	1.5	64.6	3.2
Queue Delay	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	51.4	76.5	14.7	23.0	1.5	64.6	3.2
Queue Length 50th (ft)	7	88	0	296	0	13	68
Queue Length 95th (ft)	24	149	43	#1626	m1	39	110
Internal Link Dist (ft)	289	202		354			365
Turn Bay Length (ft)			65		75	85	
Base Capacity (vph)	139	197	278	1513	1295	86	1572
Starvation Cap Reductn	0	0	0	9	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.54	0.23	0.97	0.03	0.19	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	62	15	58	1464	543
v/c Ratio	0.46	0.11	0.44	0.87	0.19
Control Delay	67.3	24.6	70.9	7.8	3.7
Queue Delay	0.0	0.0	0.0	2.1	0.0
Total Delay	67.3	24.6	70.9	9.8	3.7
Queue Length 50th (ft)	51	0	51	127	46
Queue Length 95th (ft)	96	23	m61	#345	74
Internal Link Dist (ft)	234			345	232
Turn Bay Length (ft)		50	125		
Base Capacity (vph)	249	236	142	1680	2869
Starvation Cap Reductn	0	0	0	18	0
Spillback Cap Reductn	0	0	0	110	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.06	0.41	0.93	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	60	1	4	1442	3	559	30
v/c Ratio	0.39	0.01	0.01	0.88	0.05	0.34	0.02
Control Delay	60.2	56.0	3.2	16.6	4.7	3.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	56.0	3.2	16.6	4.7	3.4	0.4
Queue Length 50th (ft)	46	1	0	500	0	52	0
Queue Length 95th (ft)	90	7	4	#1577	m3	124	3
Internal Link Dist (ft)	116	177		174		300	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	258	270	700	1636	60	1636	1397
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.00	0.01	0.88	0.05	0.34	0.02

Intersection Summary

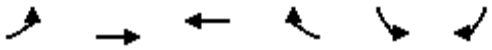
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1180	312	353	854	915	1095
v/c Ratio	0.91	0.26	0.59	0.41	0.80	0.70
Control Delay	37.0	3.0	23.6	5.3	31.3	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	3.0	23.6	5.3	31.3	15.9
Queue Length 50th (ft)	293	25	56	87	212	206
Queue Length 95th (ft)	#453	55	75	64	284	262
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1303	1218	722	2075	1138	1657
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.26	0.49	0.41	0.80	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	453	1947	1050	83	166	157
v/c Ratio	0.71	0.72	0.56	0.05	0.57	0.43
Control Delay	33.0	5.4	14.8	0.1	32.4	9.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	33.0	5.6	14.8	0.1	32.4	9.7
Queue Length 50th (ft)	94	120	181	0	59	0
Queue Length 95th (ft)	m121	m65	243	0	120	53
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	700	2707	1872	1615	292	363
Starvation Cap Reductn	0	156	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.76	0.56	0.05	0.57	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	NB
Directions Served	LR	T
Maximum Queue (ft)	46	460
Average Queue (ft)	8	125
95th Queue (ft)	32	353
Link Distance (ft)	432	450
Upstream Blk Time (%)		0
Queuing Penalty (veh)		4
Storage Bay Dist (ft)		
Storage Blk Time (%)		8
Queuing Penalty (veh)		0

Lane Group	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	6	73	38	939	125	56	1488
v/c Ratio	0.05	0.56	0.20	0.63	0.10	0.46	0.90
Control Delay	52.2	71.5	15.8	8.9	3.0	70.0	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	71.5	15.8	8.9	3.0	70.0	17.6
Queue Length 50th (ft)	5	60	0	215	11	46	671
Queue Length 95th (ft)	18	108	31	478	23	92	#1535
Internal Link Dist (ft)	289	202		354			365
Turn Bay Length (ft)			65		75	85	
Base Capacity (vph)	168	198	259	1493	1280	133	1648
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.37	0.15	0.63	0.10	0.42	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	55	16	54	1016	1544
v/c Ratio	0.42	0.12	0.42	0.60	0.53
Control Delay	66.9	24.5	66.7	4.3	6.0
Queue Delay	0.0	0.0	0.0	0.8	0.0
Total Delay	66.9	24.5	66.7	5.1	6.0
Queue Length 50th (ft)	45	0	44	172	188
Queue Length 95th (ft)	88	24	87	311	257
Internal Link Dist (ft)	234			354	232
Turn Bay Length (ft)		50	125		
Base Capacity (vph)	249	237	148	1687	2891
Starvation Cap Reductn	0	0	0	355	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.07	0.36	0.76	0.53

Intersection Summary

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	35	2	9	999	1	1402	48
v/c Ratio	0.24	0.01	0.06	0.58	0.00	0.82	0.03
Control Delay	17.0	0.0	3.1	4.3	2.0	10.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Total Delay	17.0	0.0	3.1	4.3	2.0	11.7	0.9
Queue Length 50th (ft)	0	0	1	118	0	299	1
Queue Length 95th (ft)	28	0	6	408	1	#1280	8
Internal Link Dist (ft)	116	177		174		291	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	334	492	147	1719	426	1719	1465
Starvation Cap Reductn	0	0	0	0	0	148	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.00	0.06	0.58	0.00	0.89	0.03

Intersection Summary

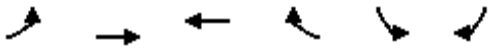
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1083	1102	1017	1019	716	742
v/c Ratio	1.04	1.09	0.99	0.45	0.71	0.41
Control Delay	71.3	76.8	46.9	6.9	33.2	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.3	76.8	46.9	6.9	33.2	9.1
Queue Length 50th (ft)	~353	~715	303	156	187	106
Queue Length 95th (ft)	#478	#960	#437	141	249	146
Internal Link Dist (ft)	609			353	499	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1042	1008	1031	2246	1011	1788
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	1.09	0.99	0.45	0.71	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	226	1580	1170	73	440	440
v/c Ratio	0.61	0.74	0.74	0.05	0.64	0.67
Control Delay	47.1	9.4	24.7	0.1	15.8	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	9.4	24.7	0.1	15.8	16.9
Queue Length 50th (ft)	53	272	285	0	88	94
Queue Length 95th (ft)	m65	m396	364	0	192	209
Internal Link Dist (ft)		198	678		620	
Turn Bay Length (ft)	175			300		
Base Capacity (vph)	389	2125	1582	1615	691	660
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.74	0.74	0.05	0.64	0.67

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	NB	SB
Directions Served	LR	T	L
Maximum Queue (ft)	24	102	28
Average Queue (ft)	6	5	1
95th Queue (ft)	23	40	11
Link Distance (ft)	432	450	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			55
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Lane Group	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	112	67	1703	40	18	705
v/c Ratio	0.08	0.70	0.28	1.13	0.03	0.21	0.45
Control Delay	51.2	77.3	14.4	74.0	0.8	65.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	77.3	14.4	74.0	0.8	65.8	4.5
Queue Length 50th (ft)	7	92	0	~1619	0	15	136
Queue Length 95th (ft)	24	155	44	m#1744	m0	42	211
Internal Link Dist (ft)	288	202		354			365
Turn Bay Length (ft)			65		75	85	
Base Capacity (vph)	135	197	281	1510	1292	85	1567
Starvation Cap Reductn	0	0	0	8	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.57	0.24	1.13	0.03	0.21	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	62	15	58	1709	819
v/c Ratio	0.46	0.11	0.50	1.02	0.28
Control Delay	67.3	24.6	55.1	24.7	3.9
Queue Delay	0.0	0.0	0.0	32.2	0.0
Total Delay	67.3	24.6	55.1	56.9	3.9
Queue Length 50th (ft)	51	0	47	~1557	80
Queue Length 95th (ft)	96	23	m49	m#416	113
Internal Link Dist (ft)	234			371	232
Turn Bay Length (ft)		50	125		
Base Capacity (vph)	249	236	124	1680	2901
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	260	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.06	0.47	1.20	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	62	1	4	1644	3	713	30
v/c Ratio	0.41	0.01	0.01	1.01	0.05	0.44	0.02
Control Delay	61.5	56.0	3.2	36.4	4.7	3.7	0.3
Queue Delay	0.0	0.0	0.0	7.9	0.0	0.0	0.0
Total Delay	61.5	56.0	3.2	44.3	4.7	3.7	0.3
Queue Length 50th (ft)	48	1	0	~1054	0	77	0
Queue Length 95th (ft)	94	7	4	#1934	m1	119	2
Internal Link Dist (ft)	116	177		174		274	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	258	270	579	1635	60	1635	1395
Starvation Cap Reductn	0	0	0	0	0	18	0
Spillback Cap Reductn	0	0	0	41	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.00	0.01	1.03	0.05	0.44	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1234	488	7	1229	1039	11
v/c Ratio	0.68	0.32	0.02	0.62	0.77	0.01
Control Delay	25.9	0.7	50.9	20.1	32.1	5.9
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	25.9	0.7	50.9	20.6	32.1	5.9
Queue Length 50th (ft)	328	0	2	327	176	0
Queue Length 95th (ft)	511	11	10	397	327	m1
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1823	1549	291	1985	1342	1426
Starvation Cap Reductn	0	0	0	309	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.32	0.02	0.73	0.77	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	213	1031	422	1044	98	13	234	884	95	74	180
v/c Ratio	0.55	0.76	0.75	0.68	0.06	0.10	0.60	0.72	0.68	0.13	0.29
Control Delay	43.7	29.0	44.9	23.5	0.1	40.5	39.7	22.9	65.5	25.5	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.7	29.0	44.9	23.5	0.1	40.5	39.7	22.9	65.5	25.5	4.4
Queue Length 50th (ft)	59	266	118	244	0	7	122	202	54	29	0
Queue Length 95th (ft)	96	344	169	315	0	25	198	279	#126	73	40
Internal Link Dist (ft)		198		678			1332			620	
Turn Bay Length (ft)	175		175		300	100		400	100		
Base Capacity (vph)	389	1360	583	1544	1615	361	390	1248	140	574	631
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.76	0.72	0.68	0.06	0.04	0.60	0.71	0.68	0.13	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	249	247	5	1036	1124	5	490
v/c Ratio	0.26	0.60	0.59	0.01	0.49	0.70	0.05	0.22
Control Delay	55.0	47.4	47.1	0.0	15.6	2.5	55.2	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	47.4	47.1	0.0	15.6	2.5	55.2	11.0
Queue Length 50th (ft)	15	181	178	0	217	0	4	87
Queue Length 95th (ft)	44	275	273	0	337	0	m12	114
Internal Link Dist (ft)	215		1332		491			901
Turn Bay Length (ft)		85				310	70	
Base Capacity (vph)	94	414	416	479	2131	1615	270	2192
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.60	0.59	0.01	0.49	0.70	0.02	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	NB
Directions Served	LR	TR
Maximum Queue (ft)	131	469
Average Queue (ft)	52	378
95th Queue (ft)	115	549
Link Distance (ft)	444	452
Upstream Blk Time (%)		2
Queuing Penalty (veh)		33
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Lane Group	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	6	76	40	1429	131	59	1731
v/c Ratio	0.06	0.57	0.21	0.95	0.10	0.51	1.05
Control Delay	52.0	71.7	16.5	21.5	2.1	74.3	44.8
Queue Delay	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	52.0	71.7	16.5	22.3	2.1	74.3	44.8
Queue Length 50th (ft)	5	62	0	~1284	3	46	~1655
Queue Length 95th (ft)	18	111	34	#1564	m5	m64	#2022
Internal Link Dist (ft)	289	202		354			365
Turn Bay Length (ft)			65		75	85	
Base Capacity (vph)	164	198	259	1498	1283	115	1647
Starvation Cap Reductn	0	0	0	13	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.38	0.15	0.96	0.10	0.51	1.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	55	16	55	1519	1790
v/c Ratio	0.42	0.12	0.43	0.90	0.62
Control Delay	66.9	24.5	64.6	11.7	8.4
Queue Delay	0.0	0.0	0.0	10.1	0.3
Total Delay	66.9	24.5	64.6	21.8	8.6
Queue Length 50th (ft)	45	0	46	255	340
Queue Length 95th (ft)	88	24	m66	#1524	m365
Internal Link Dist (ft)	234			354	199
Turn Bay Length (ft)		50	125		
Base Capacity (vph)	249	237	140	1687	2891
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	169	417
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.07	0.39	1.00	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	36	2	9	1353	1	1564	50
v/c Ratio	0.28	0.01	0.15	0.78	0.00	0.90	0.03
Control Delay	19.8	0.0	8.1	8.3	2.0	19.3	0.8
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	19.8	0.0	8.1	8.5	2.0	19.3	0.8
Queue Length 50th (ft)	0	0	1	263	0	1043	1
Queue Length 95th (ft)	30	0	9	1001	m0	#1667	m4
Internal Link Dist (ft)	116	177		174		324	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	282	399	60	1741	216	1741	1483
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	53	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.01	0.15	0.80	0.00	0.90	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1412	1260	9	1082	928	9
v/c Ratio	0.79	0.80	0.03	0.56	0.66	0.01
Control Delay	32.2	5.1	54.2	13.7	69.5	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	5.1	54.2	13.7	69.5	27.9
Queue Length 50th (ft)	457	0	3	348	430	1
Queue Length 95th (ft)	680	53	m9	444	498	m6
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225		150	150
Base Capacity (vph)	1793	1579	269	1943	1400	1447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.80	0.03	0.56	0.66	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	210	1196	627	635	85	10	177	863	36	455	434
v/c Ratio	0.61	0.92	0.90	0.38	0.05	0.12	0.35	0.62	0.42	0.72	0.55
Control Delay	39.1	62.3	68.3	23.7	0.1	62.9	31.6	11.2	75.4	46.4	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	62.3	68.3	23.7	0.1	62.9	31.6	11.2	75.4	46.4	8.2
Queue Length 50th (ft)	80	402	268	180	0	8	110	126	30	328	25
Queue Length 95th (ft)	m100	#491	#369	228	0	m12	173	167	68	#561	130
Internal Link Dist (ft)		198		678			1315			620	
Turn Bay Length (ft)	175		175		300	100		400	100		
Base Capacity (vph)	350	1303	700	1666	1615	83	511	1385	86	631	796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.92	0.90	0.38	0.05	0.12	0.35	0.62	0.42	0.72	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	11	517	526	9	1	924	1046	14	1256
v/c Ratio	0.13	0.80	0.81	0.01	0.01	0.57	0.65	0.15	0.74
Control Delay	55.8	39.2	39.7	0.0	78.0	31.5	1.4	62.7	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.8	39.2	39.7	0.0	78.0	31.5	1.4	62.7	30.9
Queue Length 50th (ft)	7	232	236	0	1	264	0	12	429
Queue Length 95th (ft)	28	m307	m316	m0	m3	m325	m0	m14	589
Internal Link Dist (ft)	174		1315			503			887
Turn Bay Length (ft)		85			85		310	70	
Base Capacity (vph)	85	646	648	676	83	1620	1615	249	1692
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.80	0.81	0.01	0.01	0.57	0.65	0.06	0.74

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 2: Reche Canyon Rd & E Shadid Dr

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	87	463	31
Average Queue (ft)	14	337	4
95th Queue (ft)	42	577	19
Link Distance (ft)	444	452	
Upstream Blk Time (%)		1	
Queuing Penalty (veh)		21	
Storage Bay Dist (ft)			55
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	112	67	1703	40	18	705
v/c Ratio	0.08	0.69	0.28	1.13	0.03	0.21	0.45
Control Delay	51.2	76.3	14.4	74.7	0.8	65.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	76.3	14.4	74.7	0.8	65.8	4.5
Queue Length 50th (ft)	7	92	0	~1618	0	15	136
Queue Length 95th (ft)	24	155	44	m#1734	m0	42	211
Internal Link Dist (ft)	288	202		354			365
Turn Bay Length (ft)			65		75	100	
Base Capacity (vph)	135	197	281	1507	1290	85	1564
Starvation Cap Reductn	0	0	0	8	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.57	0.24	1.14	0.03	0.21	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	62	15	58	1709	819
v/c Ratio	0.41	0.10	0.42	1.02	0.29
Control Delay	64.3	24.3	52.1	26.0	4.3
Queue Delay	0.0	0.0	0.0	31.1	0.0
Total Delay	64.3	24.3	52.1	57.1	4.3
Queue Length 50th (ft)	51	0	47	~1560	84
Queue Length 95th (ft)	96	23	m48	m#416	117
Internal Link Dist (ft)	234			371	232
Turn Bay Length (ft)		50	125		
Base Capacity (vph)	249	236	138	1674	2868
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	258	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.06	0.42	1.21	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	62	1	4	1644	3	713	30
v/c Ratio	0.41	0.01	0.01	1.01	0.05	0.44	0.02
Control Delay	61.5	56.0	3.2	36.4	4.7	3.7	0.3
Queue Delay	0.0	0.0	0.0	8.4	0.0	0.0	0.0
Total Delay	61.5	56.0	3.2	44.8	4.7	3.7	0.3
Queue Length 50th (ft)	48	1	0	~1054	0	77	0
Queue Length 95th (ft)	94	7	4	#1934	m1	114	2
Internal Link Dist (ft)	116	177		174		274	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	258	270	579	1635	60	1635	1395
Starvation Cap Reductn	0	0	0	0	0	11	0
Spillback Cap Reductn	0	0	0	43	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.00	0.01	1.03	0.05	0.44	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1234	488	7	1229	1039	11
v/c Ratio	0.68	0.32	0.02	0.62	0.77	0.01
Control Delay	25.9	0.7	50.9	20.1	33.2	9.3
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	25.9	0.7	50.9	20.6	33.2	9.3
Queue Length 50th (ft)	328	0	2	327	169	0
Queue Length 95th (ft)	511	11	10	397	366	m2
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225			150
Base Capacity (vph)	1823	1549	291	1985	1342	1425
Starvation Cap Reductn	0	0	0	309	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.32	0.02	0.73	0.77	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	213	1031	422	1044	98	13	234	884	95	74	180
v/c Ratio	0.61	0.87	0.86	0.78	0.06	0.07	0.67	0.68	0.29	0.10	0.25
Control Delay	51.2	40.7	60.6	33.0	0.1	41.9	48.2	17.0	37.8	22.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	40.7	60.6	33.0	0.1	41.9	48.2	17.0	37.8	22.4	4.9
Queue Length 50th (ft)	68	322	137	306	0	8	140	144	53	28	0
Queue Length 95th (ft)	106	#419	#218	387	0	26	223	222	100	72	50
Internal Link Dist (ft)		198		678			1332			620	
Turn Bay Length (ft)	175		200		300	100		400	100		
Base Capacity (vph)	350	1189	490	1335	1615	333	351	1293	333	726	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.87	0.86	0.78	0.06	0.04	0.67	0.68	0.29	0.10	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	249	247	5	1036	1124	5	490
v/c Ratio	0.14	0.67	0.66	0.01	0.51	0.70	0.03	0.23
Control Delay	46.1	53.2	52.7	0.0	17.5	2.5	51.2	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	53.2	52.7	0.0	17.5	2.5	51.2	11.9
Queue Length 50th (ft)	14	187	185	0	228	0	4	91
Queue Length 95th (ft)	42	285	283	0	371	0	m11	120
Internal Link Dist (ft)	215		1332		491			901
Turn Bay Length (ft)		325				310	70	
Base Capacity (vph)	170	371	373	414	2051	1615	270	2132
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.67	0.66	0.01	0.51	0.70	0.02	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	112	67	1703	40	18	705
v/c Ratio	0.08	0.69	0.28	1.13	0.03	0.21	0.45
Control Delay	51.2	76.3	14.4	74.7	0.8	65.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	76.3	14.4	74.7	0.8	65.8	4.5
Queue Length 50th (ft)	7	92	0	~1618	0	15	136
Queue Length 95th (ft)	24	155	44	m#1734	m0	42	211
Internal Link Dist (ft)	288	202		354			365
Turn Bay Length (ft)			65		75	100	
Base Capacity (vph)	135	197	281	1507	1290	85	1564
Starvation Cap Reductn	0	0	0	8	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.57	0.24	1.14	0.03	0.21	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	62	15	58	1709	819
v/c Ratio	0.41	0.10	0.42	1.02	0.29
Control Delay	64.3	24.3	52.1	26.0	4.3
Queue Delay	0.0	0.0	0.0	31.1	0.0
Total Delay	64.3	24.3	52.1	57.1	4.3
Queue Length 50th (ft)	51	0	47	~1560	84
Queue Length 95th (ft)	96	23	m48	m#416	117
Internal Link Dist (ft)	234			371	232
Turn Bay Length (ft)		50	125		
Base Capacity (vph)	249	236	138	1674	2868
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	258	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.06	0.42	1.21	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	62	1	4	1644	3	713	30
v/c Ratio	0.41	0.01	0.01	1.01	0.05	0.44	0.02
Control Delay	61.5	56.0	3.2	36.4	4.7	3.7	0.3
Queue Delay	0.0	0.0	0.0	8.4	0.0	0.0	0.0
Total Delay	61.5	56.0	3.2	44.8	4.7	3.7	0.3
Queue Length 50th (ft)	48	1	0	~1054	0	77	0
Queue Length 95th (ft)	94	7	4	#1934	m1	114	2
Internal Link Dist (ft)	116	177		174		274	
Turn Bay Length (ft)			55		50		50
Base Capacity (vph)	258	270	579	1635	60	1635	1395
Starvation Cap Reductn	0	0	0	0	0	11	0
Spillback Cap Reductn	0	0	0	43	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.00	0.01	1.03	0.05	0.44	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1234	488	7	1229	1039	11
v/c Ratio	0.68	0.32	0.02	0.62	0.77	0.01
Control Delay	25.9	0.7	50.9	20.1	33.2	9.3
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	25.9	0.7	50.9	20.6	33.2	9.3
Queue Length 50th (ft)	328	0	2	327	169	0
Queue Length 95th (ft)	511	11	10	397	366	m2
Internal Link Dist (ft)	609			353	496	
Turn Bay Length (ft)			225			150
Base Capacity (vph)	1823	1549	291	1985	1342	1425
Starvation Cap Reductn	0	0	0	309	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.32	0.02	0.73	0.77	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	213	1031	422	1044	98	13	234	884	95	74	180
v/c Ratio	0.61	0.87	0.86	0.78	0.06	0.07	0.67	0.68	0.29	0.10	0.25
Control Delay	51.2	40.7	60.6	33.0	0.1	41.9	48.2	17.0	37.8	22.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	40.7	60.6	33.0	0.1	41.9	48.2	17.0	37.8	22.4	4.9
Queue Length 50th (ft)	68	322	137	306	0	8	140	144	53	28	0
Queue Length 95th (ft)	106	#419	#218	387	0	26	223	222	100	72	50
Internal Link Dist (ft)		198		678			1332			620	
Turn Bay Length (ft)	175		200		300	100		400	100		
Base Capacity (vph)	350	1189	490	1335	1615	333	351	1293	333	726	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.87	0.86	0.78	0.06	0.04	0.67	0.68	0.29	0.10	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	249	247	5	1036	1124	5	490
v/c Ratio	0.14	0.67	0.66	0.01	0.51	0.70	0.03	0.23
Control Delay	46.1	53.2	52.7	0.0	17.5	2.5	51.2	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	53.2	52.7	0.0	17.5	2.5	51.2	11.9
Queue Length 50th (ft)	14	187	185	0	228	0	4	91
Queue Length 95th (ft)	42	285	283	0	371	0	m11	120
Internal Link Dist (ft)	215		1332		491			901
Turn Bay Length (ft)		325				310	70	
Base Capacity (vph)	170	371	373	414	2051	1615	270	2132
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.67	0.66	0.01	0.51	0.70	0.02	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX F:

ACCIDENT DATA

LSA

Table F-A - Non-Freeway Collision Summary

Collision Date	6/24/2018	8/2/2018	9/18/2018	8/29/2018	10/11/2018	11/5/2018	5/14/2019	4/3/2020
Collision Time	5:07	7:59	8:14	16:56	7:39	9:02	15:49	17:46
Primary Road	RECHEE CANYON DR	RECHE CANYON RD	RECHE CANYON RD	RECHE CANYON RD	S RECHE CANYON RD	RECHE CANYON RD	S RECHE CANYON RD	S RECHE CANYON RD
Secondary Road	SHANE DR	CRYSTAL RIDGE LN	CRYSTAL RIDGE LN	SHADID DR	CRYSTAL RIDGE LN	MICHELLE DR	SHANE DR	SHANE DR
Distance from Intersection (ft)	0	50	300	300	0	0	10	0
Severity of Collision	Complaint of Pain	Complaint of Pain	Complaint of Pain	Complaint of Pain	Complaint of Pain	Complaint of Pain	Complaint of Pain	Complaint of Pain
Fatality	0	0	0	0	0	0	0	0
Injury	2	1	1	1	1	5	1	3
Pedestrian Involvement	No	No	No	No	No	No	No	No
Bike Involvement	No	No	No	No	Yes	No	No	No
Motorcycle Involvement	No	No	No	No	No	No	No	No
Truck Involvement	No	No	No	No	No	No	No	No

Notes:

Data obtained from the Statewide Integrated Traffic Records System (SWITRS) for the time period of January 2018 to December 2020.

10/6/2020

BASIC AVERAGE CRASH RATE TABLE FOR HIGHWAYS

RATE GROUP		BASE RATE	+ ADT FACTOR		PCT FAT	PCT INJ	PCT F+I	HIGHWAY TYPE	TERRAIN OR ADT	DESIGN SPEED	AREA	CRASH COSTS ($1,000) F+I	CRASH COSTS ($1,000) ALL
H	01	0.78	0.29900	/	2.5	40.2	42.7	CONVENTIONAL 2 LANES OR LESS	FLAT	<=55	RURAL	806.8	349.4
H	02	0.70	0.00000		3.2	38.9	42.1	CONVENTIONAL 2 LANES OR LESS	FLAT	>55	RURAL	1001.4	426.6
H	03	1.14	0.72800	/	2.6	44.3	46.9	CONVENTIONAL 2 LANES OR LESS	ROLL	<=55	RURAL	772.1	366.7
H	04	0.65	0.47100	/	3.5	41.5	45.0	CONVENTIONAL 2 LANES OR LESS	ROLL	>55	RURAL	1021.1	464.2
H	05	1.57	0.42100	/	2.6	47.0	49.6	CONVENTIONAL 2 LANES OR LESS	MTN	<=55	RURAL	738.5	370.6
H	06	0.91	0.47600	/	2.8	42.3	45.1	CONVENTIONAL 2 LANES OR LESS	MTN	>55	RURAL	846.2	386.3
H	07	1.60	0.00000		1.0	38.3	39.3	CONVENTIONAL 2 LANES OR LESS		<45	SUBURBAN	417.1	170.6
H	08	1.32	0.00000		1.7	44.3	46.0	CONVENTIONAL 2 LANES OR LESS		45-55	SUBURBAN	538.5	253.7
H	09	0.62	0.02100	*	1.7	39.4	41.1	CONVENTIONAL 2 LANES OR LESS		>55	SUBURBAN	585.0	246.9
H	10	1.20	0.00000		1.0	39.9	40.9	CONVENTIONAL 2 LANES OR LESS		<45	URBAN	409.2	173.1
H	11	0.82	0.00000		1.6	47.2	48.8	CONVENTIONAL 2 LANES OR LESS		>=45	URBAN	498.0	248.0
H	12	1.12	0.00000		2.9	39.4	42.3	CONVENTIONAL 3 LANES			RURAL	918.3	393.4
H	13	1.44	0.00000		1.4	37.9	39.3	CONVENTIONAL 3 LANES			SUBURBAN	524.5	212.8
H	14	1.17	0.00000		2.1	38.8	40.9	CONVENTIONAL 3 LANES			URBAN	695.7	290.3
H	15	0.61	0.00000		2.1	36.7	38.8	EXPRESSWAY 3 LANES OR LESS	FLAT		RURAL	757.5	299.2
H	16	0.68	0.00000		3.2	36.8	40.0	EXPRESSWAY 3 LANES OR LESS	ROLL		RURAL	1045.9	423.5
H	17	0.97	0.00000		2.6	40.3	42.9	EXPRESSWAY 3 LANES OR LESS	MTN		RURAL	829.7	360.9
H	18	0.64	0.00000		2.8	41.7	44.5	EXPRESSWAY 3 LANES OR LESS		<=55	SUBURBAN	812.5	367.7
H	19	0.86	0.00000		2.6	33.5	36.1	EXPRESSWAY 3 LANES OR LESS		>55	SUBURBAN	908.5	335.0
H	20	0.62	0.00000		3.0	48.8	51.8	EXPRESSWAY 3 LANES OR LESS			URBAN	765.7	401.3
H	21	1.05	0.00000		1.9	34.9	36.8	UNDIVIDED 4 LANES	FLAT		RURAL	729.7	274.0
H	22	0.73	0.00000		2.0	34.4	36.4	UNDIVIDED 4 LANES	ROLL/MTN		RURAL	766.6	284.5
H	23	0.93	0.00000		2.1	27.4	29.5	UNDIVIDED 4 LANES		<=55	SUBURBAN	899.7	273.2
H	24	1.23	0.00000		2.0	35.5	37.5	UNDIVIDED 4 LANES		>55	SUBURBAN	711.3	273.6
H	25	0.94	0.00000		0.7	38.2	38.9	UNDIVIDED 4 LANES		<45	URBAN	340.5	138.4
H	26	0.67	0.00000		1.0	38.9	39.9	UNDIVIDED 4 LANES		>=45	URBAN	415.7	171.7
H	27	0.91	0.00000		3.1	31.3	34.4	UNDIVIDED 5-6 LANES	FLAT		RURAL	1158.6	404.2
H	28	0.91	0.00000		3.1	31.3	34.4	UNDIVIDED 5-6 LANES	ROLL/MTN		RURAL	1158.6	404.2
H	29	0.41	0.00000		2.6	48.7	51.3	UNDIVIDED 5-6 LANES		<=55	SUBURBAN	683.4	355.9
H	30	0.41	0.00000		2.6	48.7	51.3	UNDIVIDED 5-6 LANES		>55	SUBURBAN	683.4	355.9
H	31	1.37	0.00000		1.0	33.3	34.3	UNDIVIDED 5-6 LANES		<45	URBAN	459.3	163.9
H	32	3.02	0.00000		0.4	27.0	27.4	UNDIVIDED 5-6 LANES		>=45	URBAN	304.3	90.4

10/6/2020

BASIC AVERAGE CRASH RATE TABLE FOR INTERSECTIONS

RATE GROUP		BASE RATE	+ ADT FACTOR	PCT FAT	PCT INJ	PCT F+ I	INTERSECTION TYPE*	CONTROL TYPE	AREA	CRASH COST ($1000) F+I	CRASH COST ($1000) ALL
I	01	0.130	0.00000	1.4	44.4	45.8	F, M and S	NO CONTROL	RURAL	494.9	231.3
I	02	0.250	0.00000	2.5	44.1	46.6	F, M and S	STOP & YIELD SIGNS (EXC 4WAY)	RURAL	752.2	355.1
I	03	0.490	0.00000	0.8	32.7	33.5	F, M and S	4 WAY STOP	RURAL	420.4	146.5
I	04	0.540	0.00000	1.0	37.0	38.0	F, M and S	SIGNALS	RURAL	447.5	175.4
I	05	0.460	0.00000	1.5	36.0	37.5	F, M and S	4 WAY FLASHERS	RURAL	600.0	230.4
I	06	0.160	0.00000	0.8	45.8	46.6	F, M and S	NO CONTROL	SUBURBAN	329.7	159.5
I	07	0.240	0.00000	1.7	41.2	42.9	F, M and S	STOP & YIELD SIGNS (EXC 4WAY)	SUBURBAN	566.7	249.4
I	08	0.430	0.00000	0.7	40.3	41.0	F, M and S	4 WAY STOP	SUBURBAN	328.7	141.3
I	09	0.420	0.00000	0.5	37.4	37.9	F, M and S	SIGNALS	SUBURBAN	287.8	115.9
I	10	0.340	0.00000	0.8	39.9	40.7	F, M and S	4 WAY FLASHERS	SUBURBAN	356.0	151.4
I	11	0.050	0.00000	2.6	44.9	47.5	F, M and S	NO CONTROL	URBAN	731.8	352.7
I	12	0.140	0.00000	1.1	46.2	47.3	F, M and S	STOP & YIELD SIGNS (EXC 4WAY)	URBAN	396.5	192.7
I	13	0.170	0.00000	0.4	26.8	27.2	F, M and S	4 WAY STOP	URBAN	305.4	90.1
I	14	0.240	0.00000	0.5	46.9	47.4	F, M and S	SIGNALS	URBAN	261.2	128.9
I	15	0.260	0.00000	1.5	41.4	42.9	F, M and S	4 WAY FLASHERS	URBAN	521.2	229.1
I	16	0.130	0.00000	1.4	41.0	42.4	T, Y and Z	NO CONTROL	RURAL	522.2	226.4
I	17	0.190	0.00000	1.7	39.8	41.5	T, Y and Z	STOP & YIELD SIGNS (EXC 4WAY)	RURAL	610.8	258.5
I	18	0.560	0.00000	2.0	35.7	37.7	T, Y and Z	4 WAY STOP	RURAL	745.5	286.4
I	19	0.450	0.00000	0.5	34.6	35.1	T, Y and Z	SIGNALS	RURAL	313.0	115.4
I	20	0.560	0.00000	2.0	35.7	37.7	T, Y and Z	4 WAY FLASHERS	RURAL	745.5	286.4
I	21	0.140	0.00000	0.6	39.1	39.7	T, Y and Z	NO CONTROL	SUBURBAN	308.1	128.9
I	22	0.170	0.00000	1.2	39.9	41.1	T, Y and Z	STOP & YIELD SIGNS (EXC 4WAY)	SUBURBAN	456.7	194.2
I	23	0.180	0.00000	1.7	25.5	27.2	T, Y and Z	4 WAY STOP	SUBURBAN	808.1	227.8
I	24	0.290	0.00000	0.5	37.7	38.2	T, Y and Z	SIGNALS	SUBURBAN	286.7	116.3
I	25	0.180	0.00000	2.9	25.5	28.4	T, Y and Z	4 WAY FLASHERS	SUBURBAN	1226.0	356.1
I	26	0.060	0.00000	1.9	41.7	43.6	T, Y and Z	NO CONTROL	URBAN	613.0	272.7
I	27	0.090	0.00000	1.2	46.9	48.1	T, Y and Z	STOP & YIELD SIGNS (EXC 4WAY)	URBAN	414.5	204.4
I	28	0.070	0.00000	1.1	38.6	39.7	T, Y and Z	4 WAY STOP	URBAN	443.9	182.1
I	29	0.200	0.00000	0.5	46.8	47.3	T, Y and Z	SIGNALS	URBAN	261.4	128.8
I	30	0.070	0.00000	2.6	38.6	41.2	T, Y and Z	4 WAY FLASHERS	URBAN	821.0	343.9
I	31	0.740	0.00000	0.8	19.1	19.9	R	YIELD ON ALL APPROACHES	ALL*	585.5	125.0