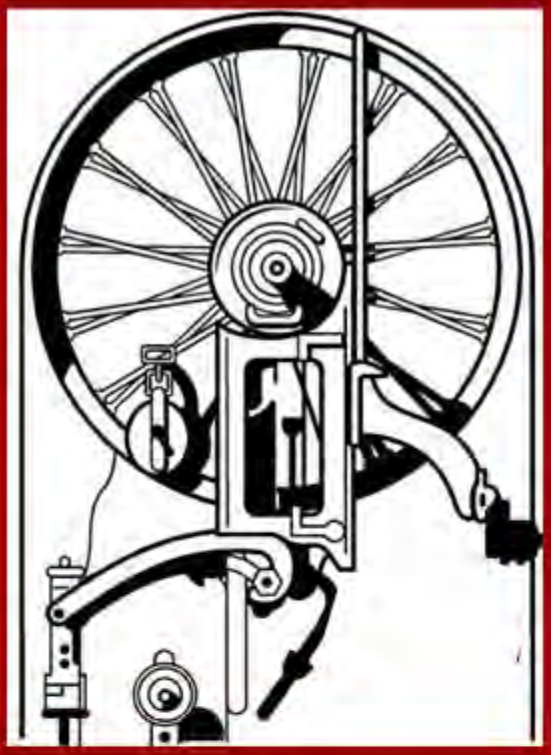

Initial Study / Mitigated Negative Declaration

GANAHL LUMBER
Hardware Store and Lumber Yard

Environmental Consultant:
LSA Associates, Inc.

Lead Agency:
City of Costa Mesa
Development Services Dept., 2nd FL
77 Fair Drive, Costa Mesa, CA 92626
(714) 754-5245

January 2015

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Initial Study/Mitigated Negative Declaration
Ganahl Lumber
Hardware Store and Lumber Yard
1100 South Bristol Street

Lead Agency:
City of Costa Mesa
Development Services
77 Fair Drive
Costa Mesa, California 92626
(714) 754-5245

Claire L. Flynn, AICP, Assistant Development Services Director
Mel Lee, AICP, Senior Planner

Prepared by:
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

Ryan Bensley, Senior Environmental Planner
Ashley Davis, Principal in Charge

January 2015

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NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

To: X
Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

X
County Clerk
County of Orange
P. O. Box 22013
Santa Ana, CA 92702

From:
City of Costa Mesa
Development Services
77 Fair Drive
Costa Mesa, CA 92626

Date: January 22**,** 2015
TO: Interested Agencies, Organizations, and Individuals

NOTICE IS HEREBY GIVEN that pursuant to Section 15072 of the State CEQA Guidelines, the City of Costa Mesa hereby gives notice that a Draft Mitigated Negative Declaration (MND) for the Ganahl Lumber Costa Mesa Relocation Project is available for review and comment.

PROJECT TITLE: Ganahl Lumber Costa Mesa Relocation Project (Planning Application No. PA-14-40).
PROJECT LOCATION: 1100 South Bristol Street in the City of Costa Mesa on the south side of the juncture of State Route 55 (SR-55) and State Route 73 (SR-73). The proposed project site is not on a list compiled pursuant to Government Code Section 65962.5.

PROJECT DESCRIPTION: The proposed project involves the development of a 6.6 acre vacant lot to accommodate the relocation of the Costa Mesa Ganahl Lumber store to a site owned by the County of Orange and leased to Ganahl Lumber. The development proposal includes the following: (1) Construction of a 65,263 square foot building materials retail store with administrative offices (Main Building A) at a maximum height of 41 feet as measured to the highest point of the proposed elevator equipment structure for the Ganahl Lumber Company; (2) A proposed outdoor storage yard consisting of three sheds (B Shed, Mill Shed, and Pole Shed) totaling 40,925 square feet (sf); (3) Provision of a total of 286 parking spaces on the project site; 108 parking stalls would be provided on the roof of the retail building; and 178 at-grade parking stalls would be provided throughout the project site; (4) Solar photovoltaic panels would be installed on the roof of the retail building at maximum height of 34 feet. (5) Freestanding monument signage at a height of 25 feet. The existing Costa Mesa Ganahl Lumber store is located on an adjacent property to the east and would be closed once the new store is completed. Required discretionary approvals from the City of Costa Mesa include: Development Review and Conditional Use Permit; Variance from front setback requirement (20-foot setback required; 10-foot setback proposed); Variances from maximum building height for the solar canopy, elevator overrun, B-Shed, and roofdeck parking; and Planned Signing Program.

PROJECT IMPACTS: The Initial Study/MND was completed in accordance with the Lead Agency's Guidelines implementing the California Environmental Quality Act. The Initial Study/MND found that the environmental effects from the project would be less than significant with the incorporation of standard conditions and mitigation measures.

PUBLIC REVIEW PERIOD: Begins: January 23, 2015 **Ends:** February 22, 2015

PUBLIC HEARING: A public hearing will be held before the Costa Mesa Planning Commission on February 23, 2015, at 6 p.m. in the City Council Chambers at Costa Mesa City Hall, 77 Fair Drive, Costa Mesa.

The Initial Study/Mitigated Negative Declaration is being circulated for public review and comment for a period of 30 days. Any person may submit written comments to the Planning Division of the City's Development Services Department before the end of the review period. If you challenge the City's action in court you may be limited to raising only those issues you or someone else raised in written correspondence delivered to the Planning Division prior to the end of the review period. Comments may be sent by mail, or faxed to the following address:

Claire Flynn, Asst. Development Services Director
City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92628

Phone: (714) 754-5278
FAX: (714) 754-4856
claire.flynn@costamesaca.gov

LOCATION WHERE DOCUMENT CAN BE REVIEWED: The Initial Study, Draft MND and supporting documents are available for review and comment during normal business hours at the following locations: (a) City of Costa Mesa, Public Counter, 77 Fair Drive, Costa Mesa, CA, (b) Mesa Verde Library, 2969 Mesa Verde Drive, East, (c) Costa Mesa/Donald Dungan Library, 1855 Park Avenue.

January 19, 2015
Date

Claire L. Flynn
Assistant Development Services Director
City of Costa Mesa

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APPENDICES (Included on CD)

FIGURES AND TABLES

FIGURES

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INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

1. FILE NUMBER(S):
Ganahl Hardware Store and Lumber Yard
Planning Application No. PA-14-40

2. NAME AND ADDRESS OF APPLICANT:
Ganahl Lumber Company
1220 East Ball Road
Anaheim, CA 92805

3. PROJECT LOCATION.:
1100 South Bristol Street, Costa Mesa, CA 92626
Assessor Parcel Number 427-363-01

4. GENERAL PLAN:
The 6.6-acre project site is designated as General Commercial on the City's General Plan Land Use Map (2004). The General Commercial land use designation allows a Floor Area Ratio (FAR) between 0.20–0.75 for high to very low traffic uses, respectively. Based on the uses proposed by the Applicant, the maximum FAR for the project site is 0.35. Specified outdoor material storage structures are not included in the FAR calculation for zoning purposes. Allowable uses within the General Commercial designation include a combination of junior department stores and retail clothing stores, theaters, restaurants, hotels and motels, automobile sales and service establishments, markets, drug stores, retail shops, financial institutions, service establishments and support office uses.

5. ZONING:
The 6.6-acre project site has a zoning designation on the City's Zoning Map (2007) of C1-Local Business. The C1-Local Business zoning designation allows a FAR between 0.20–0.75 for high to very low traffic uses, respectively. Based on the uses proposed by the Applicant, the maximum FAR for the project site is 0.35.

6. PROJECT DESCRIPTION:
The Proposed Project includes development of a 6.6-acre vacant lot located at 1100 Bristol Street with a new lumberyard consisting of three sheds (B Shed, Mill Shed, and Pole Shed) totaling 40,925 square feet (sf), a 134 sf Control Building (Security Shack), and a 65,263 sf building materials retail store and offices (Building A) for the Ganahl Lumber Company. A total of 286 parking spaces would be provided on the project site; 108 parking stalls would be provided on the roof of the retail building; and 178 at-grade parking stalls would be provided throughout the project site. Solar photovoltaic panels would be installed on the roof of the retail building. The existing Costa Mesa Ganahl Lumber store is located on an adjacent property to the east and would be closed once the new store is completed.

7. SURROUNDING LAND USES AND SETTING:

The Proposed Project site is located at 1100 South Bristol Street in the City of Costa Mesa on the south side of the juncture of State Route 55 (SR-55) and State Route 73 (SR-73) (see Figure 2.1, Existing Land Uses, located in Section 2.0 of this IS/MND). The 6.6-acre project site is currently vacant, and does not have any existing structures. The site has been improved with a concrete wall, asphalt-paved entrance area, and associated landscaping. The majority of the project site lot is unpaved and is covered with gravel. The Santa Ana Delhi Channel runs underground beneath the central and eastern portion of the project site. Most of the project site is owned by the Orange County Flood Control District (OCFCD), and would be leased by Ganahl Lumber Company. In the past, the County of Orange (County) has used the project site for storage and staging and as an annex area to the nearby County Fairgrounds. The project site is located on Bristol Street, a main arterial tying in major cultural, commercial office, and shopping districts throughout the community. The total area of the project site is 287,696 sf (6.6 acres). The site includes three parcels owned by the OCFCD and two parcels owned by the State of California Department of Transportation (Caltrans) as shown in Table 2.1, Project Site Ownership and Area. Surrounding land uses include: the SR-73 and SR-55 interchange and a Caltrans maintenance facility to the north; SR-73 and the existing Ganahl Lumber Costa Mesa store to the east; commercial (storage facility, restaurant) and multifamily residential land uses to the south; and commercial (offices), single-family residential, and recreation (Santa Ana Country Club) land uses to the west. The existing Ganahl Lumber facility in Costa Mesa was originally part of Barr Lumber, purchased in 1998. It is located immediately to the east of and adjacent to the project site at 1275 Bristol Street. It has a total of 55,540 sf of building/shed area consisting of a 35,650 sf building materials retail store and a 1,637 sf will call storage shed, a 15,905 sf storage shed, and a 2,348 sf mill shed. Access to the existing Ganahl Lumber facility is currently provided via two unsignalized full access driveways along Bristol Street.

8. OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED:

City of Costa Mesa Planning Commission
Orange County Flood Control District (OCFCD)
California Department of Transportation (Caltrans)
South Coast Air Quality Management District (SCAQMD)
Regional Water Quality Control Board (RWQCB)

1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

This purpose of this Initial Study (IS)/Mitigated Negative Declaration (MND) is to evaluate the potential environmental impacts that would occur as a result of construction and the subsequent operation of the Ganahl Hardware Store and Lumber Yard (Proposed Project). The 6.6-acre project site on which the Proposed Project would be built is located at 1100 Bristol Street in the City of Costa Mesa (City), as shown on Figure 2.1, Existing Land Uses, in Section 2 of this IS/MND.

1.1.1 Proposed Project

The Proposed Project is considered a project per the State California Environmental Quality Act (CEQA) Guidelines. The City of Costa Mesa is the Lead Agency for the Proposed Project, and as such, is responsible for the Proposed Project's environmental review and approval of the Proposed Project. Further, Section 21067 of the Public Resources Code defines a Lead Agency as the public agency responsible for carrying out or approving a project that may have potentially significant environmental impacts on the environment. The project Applicant is Ganahl Lumber Company.

As part of the environmental review process for the Proposed Project, the City has authorized the preparation of an IS/MND to assess the project's environmental impacts. The primary purpose of this IS/MND is to disclose the environmental implications of the Proposed Project to the City's decision-makers and to the public.

Although this IS/MND has been prepared with the assistance of a consultant, the analysis, conclusions, and findings herein are representative of the City's position, in its capacity as the Lead Agency for the Proposed Project. Based on the IS/MND, the City has determined that with the incorporation of mitigation, the Proposed Project will not have a significant effect on the environment.

This IS/MND and an associated Notice of Intent (NOI) will be forwarded to all applicable responsible agencies, trustee agencies, and the public for review and comment for a period of 30 days to allow these entities and other parties to comment on the Proposed Project and the findings in the IS/MND.

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2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND ENVIRONMENTAL SETTING

2.1.1 Surrounding Land Uses

The project site is located at 1100 South Bristol Street in the City of Costa Mesa (City) on the south side of the juncture of State Route 55 (SR-55) and State Route 73 (SR-73). Refer to Figure 2.1, Existing Land Uses, for the location of the project site. The project site is located on Bristol Street, a main arterial tying in major cultural, commercial office, and shopping districts throughout the community. Surrounding land uses include: the SR-73 and SR-55 interchange and a State of California Department of Transportation (Caltrans) maintenance facility to the north; SR-73 and the existing Ganahl Lumber Costa Mesa store to the east; commercial (storage facility, restaurant) and multifamily residential land uses to the south; and commercial (offices), single-family residential, and recreation (Santa Ana Country Club) land uses to the west.

2.1.2 Existing Site

The project site totals 6.6 acres and is currently vacant. The project site does not currently have any existing built structures. The site has been improved with a concrete wall, asphalt-paved entrance area, and associated landscaping. The majority of the project site lot is unpaved and is covered with gravel. The Santa Ana Delhi Channel runs underground beneath the central and eastern portion of the project site. Most of the project site is owned by the Orange County Flood Control District (OCFCD), and would be leased by Ganahl Lumber Company. In the past, the County of Orange (County) has used the project site for storage and staging and as an annex area to the nearby County Fairgrounds. The total area of the site is 287,696 square feet (sf) (6.6 acres). The site includes three parcels owned by the OCFCD and two parcels owned by Caltrans as shown in Table 2.A, Project Site Ownership and Area, and Figure 2.2, Land Ownership. The existing Ganahl Lumber facility in Costa Mesa was originally part of Barr Lumber, purchased in 1998. It is located immediately to the east of and adjacent to the project site at 1275 Bristol Street. It has a total of 55,540 sf of building/shed area consisting of a 35,650 sf building materials retail store and a 1,637 sf will call storage shed, a 15,905 sf storage shed, and a 2,348 sf mill shed. Access to the existing Ganahl Lumber facility is currently provided via two unsignalized full access driveways along Bristol Street.

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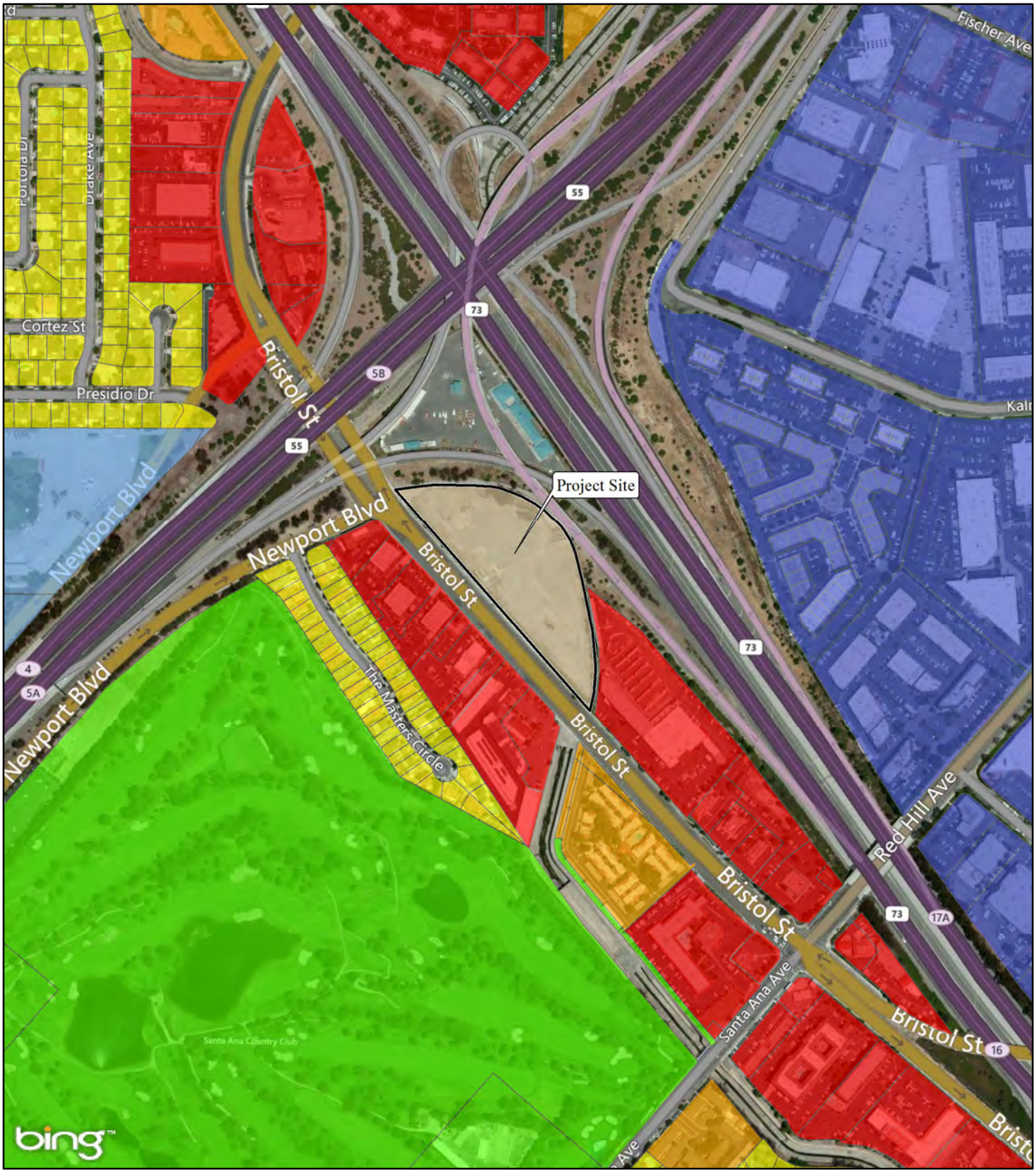

LSA

LEGEND

Project Site

Existing Land Use*

- Single Family Residential
- Multi-Family Residential
- Public and Services
- Facilities
- Industrial
- Open Space and Recreation
- Vacant

*Note: Revised based on aerial photography taken in April 2014.

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SOURCE: Bing Maps (2013); SCAG (2008)

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FIGURE 2.1

Ganahl Hardware Store and Lumber Yard

Existing Land Uses

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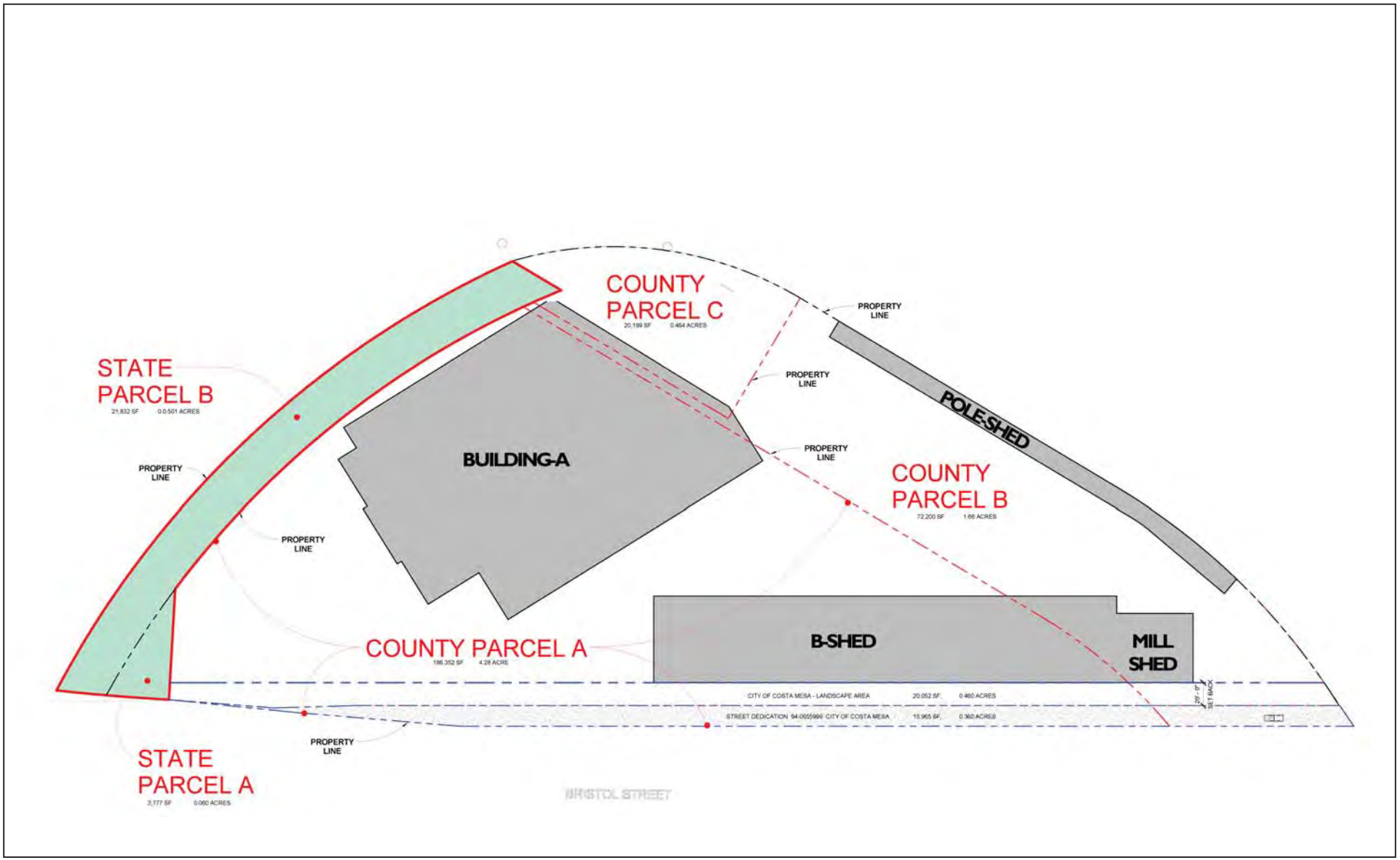

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FIGURE 2.2

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Ganahl Hardware Store and Lumber Yard

Land Ownership

SOURCE: ONYX Architects

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Table 2.A: Project Site Ownership and Area

Ownership	Parcel	Square Feet (sf)
Orange County Flood Control District	A	186,352
	B	72,200
	C	20,199
State of California Department of Transportation (Caltrans)	A	2,777
	B	21,832
Subtotal		303,360
Future City Street Dedication		(15,695)
TOTAL		**287,696**

Source: Onyx Architects (November 25, 2014).

2.2 PROJECT DETAILS

2.2.1 Project Background

Ganahl Lumber Company is the oldest lumberyard in California. In 1884, an Austrian immigrant named Christian Ganahl and his brother Frank moved to Los Angeles from St. Louis. Christian Ganahl purchased a lumber company and named it the C. Ganahl Lumber Company.

Eventually there were several lumber yards located throughout the Los Angeles area, including one C. Ganahl opened in Anaheim in 1904. In the 1930s, the inventory of the lumber business continued to change with the addition of hardware. In the late 1940s, there was a growing interest in millwork products so Ganahl opened a mill division.

Through the years, the company has acquired additional locations throughout the Counties of Orange, Los Angeles, and Riverside, making the company the nine-store business it is today. The Costa Mesa store was opened in 1998.

2.2.2 Project Purpose and Need

Ganahl Lumber is proposing to relocate its Costa Mesa facility due to uncertainty with its current lease agreement, size constraints, and energy and maintenance requirements of the current facility. Relocating the store would allow Ganahl Lumber to execute a lease that would allow them to do business adjacent to their existing Costa Mesa location for the next 63 years, and result in the construction of a larger store and storage areas that would support a greater inventory and product mix, be more energy efficient, and require less maintenance. Additionally, the new hardware store would provide an opportunity to expand the home design showroom space.

2.2.3 Project Characteristics

The Proposed Project includes the construction and operation of a new lumberyard and building materials retail store for the Ganahl Lumber Company. The existing Costa Mesa Ganahl Lumber store is located on an adjacent property to the east and would be closed once the new store is completed. The Proposed Project seeks to establish a variety of simple design details and materials, reflecting the values of Ganahl Lumber Company and the City of Costa Mesa. This would be accomplished by

providing durable and sustainable design, arranged in a way that would provide for a state-of-the-art building materials facility, while adhering to the City's General Plan intent.

Building A and Sheds. The new facility would include one main building and three sheds: Building A, B Shed, Mill Shed, and Pole Shed. Total gross square footage (gsf) and features for these structures are listed in Table 2.B. A Site Plan is included as Figure 2.3.

Table 2.B: Gross Square Footage

Structure	Gross Square Feet (gsf)
Building A: • Main Store Sales • Doors and Windows • Sales Offices/Counters • Mezzanine • Control Room • Will-Call Storage • (storage/operations offices)	65,263
B Shed	30,262
Mill Shed	3,991
Pole Shed	6,672[1]
Control Building (Security Shack)	134
TOTAL BUILDING A AND SHEDS	**106,332**

Source: Onyx Architects (November 25, 2014).

[1] Because it is not an enclosed building, the square footage of the pole shed is not included in the total square footage for purposes of calculating the allowable Floor Area Ratio (FAR) for the site as described in the following paragraph.

The total area of the project site is 287,696 sf (6.6 acres). In accordance with General Plan Policy LU-1E.1(a), the Proposed Project is subject to a maximum floor area ratio (FAR) of 0.35. Because the FAR for the Proposed Project would be 0.346, excluding the Pole Shed as noted above, the Proposed Project would comply with the City's FAR requirements.

The proposed use(s) of Building A and the sheds are described below.

- **Building A:** Building A would house two principal functions: retail sales and large volume distribution operations. This building would include a complete hardware store, a doors and windows showroom and sales department, hardwood and molding display areas, as well as sales and customer service areas. Delivery and receiving activity would be scheduled and conducted in the northeast office of the building. The structure would be 65,263 gsf in size and would also include a control room, mezzanine, rooftop parking, as well as structural support for a solar photovoltaic (PV) system overhead of the parking surface. Figures 2.4a through 2.4e, Building A Floor Plans, provide the proposed floor plans for the first floor, mezzanine, and roof parking deck of Building A. The rooftop parking would be accessed via a ramp located on the north side of the building. The sales area would feature large amounts of glass. As shown in Figure 2.5,

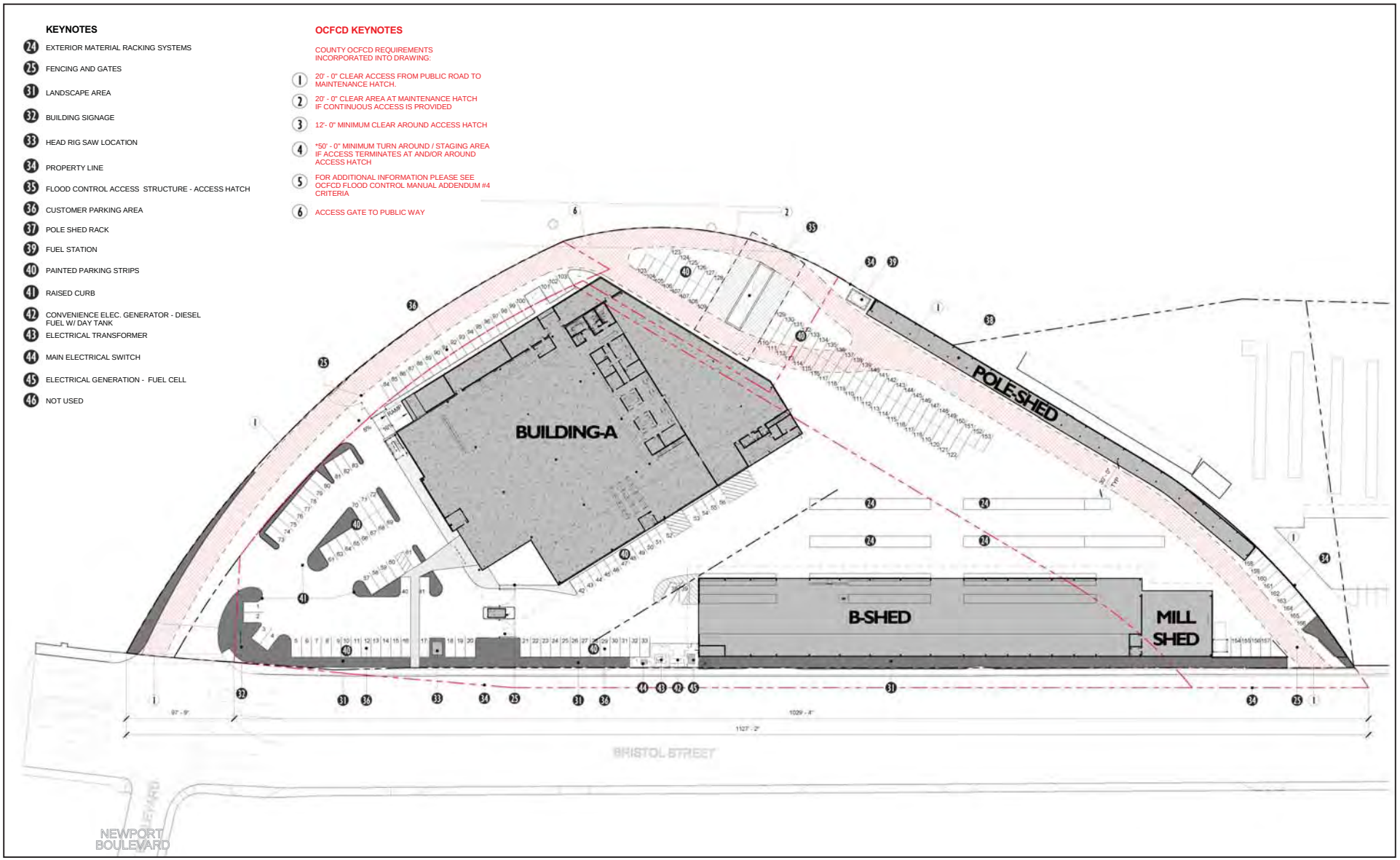

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FIGURE 2.3

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SOURCE: ONYX Architects

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Ganahl Hardware Store and Lumber Yard

Site Plan

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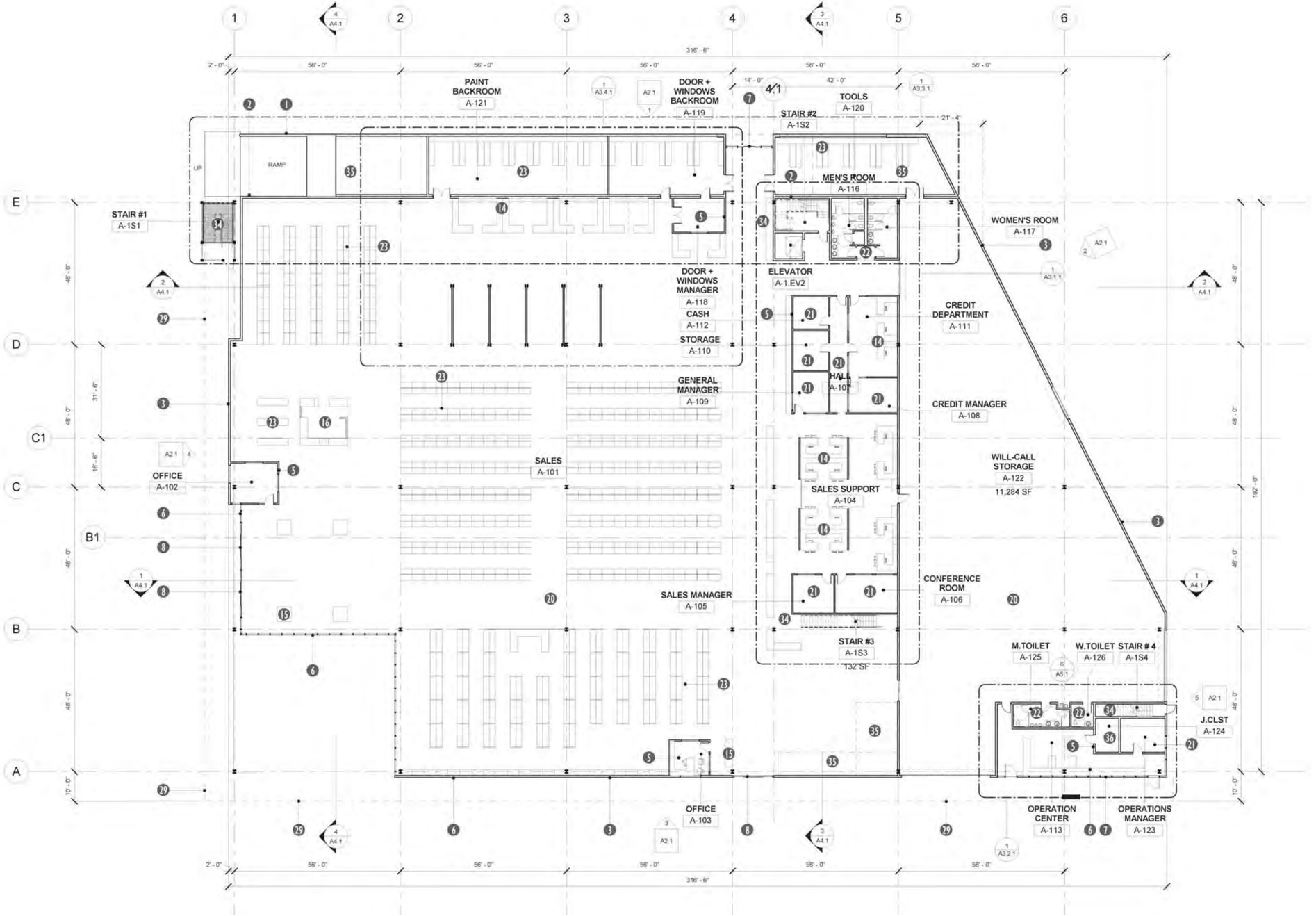

KEYNOTES

1. NEW RAMP TO PARKING DECK
2. (BUILDING JOINT, BETWEEN RAMP AND BUILDING STRUCTURE)
3. CMU WALL;COLORED AND BURNISHED WHERE EXPOSED; WP TREATMENT AT EXTERIOR FACES
4. HORIZONTAL WOOD SIDING OVER 6TUD WALL (NEEDS INDICATION)
5. INTERIOR PARTITIONS, GYPSUM BOARD OVER STUDS, PAINT
6. ALUMINUM (CLEAR FINISH) AND GLASS CURTAIN WALL SYSTEM WITH EXTERNAL STEEL REINFORCING
7. ALUMINUM (CLEAR FINISH) AND GLASS STOREFRONT SYSTEM
8. ALUMINUM (CLEAR FINISH) AND GLASS AUTOMATIC SLIDING DOORS
14. CASEWORK TYPE DESKS AND PARTITIONS
15. CASEWORK TYPE CUSTOMER COUNTERS
16. CASEWORK TYPE CUSTOMER COUNTERS WITH LEVERS AND SPECIAL SS ACCESSORIES
20. POLISHED CONCRETE FLOOR
21. CARPET TILES
22. TOILET ROOMS: GYPSUM BOARD CEILING AND WALLS WITH PATTERNED STAINLESS STEEL PANELS AT WET WALLS, SUSPENDED FIXTURES AND TOILET PARTITIONS, SS ACCESSORIES, SS TROUGH SINK, EPOXY FINISH FLOORS WITH ROLLED BASE
23. INTERIOR DISPLAY RACKS AND GONDOLAS
25. IRON FENCING AND GATES
29. CONCRETE PARKING DECK ABOVE WITH ELASTOMERIC WP COATING SYSTEM
34. NEW EMERGENCY EGRESS STAIR
35. POTENTIAL MAIN ELECTRICAL ROOM

ROOM SCHEDULE - LEVEL 1

NUMBER	ROOM NAME	NET AREA	BASE LENGTH
A-1.EV2	ELEVATOR	94 SF	38' - 6"
A-1S1	STAIR #1	211 SF	60' - 6"
A-1S2	STAIR #2	222 SF	61' - 6"
A-1S3	STAIR #3	132 SF	82' - 6"
A-1S4	STAIR # 4	116 SF	58' - 0"
A-101	SALES	35,899 SF	1210' - 0"
A-102	OFFICE	230 SF	61' - 0"
A-103	OFFICE	163 SF	51' - 0"
A-104	SALES SUPPORT	1,946 SF	180' - 6"
A-105	SALES MANAGER	188 SF	55' - 0"
A-106	CONFERENCE ROOM	285 SF	69' - 6"
A-107	HALL	253 SF	92' - 0"
A-108	CREDIT MANAGER	206 SF	58' - 0"
A-109	GENERAL MANAGER	176 SF	53' - 0"
A-110	STORAGE	174 SF	53' - 0"
A-111	CREDIT DEPARTMENT	466 SF	89' - 0"
A-112	CASH	140 SF	47' - 6"
A-113	OPERATION CENTER	778 SF	162' - 0"
A-116	MEN'S ROOM	214 SF	70' - 0"
A-117	WOMEN'S ROOM	214 SF	66' - 6"
A-118	DOOR + WINDOWS MANAGER	210 SF	59' - 0"
A-119	DOOR + WINDOWS BACKROOM	803 SF	119' - 0"
A-120	TOOLS	1,153 SF	156' - 0"
A-121	PAINT BACKROOM	1,245 SF	163' - 0"
A-122	WILL-CALL STORAGE	11,284 SF	521' - 0"
A-123	OPERATIONS MANAGER	188 SF	54' - 6"
A-124	J.CLST	102 SF	41' - 0"
A-125	M.TOILET	156 SF	56' - 0"
A-126	W.TOILET	68 SF	33' - 0"
		57,313 SF	3821' - 0"
Grand total		57,313 SF	3821' - 0"

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SOURCE: ONYX Architects

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FIGURE 2.4a

Ganahl Hardware Store and Lumber Yard

Building A Floor Plans - First Floor Plan

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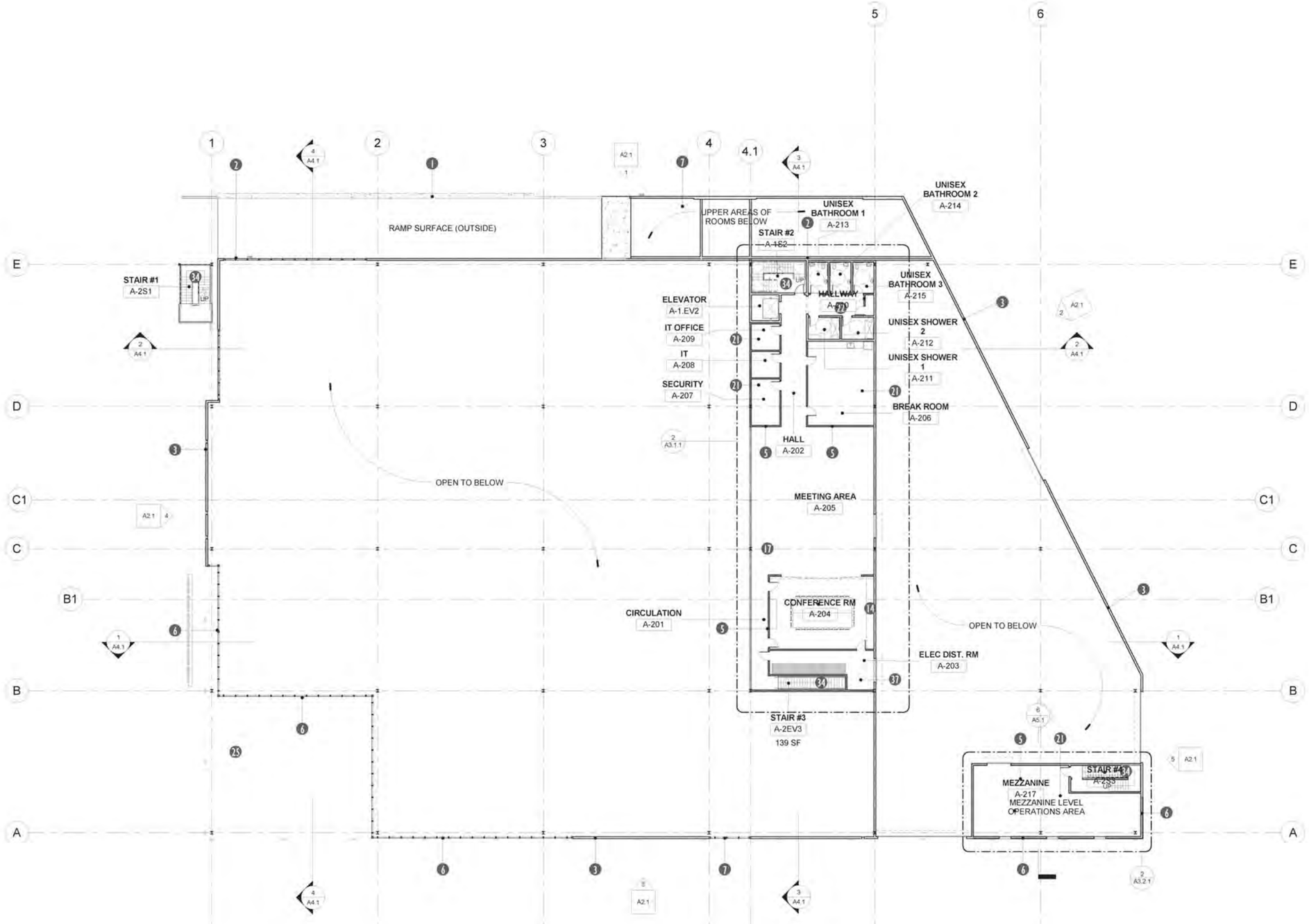

KEYNOTES

1. NEW RAMP TO PARKING DECK
2. BUILDING JOINT BETWEEN RAMP AND BUILDING STRUCTURE
3. CMU WALL/COLORED AND BURNISHED WHERE EXPOSED, WP TREATMENT AT EXTERIOR FACES
4. HORIZONTAL WOOD SIDING OVER STUD WALL (NEEDS INDICATION)
5. INTERIOR PARTITIONS, GYPSUM BOARD OVER STUDS; PAINT
6. ALUMINUM (CLEAR FINISH) AND GLASS CURTAIN WALL SYSTEM WITH EXTERNAL STEEL REINFORCING
7. ALUMINUM (CLEAR FINISH) AND GLASS STOREFRONT SYSTEM
14. CASEWORK TYPE DESKS AND PARTITIONS
16. CASEWORK TYPE CUSTOMER COUNTERS WITH LEVERS AND SPECIAL SS ACCESSORIES
17. CROSS-LAMINATED TIMBER MEZZANINE STRUCTURE WITH SUSPENDED LIGHTING, MECHANICAL, AND FIRE SUPPRESSION SYSTEMS UNDER EXPOSED DECK
21. CARPET TILES
22. TOILET ROOMS: GYPSUM BOARD CEILING AND WALLS WITH PATTERNED STAINLESS STEEL PANELS AT WET WALLS, SUSPENDED FIXTURES AND TOILET PARTITIONS. SS ACCESSORIES. SS TROUGH SINK. EPOXY FINISH FLOORS WITH ROLLED BASE.
25. IRON FENCING AND GATES
34. NEW EMERGENCY EGRESS STAIR
36. HVAC SPLIT SYSTEM
37. ELECTRICAL RM - MAIN ELECT. DISTRIBUTION PANELS
38. 8' X 6'6" ROLL UP ACCESS DOOR

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SOURCE: ONYX Architects

LSA

FIGURE 2.4b

Ganahl Hardware Store and Lumber Yard

Building A Floor Plans - Mezzanine Plan

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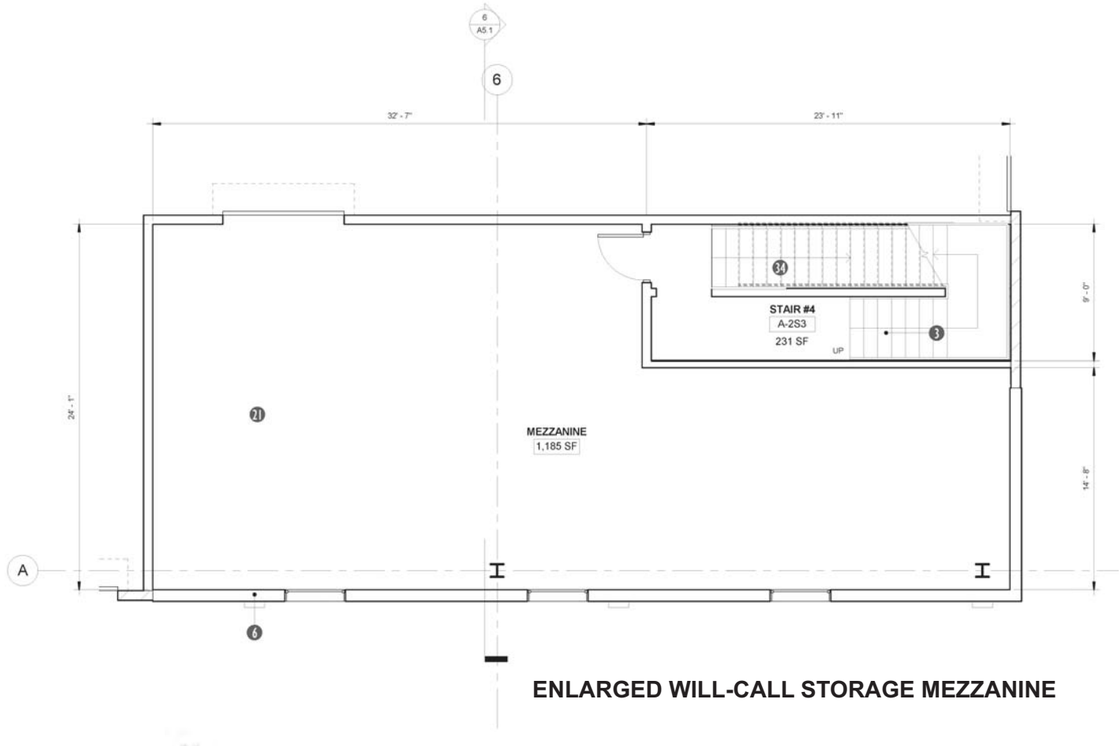
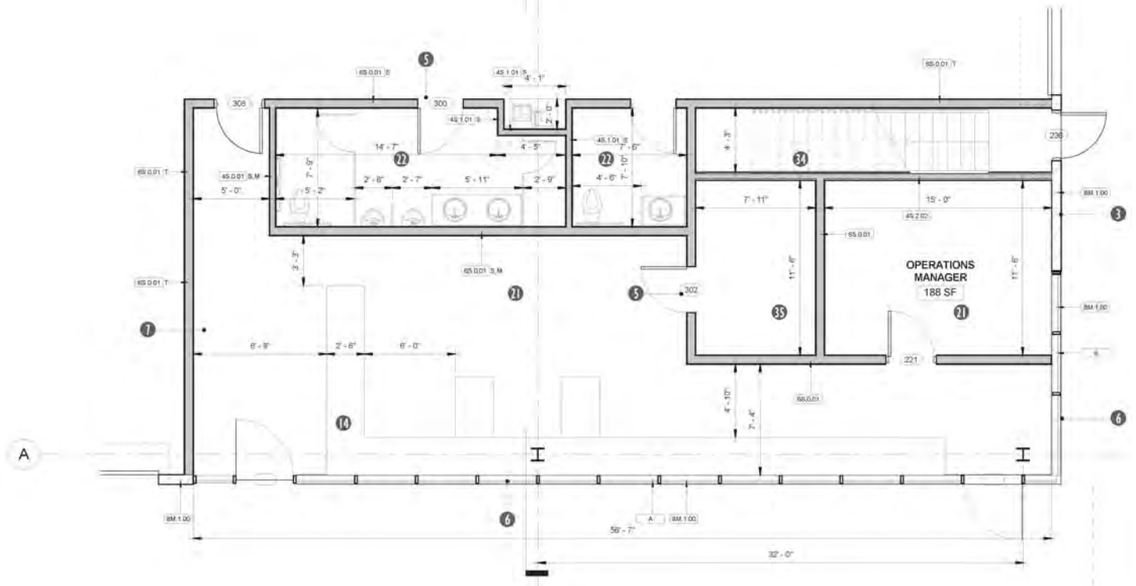


ENLARGED WILL-CALL STORAGE MEZZANINE



ENLARGED OPERATIONS FLOOR PLAN

KEYNOTES

3. CMU WALL/COLORED AND BURNISHED WHERE EXPOSED; WP TREATMENT AT EXTERIOR FACES
4. HORIZONTAL WOOD SIDING OVER STUD WALL (NEEDS INDICATION)
5. INTERIOR PARTITIONS, GYPSUM BOARD OVER STUDS, PAINT
6. ALUMINUM (CLEAR FINISH) AND GLASS CURTAIN WALL SYSTEM WITH EXTERNAL STEEL REINFORCING
7. ALUMINUM (CLEAR FINISH) AND GLASS STOREFRONT SYSTEM
14. CASEWORK TYPE DESKS AND PARTITIONS
20. POLISHED CONCRETE FLOOR
21. CARPET TILES
22. TOILET ROOMS: GYPSUM BOARD CEILING AND WALLS WITH PATTERNED STAINLESS STEEL PANELS AT WET WALLS. SUSPENDED FIXTURES AND TOILET PARTITIONS. SS ACCESSORIES. SS TROUGH SINK. EPOXY FINISH FLOORS WITH ROLLED BASE.
34. NEW EMERGENCY EGRESS STAIR
35. JANITOR CLST & STORAGE

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FEET

SOURCE: ONYX Architects

LSA

FIGURE 2.4c

Ganahl Hardware Store and Lumber Yard

Building A Floor Plans - Will-Call Storage Operations Plan

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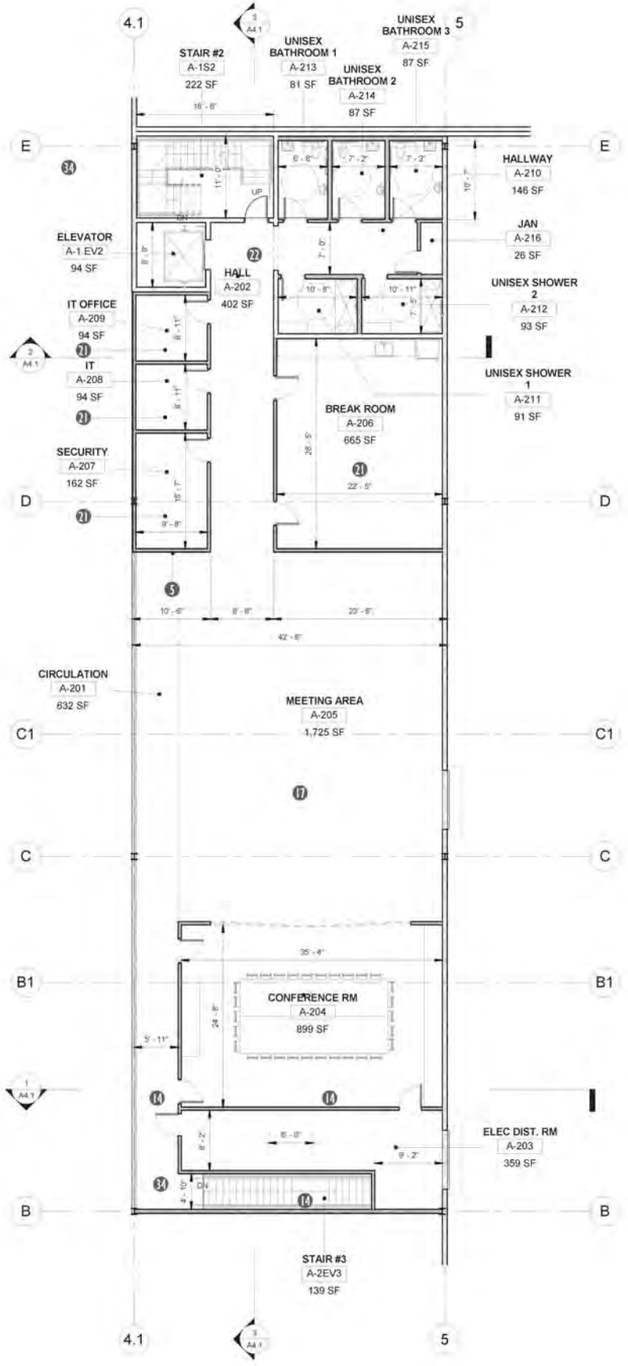
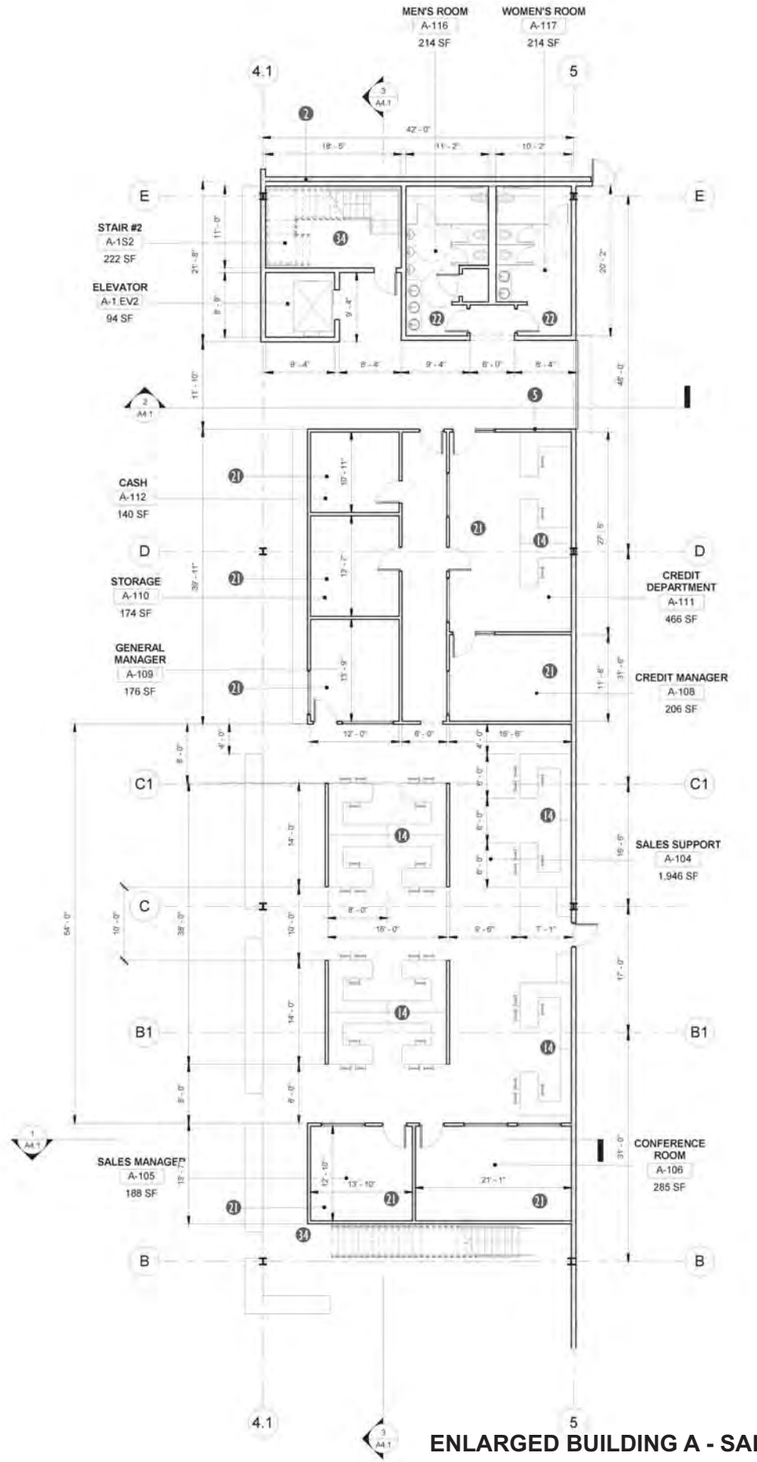


ENLARGED BUILDING A - MEZZANINE PLAN



ENLARGED BUILDING A - SALES FLOOR PLAN

N

KEYNOTES

2 BUILDING JOINT BETWEEN RAMP AND BUILDING STRUCTURE

4 HORIZONTAL WOOD SIDING OVER STUD WALL (NEEDS INDICATION)

5 INTERIOR PARTITIONS: GYPSUM BOARD OVER STUDS. PAINT

14 CASEWORK TYPE DESKS AND PARTITIONS

17 CROSS-LAMINATED TIMBER MEZZANINE STRUCTURE WITH SUSPENDED LIGHTING, MECHANICAL, AND FIRE SUPPRESSION SYSTEMS UNDER EXPOSED DECK

21 CARPET TILES

22 TOILET ROOMS: GYPSUM BOARD CEILING AND WALLS WITH PATTERNED STAINLESS STEEL PANELS AT WET WALLS. SUSPENDED FIXTURES AND TOILET PARTITIONS. SS ACCESSORIES. SS TROUGH SINK. EPOXY FINISH FLOORS WITH ROLLED BASE.

34 NEW EMERGENCY EGRESS STAIR

N

0 10 20
FEET

SOURCE: ONYX Architects

LSA

FIGURE 2.4d

Ganahl Hardware Store and Lumber Yard

Building A Floor Plans - Enlarged Sales + Mezzanine Plan

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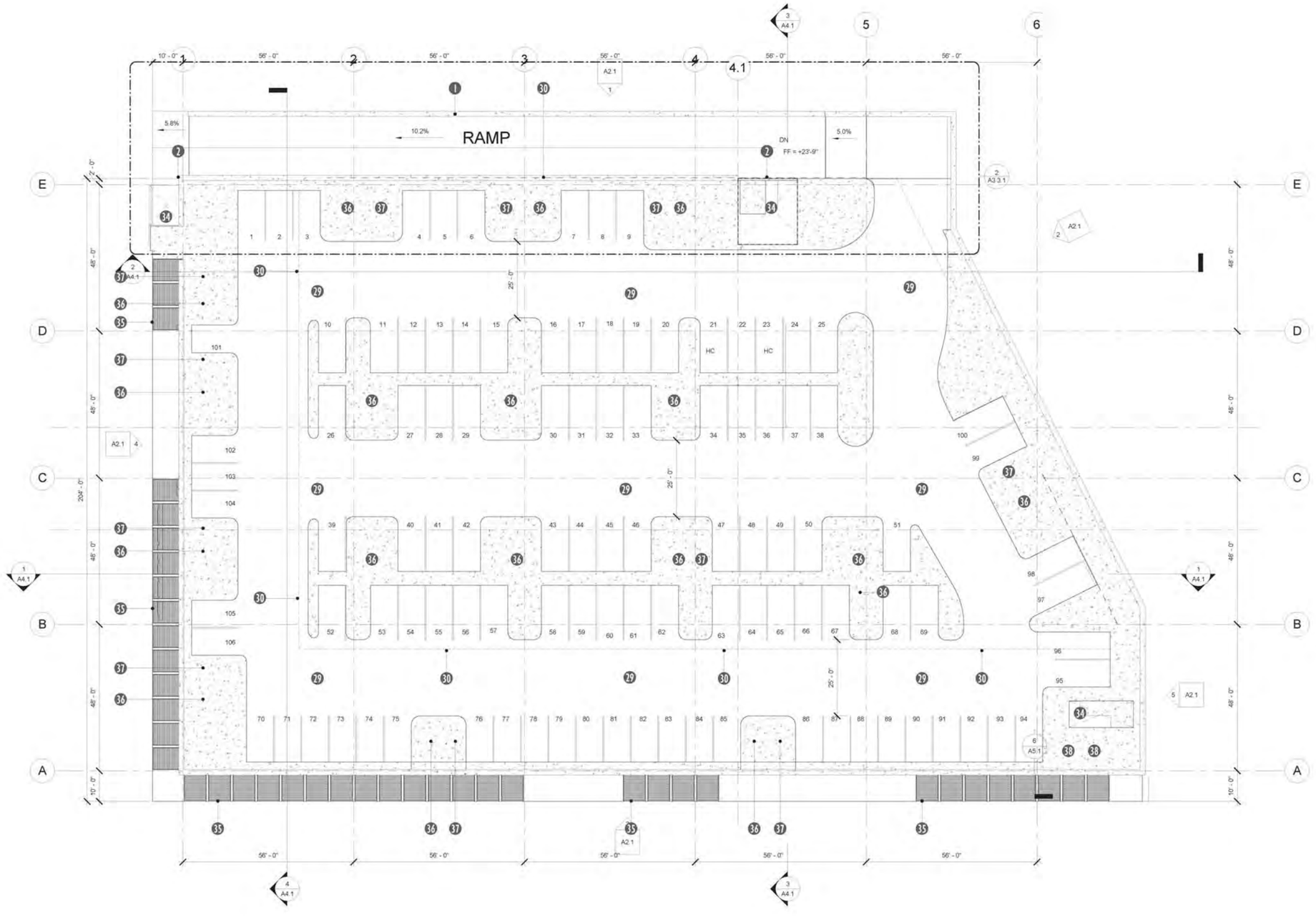

KEYNOTES

1. NEW RAMP TO PARKING DECK
2. BUILDING JOINT BETWEEN RAMP STRUCTURE AND BUILDING STRUCTURE
29. CONCRETE DECK WITH ELASTOMERIC WP COATING SYSTEM
30. METAL BUILDING STRUCTURE WITH PV SYSTEM ABOVE
34. NEW EMERGENCY EGRESS STAIR
35. ROOF SUN SHADE SYSTEM FOR GLAZING BELOW
36. NEW VENTILATION FAN UNIT
37. NEW HVAC PACKAGE UNIT
38. HVAC SPLIT SYSTEM
39. VERTICAL ACCESS WAY FROM SOLAR PANEL CONDUITS TO ACCESS ELECTRICAL RM ON MEZZANINE

N

0 32 64
FEET

SOURCE: ONYX Architects

LSA

FIGURE 2.4e

Ganahl Hardware Store and Lumber Yard

Building A Floor Plans - Roof Plan

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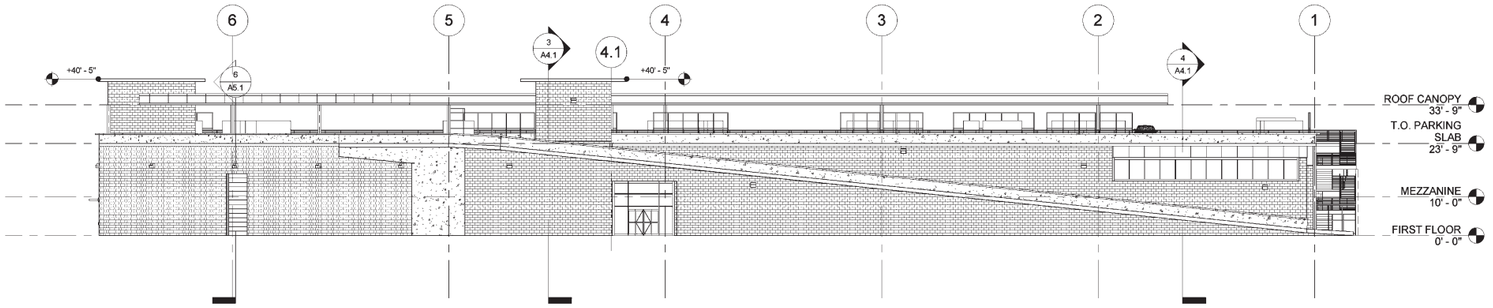
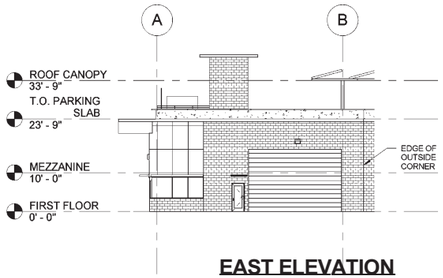
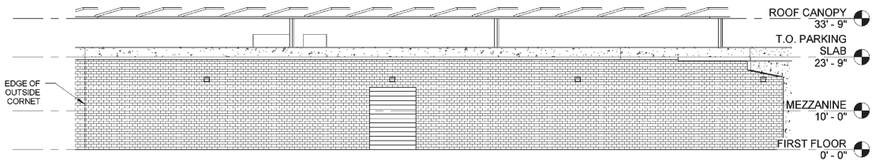


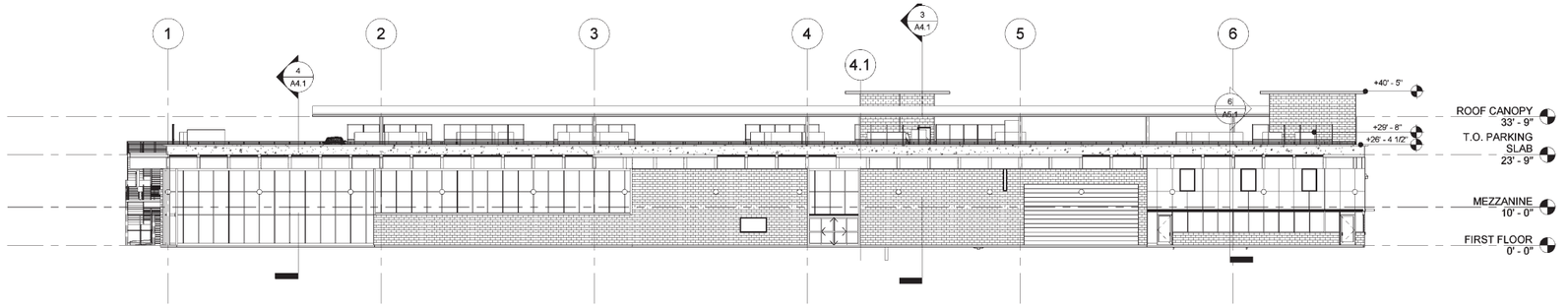
NORTH ELEVATION



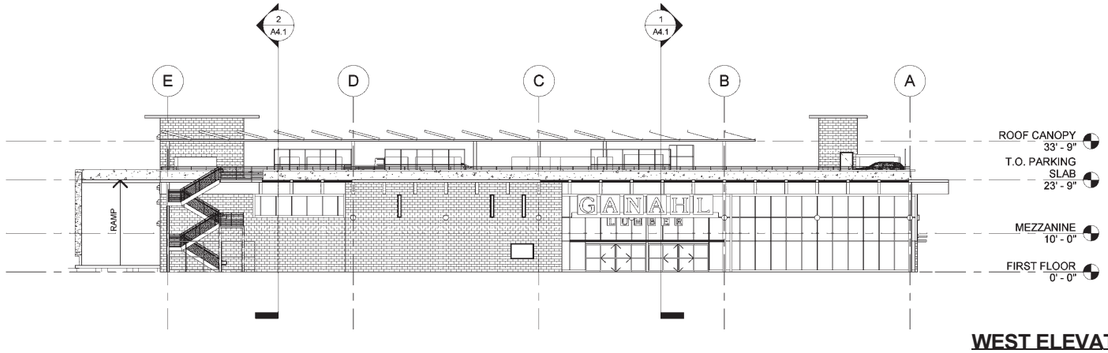
EAST ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

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FIGURE 2.5

Ganahl Hardware Store and Lumber Yard

Building A Elevations

SOURCE: ONYX Architects

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Building A Elevations, and Figure 2.6, Building A Cross Sections, Building A would be 23 feet, 9 inches in height, with the roof canopy and solar PV panels extending an additional 10 feet above the height of the building. As shown in Figure 2.5 and 2.6, the elevator and stairwell towers providing access to the roof top parking deck above Building A would be 40 feet, 5 inches in height. Three-dimensional renderings of the Proposed Project as viewed from the southeast corner of the project site along Bristol Street and from Newport Boulevard across Bristol Street are provided in Figure 2.7, 3D Perspectives.

Retail business hours would be 6:00 a.m. to 6:00 p.m., Monday through Friday; 7:00 a.m. to 6:00 p.m. on Saturdays; and 9:00 a.m. to 5:00 p.m. on Sundays. In addition, some staff would arrive a half hour to an hour prior to opening to prepare the store for customers. A night shift would be scheduled to work in Building A until 11:00 p.m. and may work longer as needed depending on work load. After-hours activities would include replenishment, cleaning, and order pulling for the next day.

The service and building materials stock areas (sheds) would be located at the back of the site. This area would be designed to be functional and attractive, yet would be screened from public view by a new fencing system. The fence is proposed to extend to a 16-foot height at the back portion of the site. The sheds are described below.

- **B Shed:** The 30,262 gsf B Shed would be used to store lumber and wood products and includes a small area for custom cutting and bundling. This shed would not be permanently staffed. Employees and customers would come and go as stored product is sold or replenished in the regular sales cycle. Products located in this building would include building materials, drywall, panels, and lumber. Figure 2.8, B Shed Floor Plans, provides the proposed floor plan for B Shed. As shown in Figure 2.9, B Shed Elevations, the B Shed would include a rooftop solar PV system and would be 34 feet, 1 inch in height.
- **Mill Shed:** The Mill Shed would encompass a 3,991 gsf area for lumber milling of wood products. The mill would typically have three to four employees working from 7:00 a.m. to 4:00 p.m., Monday through Friday. The mill operation consists of cutting and sizing wood products to meet customer needs. There would be no wood finishing or painting activities in this facility. The Mill Shed would include a sawdust collection system that would comply with South Coast Air Quality Management District (SCAQMD) Rule 1137, which requires woodworking facilities to completely vent their sawdust emissions via a pneumatic conveyance system to a baghouse system and ensure that there are no visible emissions existing from external ductwork and the baghouse system at any time, with the exception of the initial 15 minutes after startup and the final 15 minutes prior to shutdown.
- **Pole Shed:** The pole shed is not an enclosed building and is not included for FAR calculation purposes. The pole shed on the north perimeter of the project site would be used for outdoor storage of back stock of products in the yard as well as products designated for the B Shed. Those products consist of lumber, plywood, and other panel products. Outgoing loads for deliveries would also be stored in this shed. A diesel fueling station for use by Ganahl Lumber trucks and yard vehicles would be located at the west end of the pole shed. During operation of the Proposed Project, the diesel fueling station would be enclosed within integrated containment vessels, and would be required to be operated in compliance with all applicable State and federal regulations governing the handling of diesel fuels. In addition, the diesel fueling station would meet all best management practice (BMPs) and City code requirements, including a roof shed above the

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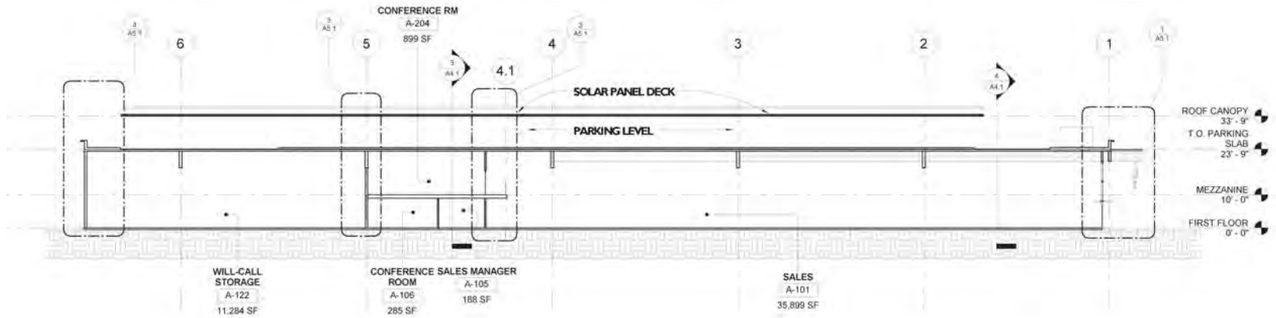
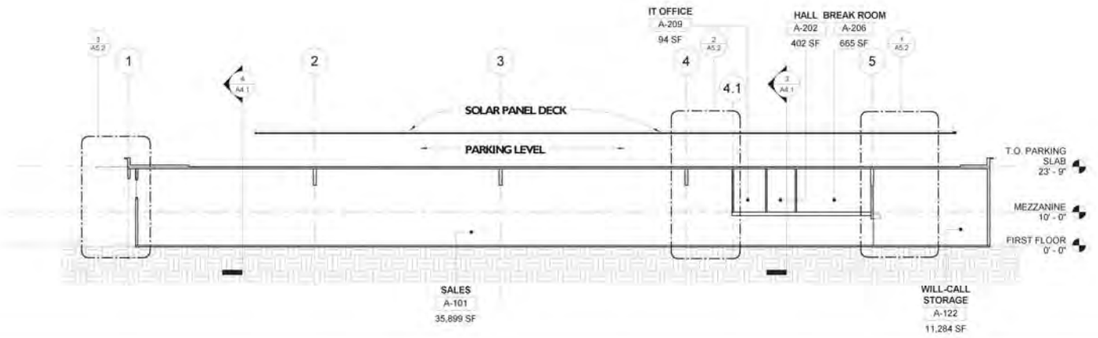
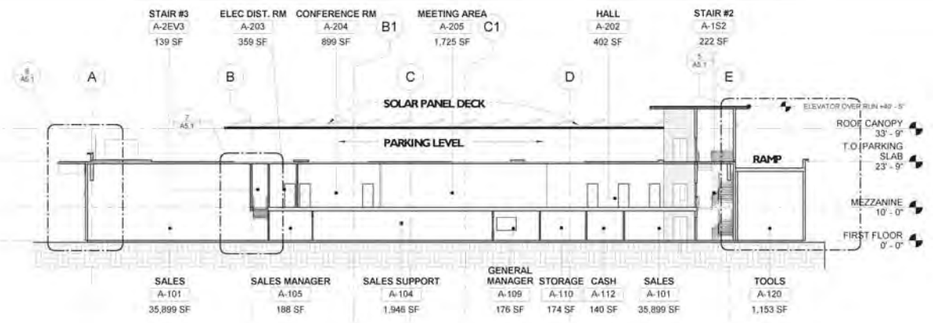


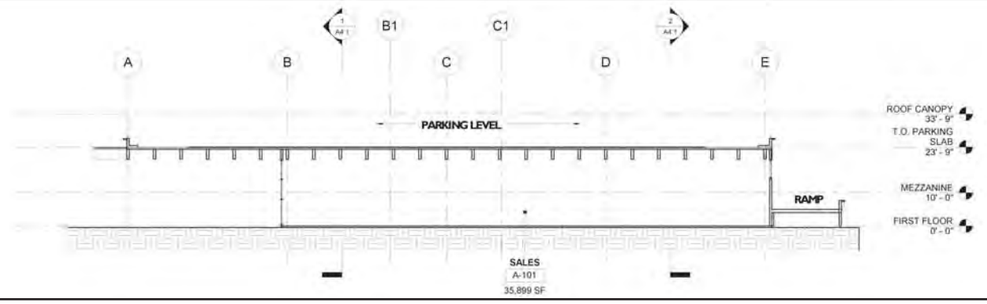
SECTION E/W 1 1/16" = 1'-0" **1**



SECTION E/W 2 1/16" = 1'-0" **2**



SECTION N/S 1 1/16" = 1'-0" **3**



NO SCALE

SOURCE: ONYX Architects

LSA

FIGURE 2.6

Ganahl Hardware Store and Lumber Yard

Building A Cross Sections

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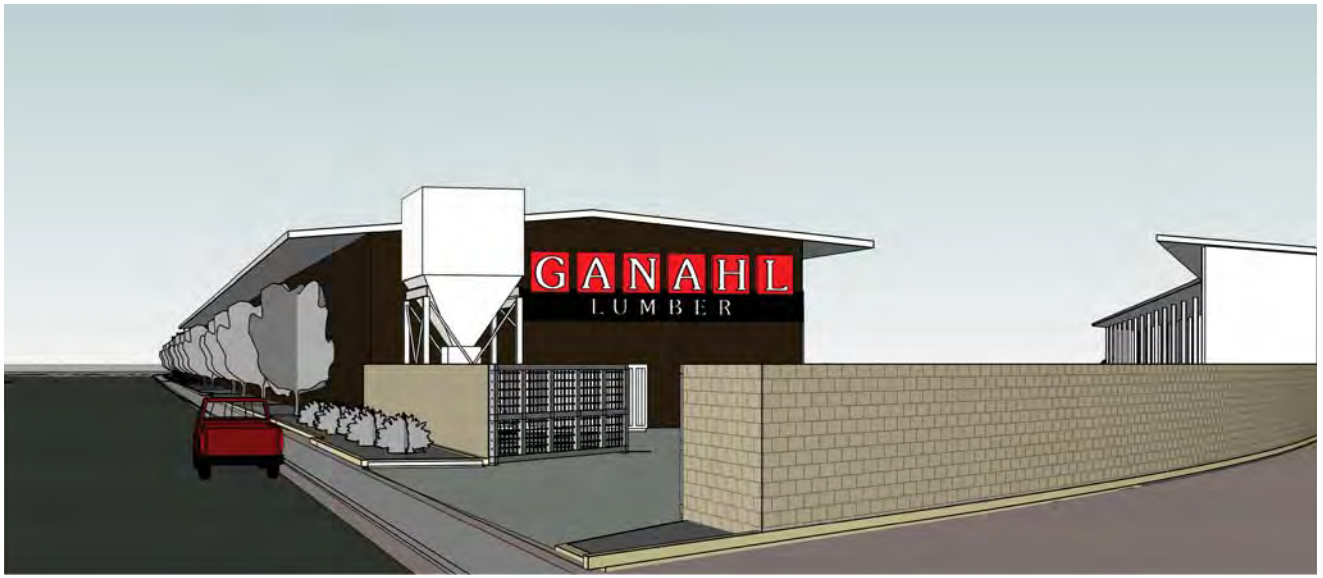

3D PERSPECTIVE SOUTHEAST CORNER FROM BRISTOL STREET

3D PERSPECTIVE FROM NEWPORT BLVD

LSA

FIGURE 2.7

Ganahl Hardware Store and Lumber Yard

3D Perspectives

SOURCE: ONYX Architects

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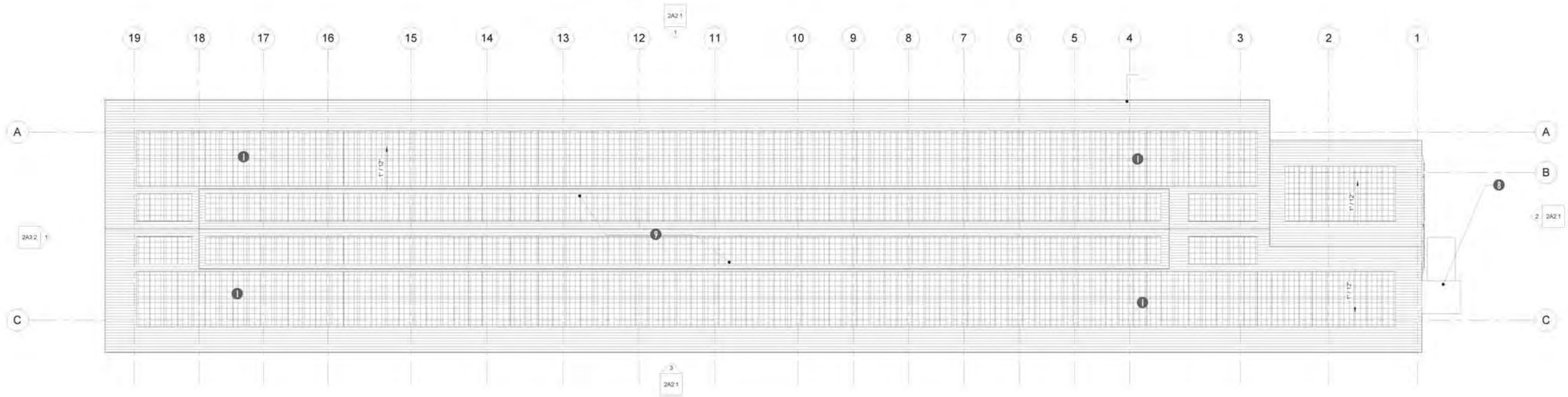
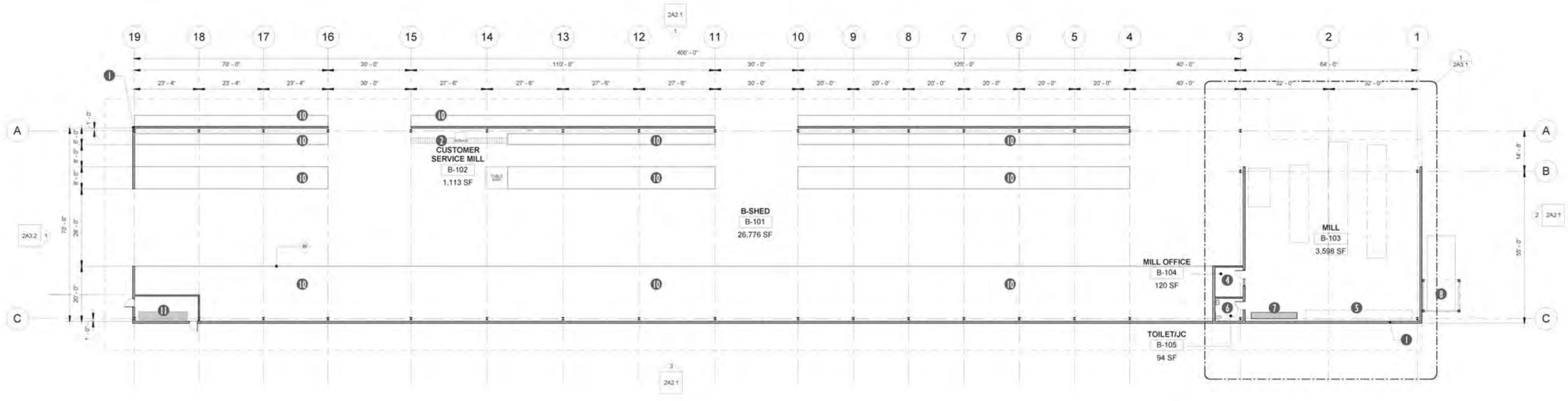


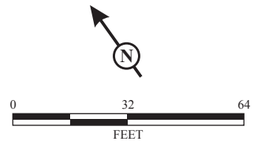
B-SHED-ROOF 2

1/16" = 1'-0"

KEYNOTES

1. PRE-MANUFACTURED BUILDING SYSTEM, COMPONENTS INCLUDE:
   - STRUCTURAL SYSTEM
   - PREFINISHED METAL SIDING WALL SYSTEM
   - PREFINISHED METAL ROOF SYSTEM
   - INTERIOR AND EXTERIOR LIGHTING
   - WINDOWS, DOORS, VENTILATION SYSTEM
   - CONCRETE FLOOR FINISH
2. CUSTOMER SERVICE MILL
3. MILL LINE
4. OFFICE
5. TOOL STORAGE RACK AND WORK BENCH
6. UNISEX TOILET ROOM
7. ELECTRICAL CONTROL PANELS
8. CYCLONE DUST COLLECTOR SYSTEM
9. CLEARSTORY LIGHT AND VENTILATION SYSTEM
10. RACKING & STORAGE SYSTEM
11. MAIN ELECT. PANEL BOARD





SOURCE: ONYX Architects

LSA

FIGURE 2.8

Ganahl Hardware Store and Lumber Yard

B Shed Floor Plans

I:\CCM1401\G\B Shed Floor Plans (1/20/15)

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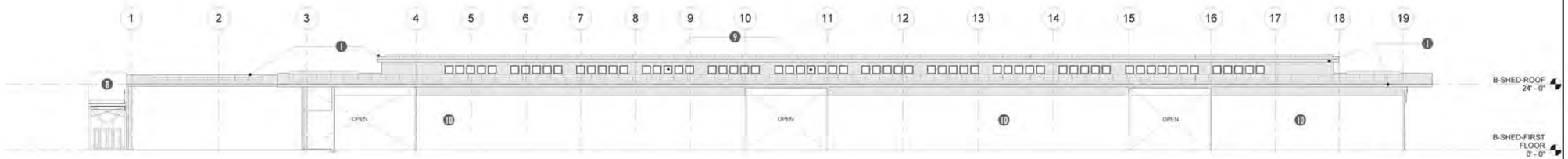
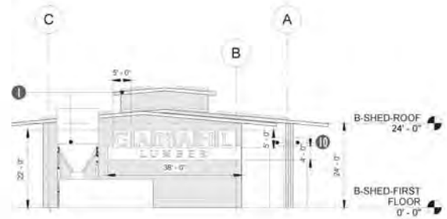
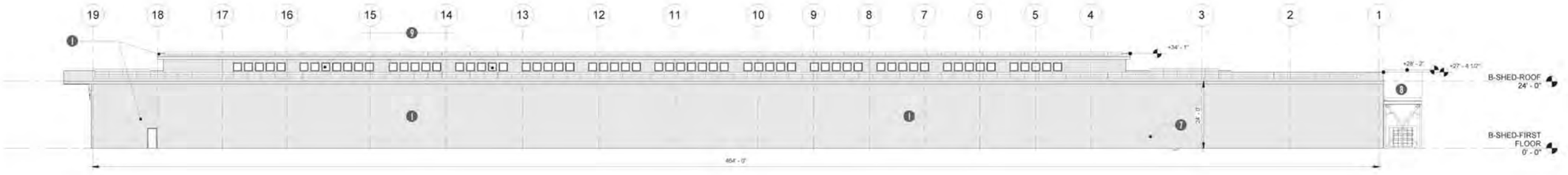


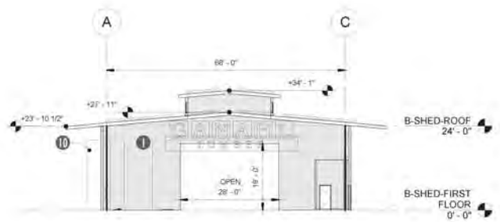
B-SHED - NORTH **1**
1/16" = 1'-0"



B-SHED - EAST **2**
1/16" = 1'-0"



B-SHED - SOUTH **3**
1/16" = 1'-0"



KEYNOTES

1. PRE-MANUFACTURED BUILDING SYSTEM; COMPONENTS INCLUDE
   STRUCTURAL SYSTEM
   PREFINISHED METAL SIDING WALL SYSTEM
   PREFINISHED METAL ROOF SYSTEM
   INTERIOR AND EXTERIOR LIGHTING
   WINDOWS, DOORS, VENTILATION SYSTEM
   CONCRETE FLOOR FINISH
2. CUSTOMER SERVICE MILL
3. MILL LINE
4. OFFICE
5. TOOL STORAGE RACK AND WORK BENCH
6. UNISEX TOILET ROOM
7. ELECTRICAL CONTROL PANELS
8. CYCLONE DUST COLLECTOR SYSTEM
9. CLEARSTORY LIGHT AND VENTILATION SYSTEM
10. RACKING & STORAGE SYSTEM
11. MAIN ELECT. PANEL BOARD

NO SCALE

SOURCE: ONYX Architects

LSA

FIGURE 2.9

Ganahl Hardware Store and Lumber Yard

B Shed Elevations

I:\CCM1401\G\B Shed Elevations (1/20/15)

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fueling area. The existing Ganahl Lumber facility has a similar fueling station on the existing site located directly above the Delhi Channel. The fuel area would be built to comply with all cover and containment requirements. A trash bin enclosure used for the disposal of trash created by the facility would also be located on the west end. This shed would be 6,672 gsf in size.

- **Yard:** The facility would support seven to ten trucks for deliveries to customers. The on-site fleet would consist of 10 wheel, bobtail, and box trucks. Customer deliveries per day would typically number from 20 to 40 stops compared to 20 to 35 at the existing facility. Receiving will typically handle 20 to 30 incoming vendor trucks supplying material for replenishment of inventory. All receiving would take place during regular business hours. All Ganahl Lumber trucks and vendor deliveries coming into the facility would enter at a non-customer approach located at the east end of the project site. All Ganahl Lumber and vendor trucks would exit at the proposed signalized exit at the west end of the project site. Approximately 15 to 20 material handling vehicles would be used to stack, load, and unload product at the yard. Storage in the yard would consist of lumber and building materials located in covered racking and storage sheds as described above. The racking would vary to match the products stored. Pallet racks, cantilever racks, and custom racks for storing doors and windows would be incorporated in the layout of the yard. Customer traffic into the yard area would enter and exit through a controlled and guarded point located in front of Building A. This gate guard building would be staffed during all business hours and would have closed and secured gates when the business is closed to customers.
- **Employees:** The employee count at the new facility is expected to start at 90 to 100 people compared to the current facility count of 80 people. The proposed facility would employ approximately 120 employees at full capacity, dependent on economic conditions and the construction market. Typically 80 percent of the employees would work in Building A. The balance of employees would move around the site to fill customer orders and prepare orders for delivery.

2.2.4 Operation and Maintenance

The Proposed Project would operate under a 21-year lease term with six additional 7-year extensions from the Orange County Flood Control District (OCFCD). An encroachment permit would be required for the Caltrans property.

Ongoing Orange County Flood Control District Maintenance. As described above in Section 2.1, the Santa Ana Delhi Channel runs underground beneath the central and eastern portion of the project site, with the majority of the project site owned in fee by the OCFCD. The OCFCD provides regular inspections of the Santa Ana Delhi Channel and when needed, may conduct maintenance activities that involve, but are not limited to: regular inspections of the triple reinforced concrete box, removing debris or potential sediment buildup, repair and/or reinforcement of the channel (including the walls and soffit), and graffiti clean-up. Most of these activities would occur below the ground elevation in the channel underneath a portion of the project site. However, in some instances the activities may require use of a maintenance access hatch located to the rear of the of the project site. As shown on Figure 2.3, the site plan for the Proposed Project includes a 20-foot wide access road that would allow the OCFCD to access the maintenance access hatch. Upon entering into a Lease Agreement with the OCFCD, the Ganahl Lumber Company will be responsible for site maintenance through the duration of the lease term and the OCFCD will continue to maintain the underground channel.

Parking and Access. The Proposed Project would provide a total of 286 parking spaces: 108 on the roof of Building A and the remainder at grade (including handicap accessible stalls and walkways) available to employees and customers. Building A would include a covered roof deck for additional parking with a solar PV system. The covered roof deck would provide natural ventilation and shade the building to provide cost savings in energy use. A ramp on the north side of Building A would provide access to the roof deck. The roof deck area square footage is as shown below in Table 2.C, Roof Area Square Footage. A focused *Traffic Impact Study for Ganahl Lumber Costa Mesa Relocation Project* was completed for the Proposed Project by Linscott, Law, & Greenspan, Engineers (LLG 2014) based on an evaluation of the trip generation studies conducted at the existing Ganahl Lumber facility located at 1275 Bristol Street. As indicated in the traffic impact study, traffic counts were collected at the two existing driveways that provide access to the existing site on Tuesday, February 11, 2014, Wednesday, February 12, 2014 and Thursday, February 13, 2014. From the results of the trip generation studies, LLG calculated the existing parking accumulation of the Ganahl Lumber facility by comparing inbound vehicles vs. outbound vehicles at the two driveways that now serve the site.

Table 2.C: Roof Area Square Footage

Building A Roof Area:	Gross Square Feet (gsf)
Roof Deck Slab Area	58,033
Covered Roof Deck (solar panels)	35,585

Source: Onyx Architects (November 25, 2014).

Access to the site would be provided by two driveways on Bristol Street. To minimize turning conflicts on the existing two-way left-turn median lane on Bristol Street along the Project frontage, primary access is proposed via a full access signalized driveway along Bristol Street to be constructed opposite northbound Newport Boulevard (Driveway No. 1), with secondary access to be provided via a proposed unsignalized driveway on Bristol Street that is located at the eastern edge of the project site (Driveway No. 2). The locations of the Proposed Project's two driveways are shown in Figure 2.3. Driveway No. 1, which requires utilization of a Caltrans easement, would provide access to customer, employee, and contractor-related traffic, while Driveway No. 2 is proposed as a "truck-only entry" driveway (no exit) for truck-related traffic; trucks would exit the site at Driveway No. 1.

Improvements to be completed as a part of the Proposed Project at the Bristol Street/Northbound Newport Boulevard intersection, subject to the approval of the City of Costa Mesa and access across the Caltrans easement, include:

- Modification of the existing median on Bristol Street to provide a dedicated eastbound left- turn lane;
- Restriping the northbound approach to provide one left-turn lane, an option left-turn/through lane, and a separate right-turn lane;

- Construction of the new site driveway to provide a southbound (outbound) left-turn lane and southbound (outbound) right-turn lane and one departure (inbound) lane; and
- Modification of the existing traffic signal, to include split phase operation on Northbound Newport Boulevard/Driveway No. 1.

Landscaping. Approximately 15,748 sf of landscaping would be included as part of the Proposed Project. The front landscape setback along Bristol Street is proposed at a depth of 10 feet. Landscape features would be used in an integrated way to reflect the history of the site and help with site stormwater management. The project site is located across the street from an open tributary to the Newport Back Bay. The Santa Ana Delhi Channel runs beneath the site and serves as a physical connection to the bay within the Newport Bay Watershed. The project is located approximately one mile from the Upper Newport Bay Nature Preserve and approximately five miles from the Pacific Ocean. Therefore, the landscape concept for the site is Tidal. Coastal native trees and shrubs would be used and tidal patterns would be reflected in the paving, planting, and built forms.

The Proposed Project includes the use of regenerative design principles and aesthetics as part of the landscape plan. The plan includes the use of signatures trees, the Ganahl Lumber rickshaw sculpture, wood fencing, nature pattern pavement (permeable), planting areas, bioswale, roof planters, and green walls (vines on cables). The Proposed Project would be designed to capture rain water from the roof system and store it in five aboveground cisterns for later use in landscape areas (based on 12 inches of average rainfall per year). The cisterns would be 18 feet in diameter and 10.75 feet high and could store approximately 100,000 gallons of rainwater. It is anticipated that the landscaping would require up to 112,000 gallons per year. Rainwater at grade would be treated and eventually filtered into the ground, replenishing the water table. Native and drought tolerant plants that thrive in extended periods of drought with seasonal floods would be used.

Sustainability Features. The Proposed Project would use passive energy and resource saving features through its rainwater runoff system, heating, ventilation and air conditioning (HVAC) system, power consumption, permeable paving, and other design features on site. As appropriate, these systems would be featured in an aesthetically pleasing way, appropriate to the functional design. These built-in features include:

- Use of sun shading and natural day-lighting to diminish heat gain and decrease the need for artificial lighting during daylight hours such as:
    - Building overhangs provided over glazing areas and over portions of the building as a whole. These overhangs are either solid to shade the masonry walls or are louvered over glazing areas to harness the natural light while blocking solar gain and glare from the direct light.
    - Light shelves provided at the glass curtain walls in order to bring indirect light into the interior of the building.
    - Roof shading covering provides a mounting surface for solar PV panels and blocks solar radiation from hitting the main roof plane (the upper part of the main building envelope); prevailing winds continually blow away accumulated heat that collects under this shade, lowering the temperature of the air immediately above the main roof. The solar PV system of

the roofs of Building A and the B Shed would produce approximately 40 kilowatts of electricity. The Proposed Project would also include four 5 kilowatt fuel cell modules (20 kilowatt maximum).

- The enclosed building would employ natural ventilation to maintain a comfortable temperature, while minimizing the use of air conditioning. The building envelope incorporates a controlled wall louver system to catch prevailing winds in lieu of air conditioning during much of the day and during most days of the year. This ventilation would be mechanically augmented, as needed.
- All passive systems would be integrated into the facility's active control systems:
    - As more natural lighting comes into the store, artificial lighting would be dimmed accordingly.
    - As the various solar shading and ventilation systems maintain a temperate environment in the store, air conditioning and heating systems would be kept at idle, and not used until necessary (a fraction of a typical commercial facility).

These passive conservation elements would exceed what is currently prescribed in the State's Title 24 Energy Code.

2.2.5 Project Timing

The project site is under contract with the Orange County Flood Control District (property owner) for a limited duration; therefore, there is interest to proceed with project implementation closely following the approval of land use entitlements. The Proposed Project would start construction in summer 2015 and would take approximately 12 months to complete. Project construction activities would be limited to the hours and days listed in the City of Costa Mesa Noise Ordinance (7:00 a.m. to 7:00 p.m. on Mondays through Fridays, 9:00 a.m. to 6:00 p.m. on Saturdays, excluding Sundays and federal holidays). The existing store would remain open during construction. Once construction of the new Ganahl Lumber store is complete, the existing store would close permanently; there are no plans to reuse or continue to operate the existing site once the new store is operational.

2.2.6 Regulatory Requirements, Permits, and Approvals

The City of Costa Mesa is the primary approval authority and the California Environmental Quality Act (CEQA) Lead Agency for the Proposed Project. Because the Proposed Project would be located on property owned by the OCFCD and Caltrans, the OCFCD and Caltrans would serve as a Responsible Agencies. Additional subsequent approvals and other permits may be required from other local, regional, state, and federal agencies. Permits required for the Proposed Project include, but are not limited to, the following:

- City of Costa Mesa
    - Discretionary Permits to be approved by Planning Commission (Conditional Use Permit, Development Review, Variances, Planned Signing Program)
    - Grading Permit

  - Building Permit
  - Fire Department Permit
- Orange County Flood Control District (OCFCD)
  - Lease Agreement
- California Department of Transportation (Caltrans)
  - Encroachment Permit
- South Coast Air Quality Management District (SCAQMD)
  - Permit for sawdust collection system
- State Water Resources Control Board (SWRCB)
  - National Pollution Discharge Elimination System (NPDES) General Construction Stormwater Permit or Waiver (for construction)

Required Discretionary Approvals by the City. The following discretionary approvals are required:

- Conditional Use Permit for Hardware Store and Outdoor Lumber Yard;
- Development Review for new construction of 65,263 sf store and associated outdoor material storage structures and mill shed;
- Variances from building height from 34 to 41 feet for the solar roof canopy, elevator overrun, B-shed, and roof-deck parking level;
- Variance from front setback requirement (20 feet required, 10 feet proposed); and
- Planned Signing Program for freestanding signs up to 25 feet in height (12 feet allowed).

Other Ministerial City Actions. Ministerial permits/approvals (e.g., grading permits and building permits) would be issued by the City to allow site preparation, curb cuts, and connections to the utility infrastructure.

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3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION. On the basis of this initial evaluation:

1. I find that the proposed project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** would be prepared. ☐

2. I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

3. I find the proposed project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required. ☐

4. I find that the proposed project **may have a "potentially significant impact" or "potentially significant unless mitigated impact"** on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed. ☐

5. I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐

for Mel Lee — 1/21/15

Project Planner — Date

Claire L. Flynn — January 19, 2015

Assistant Development Services Director — Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced, as discussed below).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c) (3) (D). In this case, a brief discussion should identity the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

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3.1 AESTHETICS

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

3.1.1 Environmental Setting

The City of Costa Mesa (City) encompasses 16 square miles, and is located in central Orange County. The City is bordered by the cities of Santa Ana, Irvine, Newport Beach, Huntington Beach, and Fountain Valley. The City is a commercial and industrial center serving areas beyond Orange County. Costa Mesa offers 28 parks, a municipal golf course, 20 public schools, and three libraries (City of Costa Mesa 2014c). The Proposed Project is located within the City of Costa Mesa on the south side of the juncture of State Route-55 (SR-55) and State Route-73 (SR-73). The Santa Ana Country Club is located approximately 600 feet southwest of the project site. The existing Ganahl Lumber yard is located directly to the southeast of the project site. The Proposed Project is surrounded by general commercial, transportation, and residential land uses (Google Maps 2014). Access to the project site is currently provided by one driveway along Bristol Street. The project site currently contains a concrete wall, an asphalt paved entrance area, landscaping along the Bristol Street frontage, and an underground concrete flood channel (Santa Ana Delhi Channel) located beneath the project site.

3.1.2 Impact Analysis

(a) **No Impact.** The project site is surrounded primarily by roadways and commercial and residential development. The Proposed Project would be built directly south of the SR-55 and SR-73 junction, and would not obstruct long distance views from any public viewing areas. The City's General Plan does not designate any aesthetic or visual resources on or within the vicinity of the project site (City of Costa Mesa 2000). Variances are required for the overall building height to account for the roof canopy (34 feet), elevator overrun (approximately 40 feet), B Shed, and roofdeck parking. The maximum building height allowed in this commercial zone is 2 stories/30 feet.

Therefore, no impacts to scenic vistas would occur.

Mitigation Measures: No mitigation would be required.

(b) **No Impact.** The California Department of Transportation's (Caltrans) Landscape Architecture Program administers the Scenic Highway Program, contained in Streets and Highways Code Sections 260–263. State Highways are classified as either Officially Listed or Eligible. SR-55 and SR-73, which are located adjacent to the project site, are not identified as eligible or State-designated Scenic Highways (Caltrans 2014). Therefore, the Proposed Project does not have the potential to damage resources within a State-designated scenic highway. In addition, there are no

existing aesthetic or visual resources located on the project site or in the surrounding vicinity of the project site that have been designated in the City's General Plan (City of Costa Mesa 2000). Therefore, no impacts related to scenic resources would occur.

Mitigation Measures: No mitigation would be required.

(c) **Less Than Significant Impact.** The Proposed Project would be located within a primarily commercial area adjacent to SR-55 and SR-73 that includes the existing Ganahl Lumber Store. The project site is an empty lot designated for general commercial land use (City of Costa Mesa 2004). The Proposed Project is designed to be consistent with the architecture of the existing commercial buildings along Bristol Street and its buildings would be similar in size and scale to other buildings in the vicinity of the project, including the buildings on the existing Ganahl Lumber Store adjacent to the project site. Landscaping for the Proposed Project is designed to be visually pleasing and would reflect the project site's coastal location. Refer to Figures 2.4 and Figure 2.5 for elevations of Building A and architectural renderings of the Proposed Project, respectively. The Proposed Project would not create shade/shadow effects on the neighboring land uses because no adjacent land uses are located in close enough proximity to the Proposed Project to experience shade and shadow impacts from the structures associated with the Proposed Project. Therefore, the Proposed Project would not degrade the existing character or quality of the site and its surroundings. No impact would occur.

Mitigation Measures: No mitigation would be required.

(d) **Less than Significant Impact.** The Proposed Project would include light fixtures for parking lots, pedestrian pathways, building entries, and landscaping. These light fixtures would provide increased visibility and highlight elements of buildings and trees. Light fixtures at the edge of the project site would be shielded and directed downward to avoid spillover effects on surrounding properties. Impacts from lighting would be less than significant. The reflection of sunlight is the primary potential producer of glare from glass and metallic surfaces. The Proposed Project would have the potential to produce glare from glass and metallic materials used on its buildings and from the proposed solar photovoltaic (PV) system. The reflection of light is an optical phenomenon governed by the law of reflection. This law states that the direction of incoming light (incident ray) and the direction of the outgoing light reflected (reflected ray) make the same angle with respect to the surface normal, thus the angle of incidence equals the angle of reflection. The law of reflection shows how light responds when it contacts a truly spectral surface like a mirror. The sales area of Building A would feature glass on its south and west facades to allow for a visual connection of the materials in the inside of the store and the materials on the outside. There is a potential for glare from sunlight reflecting off the glass surfaces. However, glare from glass surfaces of Building A would be partially shielded by other structures on the site (B Shed) and trees planted as part of the landscaping plan. Building overhangs that are louvered over glazing areas would be used to harness the natural light while blocking solar gain and glare from direct sunlight. Furthermore, the height (single story) and orientation of Building A would minimize the amount of glare that could potentially result from sunlight reflecting from glass surfaces.

A solar PV system would be built on the roofs of Building A and the B Shed. The solar panel deck is proposed at height of 33 feet 9 inches from grade. A solar panel differs from a truly spectral surface in that it has microscopically irregular surface designed to trap the incident rays of sunlight with the intention of generating additional photon collisions and energy production. Any incident radiation, if not absorbed or transmitted, would be reflected. With the current advancements in PV technology, a typical untreated silicon solar cell absorbs two-thirds of the sunlight reaching the panel's surface, meaning only one-third of the sunlight reaching the surface of the panel would be reflected. Recent improvements in PV technology have led to even greater light absorption efficiency through the use of nanoengineered anti-reflective materials applied directly to solar cells that allow the cells to absorb light from virtually the entire solar spectrum. The intent of solar technology is to increase the efficiency by absorbing as much light as possible which further reduces reflection and glare. Most solar glass sheets (the glass layer that covers the PV panels) are typically tempered glass that is treated with an anti-reflective or diffusion coating that further diffuses (scatters) the intensity of glare produced. This type of diffused glare loses intensity as the distance from the reflection source increases. As such, the proposed PV system is not expected to generate substantial glare. Impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

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3.2 AGRICULTURE AND FOREST RESOURCES **Would the project:**		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
(b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
(c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
(d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
(e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Impact Analysis

(a) **No Impact.** The Proposed Project is not located within any farmland uses (City of Costa Mesa 2004). The project area is not identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation 2010). No impact would occur.

Mitigation Measures: No mitigation would be required.

(b) **No Impact.** The project site is not zoned for agricultural use or is it subject to a Williamson Act contract (City of Costa Mesa 2000; Department of Conservation 2004). No impact would occur.

Mitigation Measures: No mitigation would be required.

(c) **No Impact.** The project site is not zoned for forest land, timberland, or timberland production (City of Costa Mesa 2000). No impact would occur.

Mitigation Measures: No mitigation would be required.

(d) **No Impact.** The project site is located in a developed area with commercial land uses. There are no forest land uses in the vicinity of the project site. No impact would occur.

Mitigation Measures: No mitigation would be required.

(e) **No Impact.** The project site and the surrounding properties are not currently used for agriculture or considered forest land. No impact would occur.

Mitigation Measures: No mitigation would be required.

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3.3 AIR QUALITY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
(d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
(e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Introduction

An air quality and global climate change impact analysis report (Appendix A) was completed for the Proposed Project by Kunzman Associates, Inc. (Kunzman 2014a). The findings of this report are summarized in the following sections.

3.3.2 Environmental Setting

The project site is located within the South Coast Air Basin (SCAB), and is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB has been designated by the California Air Resources Board (ARB) as a nonattainment area for ozone (O_3), particulate matter of 10 microns or less in diameter (PM_{10}), and particulate matter of 2.5 microns or less in diameter ($PM_{2.5}$). Currently, the SCAB is in attainment with the ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and sulfates and is unclassified for visibility-reducing particles and hydrogen sulfide (Kunzman 2014a).

3.3.3 Impact Analysis

(a) **No Impact.** An Air Quality Management Plan (AQMP) describes air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. California Environmental Quality Act (CEQA) requires that certain projects be analyzed for consistency with the AQMP.

A project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

Because of California's nonattainment status for O_3, $PM_{2.5}$, and PM_{10}, if project-generated emissions of the O_3 precursor pollutants (i.e., reactive organic gases [ROG] and nitrogen oxides NO_X), $PM_{2.5}$, or PM_{10} would exceed the SCAQMD's significance thresholds, then the project would be considered to conflict with the AQMP. However, short term construction impacts and long term operation impacts were found to be below thresholds of significance. Therefore, the Proposed Project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

(2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Consistency with the AQMP assumptions is determined by performing an analysis of the Proposed Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the Proposed Project are based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCP&G) consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on the Southern California Association of Governments (SCAG). Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For the Proposed Project, the City of Costa Mesa General Plan defines the assumptions that are represented in the AQMP.

The project site is zoned "C1 Local Business" and has a land use designation of "General Commercial" in the City of Costa Mesa Zoning Map and General Plan Land Use Map, respectively. Based on the City of Costa Mesa Industrial Development Standards, the project site could be developed with up to 193,700 square feet (sf) of "mini-warehouse" floor area. Therefore, the Proposed Project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion. In addition, the Proposed Project would exceed Title 24 requirements and the Mandatory Measures outlined in the California Green Building Standards Code (Cal Green Code) intended to improve air quality.

Based on the above, the Proposed Project would not result in an inconsistency with the SCAQMD AQMP. No impact would occur.

Mitigation Measures: No mitigation would be required.

(b) **Less Than Significant Impact.** The Proposed Project's air quality impacts are attributable to construction and operation activities that have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Air pollutant emissions for both the construction and operational phases of the Proposed Project were estimated using the CalEEMod program (Version 2013.2.2) (Kunzman 2014a).

Construction Impacts. Emissions associated with construction would include the following: emissions of fugitive dust from surface disturbance activities, emissions of combustion pollutants from heavy construction equipment, emissions of combustion pollutants from worker vehicles,

and emissions of combustion pollutants from heavy-duty vehicles transporting construction materials and equipment to the site. The following emissions could result from construction activities associated with the Proposed Project:

Construction Emissions. There would be emissions from soil disturbance (fugitive dust), architectural coating application, and equipment exhaust during construction of the Proposed Project.

Fugitive Dust. Blowing dust, combined with engine emissions, produces airborne matter referred to in air quality studies as PM_{10}, $PM_{2.5}$, or fugitive dust. Fugitive dust emissions are generally associated with land clearing, exposure, and cut-and-fill operations. Once construction activities are complete, no further fugitive dust emissions occur. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending upon prevailing wind conditions. Fugitive dust would also be generated as construction equipment or trucks travel on unpaved areas of the construction site. Compliance with SCAQMD Rules 402 and 403 would ensure that fugitive dust (PM_{10} and $PM_{2.5}$) generation would be less than significant.

Architectural Coatings. Architectural coatings contain volatile organic compounds (VOCs) that are similar to ROGs and are part of the O_3 precursors.

Odors. Heavy-duty equipment in the project area during construction would emit odors. However, the construction activity would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the Proposed Project.

SCAQMD Rule 402 regarding nuisances states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property." The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the Proposed Project.

Naturally Occurring Asbestos. The Proposed Project is located in Orange County, which is not among the counties that are found to have serpentine and ultramafic rock in their soils. In addition, no serpentine or ultramafic rock has been found in the project vicinity in the past 10 years. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small and less than significant.

Equipment Exhaust and Related Construction Activities. Construction of would include the following tasks: grading, building, and paving. While both the site preparation and grading phases involve heavy-duty diesel-powered equipment and both activities generate large amounts of fugitive dust, the grading phase typically generates greater overall emissions due to the larger equipment needed for earthmoving.

To evaluate potential impacts related to construction activities, specific criteria are used. The criteria include daily emissions thresholds, compliance with State and national air quality standards, and conformity with the existing State Implementation Plan (SIP) or existing air quality attainment plans. Specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in the SCAQMD *CEQA Air Quality Handbook*.

Thresholds for Construction Emissions. The following daily thresholds for construction emissions have been established by the SCAQMD and are used in the analysis of air quality impacts for the Proposed Project:

- 75 pounds per day (lbs/day) of ROG
- 100 lbs/day of NO_X
- 550 lbs/day of carbon monoxide (CO)
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of sulfur oxide (SO_X)

Projects in the SCAB with construction-related emissions that exceed any of the emission thresholds above are considered potentially significant by the SCAQMD.

Table 3.3.A shows estimated construction-related pollutant emissions associated with the Proposed Project.

As shown in Table 3.3.A, none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from construction of the Proposed Project.

Operational Impacts

The ongoing operation of the Proposed Project would result in a long-term increase in air quality emissions. This increase would be mainly due to emissions from the project generated vehicle trips and through operational emissions from the ongoing use of the Proposed Project.

The Proposed Project would result in net increases in both stationary- and mobile-source emissions. The stationary-source emissions would come from many sources, including the use of consumer products, landscape equipment, general energy consumption, and solid waste. Mobile sources include emissions from vehicle trips and associated miles traveled generated by the Proposed Project.

The worst-case summer or winter volatile organic compounds (VOC), nitrogen oxides (NO_X), CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions created from the Proposed Project's long-term operations have been calculated and are summarized below in Table 3.3.B.

Table 3.3.A: Construction Related Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Grading						
On-Site	3.87	41.10	26.75	0.03	4.83	3.48
Off-Site	0.06	0.08	1.00	0.00	0.17	0.05
Total	**3.93**	**41.18**	**27.76**	**0.03**	**5.00**	**3.53**
Building Construction						
On-Site	3.87	31.25	18.93	0.03	2.23	2.10
Off-Site	0.89	5.28	11.74	0.02	1.49	0.46
Total	**4.75**	**36.53**	**30.67**	**0.05**	**3.72**	**2.56**
Paving						
On-Site	2.79	25.18	14.98	0.02	1.41	1.30
Off-Site	0.06	0.07	0.91	0.00	0.17	0.05
Total	**2.84**	**25.25**	**15.88**	**0.02**	**1.58**	**1.35**
Architectural Coating						
On-Site	18.20	2.57	1.90	0.00	0.22	0.22
Off-Site	0.08	0.10	1.21	0.00	0.23	0.06
Total	**18.28**	**2.67**	**3.11**	**0.01**	**0.45**	**0.28**
Total of overlapping phases	**26**	**64**	**50**	**0**	**6**	**4**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No

Source: Kunzman (2014a).
CO = carbon monoxide
NO_X = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide
SCAQMD = South Coast Air Quality Management District

Table 3.3.B: Operational Criteria Pollutant Regional Air Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Area Sources	5.56	0.00	0.01	0.00	0.00	0.00
Energy Usage	0.00	0.04	0.04	0.00	0.00	0.00
Mobile Sources	6.81	11.52	56.68	0.12	8.67	2.41
Total Emissions	**12**	**12**	**57**	**0**	**9**	**2**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Source: Kunzman (2014a).
CO = carbon monoxide
NO_X = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide
SCAQMD = South Coast Air Quality Management District

Projects in the SCAB with operations-related emissions that exceed any of the emission thresholds are considered potentially significant by the SCAQMD. Because none of the modeled emissions associated with the Proposed Project's ongoing operations activities would exceed the

SCAQMD regional thresholds of significance, the Proposed Project would result in less than significant regional air quality impacts during operations.

CO Hot-Spot Analysis. There is a direct relationship between traffic/circulation congestion and CO impacts since exhaust fumes from vehicular traffic are the primary source of CO, a localized gas that dissipates very quickly under normal meteorological conditions. Therefore, CO concentrations decrease substantially as the distance from the source (intersection) increases. The highest CO concentrations are typically found in areas directly adjacent to congested roadway intersections. These areas of vehicle congestion have historically had the potential to create pockets of elevated levels of CO that are called "hot spots." However, with the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the project vicinity have steadily declined. (State of California Air Resources Board [ARB]).

Micro-scale air quality impacts have traditionally been analyzed in environmental documents for which the region was a nonattainment area for CO. However, the SCAQMD has demonstrated in the CO attainment re-designation request to the Environmental Protection Agency (EPA) that there are no "hot spots" anywhere in Southern California, even at intersections with much higher volumes, much worst congestion, and much higher background CO levels than anywhere in the vicinity of the project site. If the worst-case intersections in the SCAB have no "hot spot" potential, any local impacts near the project site would be well below thresholds with an even larger margin of safety. Therefore, no project-specific CO hot-spot analysis was conducted.

Construction and operation of the Proposed Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(c) **Less Than Significant Impact.** As noted earlier, the project site is in an area considered a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$. As described in the response to question 3.3 (b) of this Initial Study, neither short-term construction of the Proposed Project nor long-term operation of the Proposed Project would exceed significance thresholds for ozone, PM_{10}, and $PM_{2.5}$. Because the Proposed Project is not considered to result in a significant impact, the Proposed Project is not considered to result in a cumulatively considerable net increase of ozone, PM_{10}, and $PM_{2.5}$ emissions. Impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(d) **Less Than Significant Impact.** For air quality analysis purposes, the nearest sensitive receptors to the project site are the apartments located across Bristol Street from the existing Ganahl Lumber facility, southeast of the project site, at a distance of approximately 313 feet from the project boundary. Table 3.3.C shows the on-site phases and the localized significance threshold (LST) emissions thresholds.

Table 3.3.C Local Construction Emissions at the Nearest Receptor

Phase	On-Site Pollutant Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Grading	41.10	26.75	4.83	3.48
Building Construction	31.25	18.93	2.23	2.10
Paving	25.18	14.98	1.41	1.30
Architectural Coating	2.57	1.90	0.22	0.22
SCAQMD Threshold for 50 meters (164 feet)[1]	**128**	**1,089**	**21**	**7**
Exceeds Threshold?	No	No	No	No

Source: Kunzman (2014a).

[1] The estimated distance from the project site to the nearest sensitive receptor (apartments) located southeast of the project site is 313 feet (95 meters). As the distance is less than 100 meters, the 50 meter thresholds were used.

CO = carbon monoxide
NO_X = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide
SCAQMD = South Coast Air Quality Management District

The data provided in Table 3.3.C shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. During construction, contractors would be required to implement measures to reduce or eliminate emissions by following SCAQMD standard construction practices. During operation, the proposed Mill Shed would include a SCAQMD compliant sawdust collection system that would reduce air quality impacts to nearby sensitive receptors. Therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(e) **Less Than Significant Impact.**

Construction Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement and diesel exhaust emissions. The objectionable odors that may be produced during the construction process are short term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Due to the short term nature and limited amounts of odor producing materials being utilized, a less than significant impact related to odors would occur during construction of the Proposed Project.

Operational Impacts

Potential sources that may emit odors during the ongoing operations of the Proposed Project would include odor emissions from diesel truck emissions and trash storage areas. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402, no significant impact related to odors would occur during the ongoing operations of the Proposed Project.

Mitigation Measures: No mitigation would be required.

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3.4 BIOLOGICAL RESOURCES

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

3.4.1 Introduction

A biological technical report (see Appendix B) was prepared for the Proposed Project by ECORP Consulting Inc. (ECORP 2014a). The purpose of the assessment was to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and to determine whether project implementation would impact sensitive biological resources, as required under California Environmental Quality Act (CEQA) (ECORP 2014a). A biological reconnaissance survey was performed by ECORP biologists on May 23, 2014. Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature search using the California Department of Fish and Wildlife's (CDFW) Natural Diversity Database (CNDDB) and United States Fish and Wildlife Service (USFWS) species lists to determine the special-status species that have been documented in the project vicinity. Using this information and observations in the field, a list of special-status plant and animal species that may have the potential to occur within the project site was generated. A follow-up visit was conducted on December 15, 2014, to confirm site conditions, including the presence of potential areas subject to United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act and CDFW jurisdiction pursuant to Section 1602 of the State of California Fish and Game Code. The Biological Technical Report is summarized below.

3.4.2 Environmental Setting

Vegetation Communities. The project site is currently composed of disturbed or developed areas and ornamentals plant species. Plant species observed within these land cover types include ornamental

trees and herbaceous plants and non-native or invasive weedy species. Ornamental vegetation includes eucalyptus (*Eucalyptus* sp.), California fan palm (*Washingtonia filifera),* crimson bottlebrush (*Callistemon citrinus*), and Asiatic lily (*Lilium* sp.). Non-native and invasive weedy species include bromes (*Bromus* sp.), black mustard (*Brassica nigra*), and yellow star thistle (*Centaurea solstitialis*). Of the 27 plant species observed on the project site a total of 7 species are native and the other 20 are exotic species (ECORP 2014a).

Special-Status Plants. The literature search documented 37 special-status plant species (five federally and/or state listed) in the project vicinity. The follow-up visit conducted by ECORP biologists on December 15, 2014, confirmed site conditions, including lack of habitat for the special-status plant species. Given the site conditions (historical and present), the general lack of vegetation/cover, soil conditions, special-status plant species that had been previously recorded in nearby locations, such as southern tarplant (*Centromadia parryi* ssp. *australis*), all were determined to be presumed absent. The age of the CNDDB records were also considered when determining potential. A complete list of the 37 special-status plant species, with details regarding blooming periods, habitat requirements, and potential for occurrence designations can be found in the Biological Technical Report (ECORP 2014a).

Wildlife. The project site provides habitat for species adapted to high levels of disturbance and urban environments. Thirteen wildlife species were observed during the reconnaissance visit. Common species observed included western fence lizard (*Sceloporus occidentalis*), house finch (*Haemorhous mexicanus*), and Bottae's pocket gopher (*Thomomys bottae*). Two red-tailed hawks (*Buteo jamaicensis*) had been observed during a previous site visit on February 13, 2014 (ECORP 2014a). A complete list of wildlife species observed or detected during the survey in and adjacent to the project site can be found in the Biological Technical Report. Other common species expected to occur in and adjacent to the project site include side-blotched lizard (*Uta stansburiana*), common raven (*Corvus corax*), Anna's hummingbird (*Calypte anna*), and California ground squirrel (*Spermophilus beecheyi*) (ECORP 2014a).

Special-Status Wildlife. The literature search documented 33 special-status wildlife species (16 federally and/or state-listed species) in the vicinity of the project site. Three of these wildlife species were determined to have a low to moderate potential to occur on the project site; the American badger (*Taxidea taxus*), the Western yellow bat (*Lasiurus xanthinus*), and the white-tailed kite (*Elanus leucurus*). The remaining 30 species were presumed to be absent from the project site. None of the special-status wildlife species with a potential to occur in the area were observed during the reconnaissance survey (ECORP 2014a). A complete list of the 33 special-status wildlife species, with details regarding habitat requirements and potential for occurrence designations can be found in the Biological Technical Report.

Soils. Soil types on the project site were determined using the Natural Resources Conservation Service (NRCS) Web Soil Survey. Soils within the project site consist entirely of Myford sandy loam, 2 to 9 percent slopes (ECORP 2014a). The soils of the Myford Series are deep, moderately well drained soils formed on terraces. Principal vegetation associated with this soil are annual grasses and forbs with some scattered low-growing brush.

Potential Waters of the United States. As described above, the project site was examined to identify potential USACE jurisdiction pursuant to Section 404 of the Clean Water Act (CWA) and CDFW

jurisdiction pursuant to Section 1602 of the State of California Fish and Game Code. The survey of the project site identified two features that are potentially jurisdictional to the USACE, CDFW, and the Santa Ana Regional Water Quality Control Board (SARWQCB): the Santa Ana Delhi Channel and a small drainage ditch located in the northern portion of the project site that parallels the transition ramp from northbound SR-55 to southbound SR-73 (ECORP 2014a).

Wildlife Movement Corridors. The project site is heavily disturbed and contains very little cover that would only allow for limited movement of smaller resident populations of wildlife. Furthermore, the entire project site is cut off from any large blocks of habitat that would allow the movement of wildlife species. Although the project site is within one mile of the Santa Ana Country Club and within two miles of the Upper Newport Bay Nature Preserve, there is no connecting corridor between the project site and these areas (ECORP 2014a).

3.4.3 Impact Analysis

(a) **Less than Significant Impact.** The project site is located in an urbanized area characterized by land that is developed or highly disturbed and that support non-native vegetation communities and ornamental landscaping. None of the 37 special-status plant species or 33 special-status wildlife species identified in the literature search were observed on the project site (ECORP 2014a). As such, the project site does not contain any habitat that would support a candidate, sensitive, or special-status plant species. While no special-status wildlife or plant species were observed during the field surveys, there is a potential for the project area to support nesting birds in small patches of vegetation and structures adjacent to the project site. Nesting birds are protected under both the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (Sections 3503, 3503.5, 3513, and 3800) and cannot be subjected to take (as defined in California Fish and Game Code) during the bird breeding season, which typically runs from February 15 through August 31. If construction of the Proposed Project occurs during the bird breeding season, ground-disturbing construction activities could indirectly affect native and nongame birds and their nests through increased noise disturbances. Impacts would be less than significant with the implementation of Condition of Approval B-1.

Condition of Approval:

B-1: **Compliance with Migratory Bird Treaty Act.** If construction activities occur within the bird breeding season (February 15 through August 31), the Applicant (or its contractor) shall retain a qualified biologist to conduct a pre-construction nesting bird survey no more than 30 days prior to the start of construction. The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by Project activities such as noise, human activity, and dust, etc. If active bird nests are found within 100 feet of the designated construction area on the project site, the qualified biologist will establish an appropriate buffer zone around the active nestsProject activities shall be avoided within the buffer zone until the nest is deemed no longer active by the biologist.

Prior to commencement of grading activities and issuance of any building permits, the City of Costa Mesa Director of Community Development, or designee, shall verify that all project grading and construction plans include specific documentation regarding the Migratory Bird Treaty Act (MBTA) requirements for a nesting bird

survey should construction or grading occur from February 15 through August 31, that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.

Mitigation Measures: No mitigation would be required.

(b) **No Impact.** The project site is located in an urban area that does not contain native habitat. Sensitive habitats include those vegetation communities which are considered rare within the region, are considered sensitive by the State of California, and are listed as sensitive under local conservation plans. The project site supports no riparian habitat or other sensitive natural community (ECORP 2014a). No impact would occur.

Mitigation Measures: No mitigation would be required.

(c) **Less than Significant Impact.** The project site is located in an urban area that does not contain wetlands or native habitat; however, two potential jurisdictional water features (drainages) are present on the project site: the Santa Ana Delhi Channel and a small drainage ditch located in the northern portion of the project site (ECORP 2014a). The Proposed Project would not remove, fill, or otherwise interrupt the Santa Ana Delhi Channel, as it would be intentionally avoided per project plans; no impact would occur. However, the drainage ditch may be impacted by construction of the Proposed Project. Mitigation Measure B-2 would require the Applicant to verify USACE jurisdiction over the drainage ditch and, if necessary, obtain a CWA Section 404 permit from the USACE and implement any associated permit conditions. Mitigation Measure B-2 would also require the Applicant to submit a Streambed Alteration Notification to CDFW to facilitate its determination of the drainage as a "streambed" regulated by Section 1602 of the California Fish and Game Code. In addition, Condition of Approval B-2 would require the Applicant to obtain a Water Quality Certification or waiver pursuant to Section 401 of the CWA from the SARWQCB if the USACE determines that a CWA Section 404 permit would be required. With implementation of Condition of Approval B-2, impacts would be less than significant.

Condition of Approval:

B-2: **Permitting for Drainage Impacts.** Prior to the commencement of grading activities that may result in the placement of fill material into the potentially jurisdictional drainage feature on the northern portion of the project site, the Applicant shall prepare and submit to the United States Army Corps of Engineers (USACE) for verification a "Preliminary Delineation Report for Water of the United States" and a Streambed Alteration Notification package to the California Department of Fish and Wildlife (CDFW) for the drainage feature. If these agencies determine that the feature is not regulated under their jurisdiction, then no further mitigation is necessary. However, if the USACE considers the feature to be jurisdictional, then a Clean Water Act Section 404 permit shall be obtained from the USACE, and any permit conditions shall be agreed to, prior to the start of grading activities in the affected area. If the CDFW determines that the drainage is a regulated "streambed," then a Streambed Alteration Agreement shall be entered into with the CDFW and any

associated conditions shall be agreed to prior to the start of grading activities in the affected area. If the USACE considers the feature to be jurisdictional, the Applicant shall obtain a Water Quality Certification or waiver pursuant to Section 401 of the CWA from the Santa Ana Regional Water Quality Control Board prior to the start of grading activities in the affected area.

(d) **Less than Significant Impact.** The project site is located in an urban area that does not contain native habitat, and is not located near a native wildlife nursery site. The project site is located in an area characterized by commercial uses and does not connect significant open spaces; therefore, it does not function as a major wildlife movement corridor. All native birds, including raptors, are protected under California Fish and Game Code and the Federal MBTA. As previously stated in the response to question 3.4 (a), prior to commencing ground disturbing activities during the nesting bird season, Condition of Approval B-1 shall be implemented to ensure that there are no impacts to nesting birds. With implementation of Condition of Approval B-1, impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

Conditions of Approval: Refer to Condition of Approval B-1 above.

(e) **No Impact.** The Proposed Project would not disturb any riparian areas. The proposed landscape concept plan is subject to compliance with the City's landscape standards for commercial zones. Therefore, no conflicts with local ordinances would occur. No impact would occur.

Mitigation Measures: No mitigation would be required.

(f) **No Impact.** The project site is not located within a "Habitat Reserve System" or is any vegetation type on the project site designated a "Covered Habitat" as identified by the Central and Coastal Subregion Natural Community Conservation Plan/ Habitat Conservation Plan (NCCP/HCP) (County of Orange 1996). Therefore, no impact would occur.

Mitigation Measures: No mitigation would be required.

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3.5 CULTURAL RESOURCES

Would the project:		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
(b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
(c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
(d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

3.5.1 Introduction

A cultural resources survey was conducted by ECORP Consulting, Inc. in July 2014 for the Proposed Project (Appendix C). The purpose of the investigation was to identify cultural resources that could be affected by the Proposed Project (ECORP 2014b). A paleontological records search was completed by the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (ECORP 2014c). A cultural resources records search was conducted at the South Central Coastal Archaeological Information Center (SCCIC) and it indicated that the project area has not been previously surveyed and that there are no previously recorded cultural resources in the project area (ECORP 2014b). A search of the Sacred Land File of the Native American Heritage Commission did not indicate the presence of any Native American cultural resources in the immediate area of the project site (LSA Associates, Inc. [LSA] 2014). The Cultural Resource Survey, the Paleontological Records Search, and the Sacred Lands File Search are all included in Appendix C. In addition, letters were sent to Native American groups to inform them of the project and to ask for their input. An intensive field survey was conducted on June 25, 2014, by ECORP. The project site is mostly paved with asphalt and in some places hard packed gravel. There are no buildings or structures on the site. Three concrete pads that served as foundations for small buildings are present. No prehistoric or historical archaeological material was observed on the project site (ECORP 2014b).

California Environmental Quality Act (CEQA) (Title 14, California Code of Regulations [CCR], Article 5, Section 15064.5) applies to cultural resources of the historical and prehistoric periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant impact on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California Register of Historical Resources (California Register) (Public Resources Code [PRC] Section 5024.1, Title 14 CCR, Section 4852) or the National Register of Historic Places (National Register) (36 CFR 60.4). Cultural resources eligible for listing on the National Register are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the California Register. Resources listed on or eligible for inclusion in the California Register are considered Historical Resources under CEQA.

3.5.2 Impact Analysis

(a) **Less than Significant Impact.** The cultural resources records search indicated that the project area has not been previously surveyed and that there are no previously recorded historical

resources in the project area (ECORP 2014b). The project site is currently vacant. The intensive field survey conducted for the Proposed Project did not discover any historical resources on the project site. Therefore, impacts to historic resources as a result of the Proposed Project would be less than significant.

Mitigation Measure: No mitigation would be required.

(b) **Less than Significant.** No archaeological resources have been previously recorded on the site and none were recorded during the field survey (ECORP 2014b). Further, no Native American cultural resources have been identified in the immediate area of the project site (LSA 2014). However, there remains the possibility that the Proposed Project may impact unknown buried archaeological resources as a result of ground disturbing construction activities. Therefore, Condition of Approval CR-1 has been proposed, which requires the City to retain a qualified archaeologist to establish, in cooperation with the Applicant and the City, procedures for temporarily halting or redirecting work to facilitate evaluation of cultural resources that may be discovered during construction activities. With the implementation of Conditions of Approval CR-1, impacts to unknown archaeological resources during construction would be less than significant.

At the completion of project construction, the Proposed Project would not result in further disturbance of native soils on the project site and, therefore, operation of the Proposed Project would not result in a substantial adverse change in the significance of an archeological resource as defined in Section 15064.5 of the *State CEQA Guidelines*. Therefore, operation of the Proposed Project would not cause a substantial adverse change in the significance of any known archaeological resource.

Conditions of Approval:

CR-1: Archaeological Monitors. Prior to issuance of grading permits, and in adherence to the recommendations of the cultural resources survey, the Applicant shall retain a qualified archaeological monitor, subject to review and approval by the City of Costa Mesa (City) Community Development Director, or designee. This monitor shall be present at the pregrade conference in order to explain the cultural mitigation measures associated with the Proposed Project. The monitor, in conjunction with the City and the Applicant will prepare a plan that includes: (1) a description of circumstances that would result in the halting of work at the project site (e.g., what is considered a "significant" archaeological site); (2) a description of procedures for halting work on site and notification procedures; and (3) a description of monitoring reporting procedures. If any significant historical resources, archaeological resources, or human remains are found during monitoring, work shall stop within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing in the California Register of Historic Places. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be

avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to, the following: excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations Title 4(3) Section 5126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials.

(c) **Less than Significant**. A paleontological records search was completed by the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (ECORP 2014c). Shallow deposits in the project area consist of marine younger Quaternary Terrace deposits. These deposits typically do not contain significant vertebrate fossils. The marine younger Quaternary Terrace has a low potential to contain fossil resources. The marine younger Quaternary Terrace deposits overlie older Quaternary deposits in the subsurface which has high potential to contain significant vertebrate fossils. Fossils recovered from these sediments in the project vicinity include fossil sea turtle (Cheloniidae), camel (Camelidae), and mammoth (Mammuthus sp.) bones. It is estimated that the older Quaternary deposits begin at a depth of about 10 feet below surface in the project area. Therefore, if project excavation extends below 10 feet there is a potential for unknown buried paleontological resources to be affected. With implementation of Condition of Approval CR-2, which requires the preparation of a program to mitigate impacts to paleontological resources if excavation activities extend below 10 feet, impacts to unknown paleontological resources would be less than significant.

At the completion of project construction, the Proposed Project would not result in further disturbance of native soils on the project site and, therefore, operation of the Proposed Project would not result in a substantial adverse change in the significance of a paleontological resource as defined in Section 15064.5 of the *State CEQA Guidelines*.

Condition of Approval:

CR-2: Paleontological Resources Impact Mitigation Program. If excavation activities associated with the Proposed Project are expected to extend below 10 feet, the Applicant shall retain a qualified paleontologist, subject to the review and approval of the City of Costa Mesa's (City) Community Development Director, or designee, to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Proposed Project prior to issuance of any grading permits. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) and shall include, but not be limited to, the following:

- The paleontologist, or his/her representative, shall attend a preconstruction meeting.
- A qualified paleontological monitor working under the direction of an Orange County certified paleontologist shall "spot check" grading within the project site. Initially, spot checks are recommended for 2 to 3 hours twice per week during grading. If fossil resources are noted during the spot check, the monitoring level shall be increased to full time for the remaining duration of the grading.

- In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and the paleontologist contacted to assess the find for scientific significance. The paleontologist shall make recommendations as to whether monitoring shall be required in these sediments on a full-time basis.
- Collected resources shall be prepared to the point of identification and permanent preservation. This includes washing and picking of mass samples to recover small vertebrate and invertebrate fossils and removal of surplus sediment around larger specimens to reduce the storage volume for the repository and the storage cost for the Applicant.
- Any collected resources shall be cataloged and curated into the permanent collections of an accredited scientific institution.
- At the conclusion of the monitoring program, a report of findings with an appended inventory of specimens shall be prepared. When submitted to the City, the report and inventory shall signify completion of the program to mitigate impacts to paleontological resources.

(d) **Less than Significant.** No formal cemeteries are located in or near the project area and no human remains have been reported in the project vicinity, based on the records search from SCCIC (ECORP 2014b). Most Native American human remains are found in prehistoric archaeological sites. No prehistoric archaeological sites have been recorded within 0.5 mile of the project area (ECORP 2014b). Further, no Native American cultural resources have been identified in the immediate area of the project site (LSA 2014). Therefore, the Proposed Project has little potential to disturb human remains. However, as a preventative measure, Condition of Approval CR-3 has been proposed to address the potential discovery of unknown human remains. Impacts to unknown resources would be less than significant with the implementation of Condition of Approval CR-3.

Condition of Approval:

CR-3: Human Remains. If human remains of any kind are found during construction, the requirements of California Environmental Quality Act (CEQA) Guidelines Section 15064.5(e) and Assembly Bill (AB) 2641 shall be followed. According to these requirements, all construction activities must cease immediately and the Orange County Coroner and a qualified archaeologist must be notified. The Coroner shall examine the remains and determine the next appropriate action based on his or her findings. If the Coroner determines the remains to be of Native American origin, he or she shall notify the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall then identify the most likely descendants (MLD) to be consulted regarding treatment and/or reburial of the remains. If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to them, the Native American human remains and associated grave goods shall be buried with appropriate dignity on the property in a location not subject to further subsurface disturbance.

3.6 GEOLOGY AND SOILS

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

3.6.1 Introduction

A geotechnical investigation of the project site was conducted by G.A. Nicoll and Associates, Inc. to obtain soil and geotechnical report (see Appendix D), and to provide preliminary design parameters and recommendations to the Proposed Project (G.A. Nicoll 2014).

3.6.2 Impact Analysis

(a) i) **Less than Significant Impact.** The nearest known earthquake faults to the project site are the active San Joaquin Hills Blind Thrust Fault, which is located approximately 1.5 miles to the south of the site, and the active Newport-Inglewood fault zone, which is located approximately 4.6 miles west of the site (United States Geological Survey [USGS], 2013a). The project site is not located within an Alquist-Priolo earthquake fault zone. Furthermore, ground rupture is not considered to be a constraint within the project area. No known faults traverse the project site or are located adjacent to the project site that may rupture during seismic activity (G.A. Nicoll 2014). A less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(a) ii) **Less than Significant Impact with Mitigation Incorporated.** Similar to most of Southern California, the project site is located in a seismically active region. In addition, the project site lies in relatively close proximity to several active faults that have historically generated moderate to occasionally high levels of ground motion. Therefore, in the event of an earthquake strong ground shaking is expected to occur on the project site. The Proposed

Project would not expose people or structures to strong seismic ground shaking greater than what currently exists. Design and construction would comply with current building codes and standards, which would reduce the risk of loss, injury, or death resulting from strong ground-shaking. Mitigation Measure GEO-1 requires the Applicant to comply with the recommendations of the *Geotechnical Investigation Report,* which stipulates appropriate seismic design provisions that would be implemented with project design and construction. With implementation of Mitigation Measure GEO-1, potential impacts related to seismic ground shaking would be reduced to a less than significant level.

Mitigation Measure:

GEO-1: Incorporation of and Compliance with the Recommendations in the Geotechnical Report. During project construction activities, the City of Costa Mesa (City)'s Community Development Director, Director of Public Works, or designee, shall ensure that all grading operations and construction are conducted in conformance with the recommendations included in the Geotechnical Report prepared for the Proposed Project that has been prepared by G.A. Nicoll., titled *Geotechnical Investigation Report* (June 13, 2014).

The Applicant shall require the project geotechnical consultant to assess whether the requirements in the *Preliminary Geotechnical Investigation* need to be modified or refined to address any changes in the project that occur prior to the start of grading. If the project geotechnical consultant identifies modifications or refinements to the requirements, the Applicant shall require appropriate changes to the final project design and specifications and shall submit any revised geotechnical reports to the Land Development Section of the Engineering Division, or designee, for approval prior to issuance of any grading or construction permits.

The Development Review Section of the Engineering Division, or designee, shall review grading plans prior to the start of grading to verify that the requirements developed during the geotechnical design evaluation have been appropriately incorporated into the project plans. Design, grading, and construction shall be performed in accordance with the requirements of the City's Building Code and the California Building Code (CBC) applicable at the time of grading, as well as the recommendations of the project geotechnical consultant as summarized in a final report subject to review by the City's Building Official, or designee, prior to the start of grading activities. On-site inspection during grading shall be conducted by the project geotechnical consultant and the Development Review Section of the Engineering Division to ensure compliance with geotechnical specifications as incorporated into project plans.

(a) iii) **Less than Significant Impact with Mitigation Incorporated.** Liquefaction is a phenomenon where water-saturated granular soil loses shear strength during strong ground shaking produced by earthquakes. The loss of soil strength occurs when cyclic pore water pressure increases below the groundwater surface. Potential hazards due to liquefaction include the loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements. The project site is located within the liquefaction potential

zone as shown on the State of California Seismic Hazard Zone Map, for the Newport Beach Quadrangle. However, based on the results of the site-specific geotechnical investigation, potential for liquefaction of soils present at the project site is very low (G.A. Nicoll 2014). Although the risk of liquefaction on the project site is low, measures included in the *Geotechnical Investigation Report* would serve to further reduce any potential liquefaction impacts. With implementation of Mitigation Measure GEO-1, potential impacts related to liquefaction would be reduced to a less than significant level.

Mitigation Measure: Refer to Mitigation Measure GEO-1 above.

(a) iv) **No Impact.** Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes in areas with significant ground slopes. The Proposed Project is not located within an area designated as having a potential for earthquake-induced land sliding, and the project site is relatively flat (G.A. Nicoll 2014). No impacts would occur.

Mitigation Measures: No mitigation would be required.

(b) **Less than Significant Impact**. Implementation of the Proposed Project would require ground-disturbing activities, such as grading, that would result in soil exposure that could potentially result in soil erosion or loss of topsoil. Additionally, during a storm event, soil erosion could occur at an accelerated rate. As discussed in Section 3.9, Hydrology and Water Quality, construction of the Proposed Project would be required to comply with the Construction General Permit, either through a waiver or through preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Best Management Practices (BMPs) included in the SWPPP would minimize soil erosion during construction. The Proposed Project's grading plan would also ensure that the proposed earthwork and storm water structures are designed to avoid soil erosion. Impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(c) **Less than Significant Impact with Mitigation Incorporated.** Strong ground shaking can cause settlement, lateral spreading, or subsidence by allowing sediment particles to become more tightly packed, thereby reducing pore space. According to the *Geotechnical Investigation Report,* the project site is underlain by firm to very stiff, sandy clay and medium dense to dense, silty and clayey sand, and silty sand with gravel ranging from approximately 6 to 25 feet in thickness. A thin layer of alluvium comprised of soft, silty clay overlies the marine terrace deposits. As discussed above, the potential for a landslide, lateral spreading, liquefaction, or collapse at the project site is very low (G.A. Nicoll 2014). Furthermore, the soft/loose existing fill would be removed below the proposed buildings and compacted. Although the risk of settlement, lateral spreading, or subsidence on the project site is low, measures included in the *Geotechnical Investigation Report* would serve to further reduce any potential settlement, lateral spreading, or subsidence impacts by incorporating building construction and design standards that would mitigate the impact of any strong ground shaking experienced on the project site. Incorporation of Mitigation Measure GEO-1 would reduce impacts from unstable soils to a less than significant level.

Mitigation Measure: Refer to Mitigation Measure GEO-1 above.

(d) **Less than Significant Impact with Mitigation Incorporated.** Expansive soils contain types of clay minerals that occupy considerably more volume when they are wet or hydrated than when they are dry or dehydrated. Volume changes associated with changes in the moisture content of near-surface expansive soils can cause uplift or heave of the ground when they become wet or, less commonly, cause settlement when they dry out. The project site contains approximately 6 to 25 feet of fill that covers mostly Pleistocene-age terrace deposits. Fill material consists predominantly of thick layers of firm to very stiff, moist to saturated sandy clay, and medium dense to dense, moist to saturated silty and clayey sand (G.A. Nicoll 2014). These soils are considered to have a medium expansion potential (G.A. Nicoll 2014). Although the risk of soil expansion on the project site is low, measures included in the *Geotechnical Investigation Report* would serve to further reduce any potential soil expansion by incorporating building construction and design standards that would mitigate the impact of any soil expansion experienced on the project site. Incorporation of Mitigation Measure GEO-1 would reduce impacts to a less than significant level.

Mitigation Measure: Refer to Mitigation Measure GEO-1 above.

(e) **No Impact.** The Proposed Project does not include the construction of, or connections to a septic system or alternative waste water disposal system. Therefore, the Proposed Project would not result in impacts related to the soil's capability to adequately support the use of septic tanks or alternative wastewater disposal systems, and no impacts would occur.

Mitigation Measures: No mitigation would be required.

3.7 GREENHOUSE GAS EMISSIONS

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

3.7.1 Technical Background

Global climate change (GCC) is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

The prevailing scientific opinion on climate change is that "most of the warming observed over the last 50 years is attributable to human activities (Intergovernmental Panel on Climate Change [IPCC])." Increased amounts of carbon dioxide (CO_2) and other greenhouse gases (GHGs) are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.[1]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC include the following:[2]

a) CO_2
b) Methane (CH_4)
c) Nitrous oxide (N_2O)
d) Hydrofluorocarbons (HFCs)
e) Perfluorocarbons (PFCs)
f) Sulfur hexafluoride (SF_6)

[1] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse allows heat from sunlight in and reduces the amount of heat that escapes, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

[2] The greenhouse gases listed are consistent with the definition in Assembly Bill (AB) 32 (Government Code 38505), as discussed later in this section.

In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order (EO) S-3-05. The EO established the following goals for the State of California: GHG emissions were to be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "Global Warming Solutions Act," passed by the California State legislature on August 31, 2006. AB 32 requires the California Air Resources Board (ARB) to:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions, by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of GHG emissions by January 1, 2008;
- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions would be achieved via regulations, market mechanisms, and other actions; and
- Adopt regulations to achieve the maximum technologically feasible and cost-effective reduction of GHGs by January 1, 2011.

To assist public agencies in the mitigation of GHG emissions or analyzing the effects of GHGs under the California Environmental Quality Act (CEQA), including the effects associated with transportation and energy consumption, Senate Bill (SB) 97 (Chapter 185, 2007) required the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines on how to minimize and mitigate a project's GHG emissions. The OPR was required to prepare, develop, and transmit these guidelines on or before July 1, 2009, and the Resources Agency was required to certify and adopt them by January 1, 2010. On January 8, 2009, the OPR released preliminary draft CEQA guideline amendments. The Natural Resources Agency adopted the CEQA Guidelines Amendments and transmitted them to the Office of Administrative Law (OAL) on December 31, 2009. On February 16, 2010, the OAL approved the Amendments and filed them with the Secretary of State for inclusion in the California Code of Regulations (CCR). The Amendments became effective on March 18, 2010. The Amendments encourage Lead Agencies to consider many factors in conducting a CEQA analysis, but preserve the discretion granted by CEQA to Lead Agencies in making their determinations.

> *State CEQA Guidelines* Section 15064.4 states:
>
> (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based on available information, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
>
> (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; or

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency may consider the following when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

State CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

As such, currently neither the CEQA statutes, OPR guidelines, nor the *State CEQA Guidelines* prescribe specific quantitative thresholds of significance or a particular methodology for performing an impact analysis. As with most environmental topics, significance criteria are left to the judgment and discretion of the lead agency.

The recommended approach for GHG analysis included in the Governor's OPR June 2008 Technical Advisory (TA) is to: (1) identify and quantify GHG emissions, (2) assess the significance of the impact on climate change, and (3) if significant, identify alternatives and/or mitigation measures to reduce the impact below significance (State of California OPR). The June 2008 OPR guidance provides some additional direction regarding planning documents as follows: "CEQA can be a more effective tool for GHG emissions analysis and mitigation if it is supported and supplemented by sound development policies and practices that would reduce GHG emissions on a broad planning scale and that can provide the basis for a programmatic approach to project-specific CEQA analysis and mitigation. For local government lead agencies, adoption of general plan policies and certification of general plan EIRs that analyze broad jurisdiction-wide impacts of GHG emissions can be part of an effective strategy for addressing cumulative impacts and for streamlining later project-specific CEQA reviews."

SB 375, signed into law on October 1, 2008, is intended to enhance the ARB's ability to reach AB 32 goals by directing the ARB to develop regional GHG emissions reduction targets to be achieved within the automobile and light truck sectors for 2020 and 2035. On December 5, 2008, the South Coast Air Quality Management District (SCAQMD) adopted an interim quantitative GHG

Significance Threshold for industrial projects where the SCAQMD is the lead agency of 10,000 metric tons (MT) of CO_2 equivalent/year (CO_2e/yr). The SCAQMD has not adopted any other GHG Significance Thresholds; however, it has proposed a screening level threshold of 3,000 MT of CO_2eq/yr for residential and commercial sector projects. Therefore, this analysis uses compliance with the 3,000 MT CO_2e annual screening level as a threshold in determining if the Proposed Project's contribution of GHGs is a considerable contribution to global warming impacts.

For the purpose of this technical analysis, the concept of CO_2e is used to describe how much global warming a given type and amount of GHG may cause, using the functionally equivalent amount or concentration of CO_2 as the reference. Individual GHGs have varying global warming potentials and atmospheric lifetimes. The CO_2e is a consistent methodology for comparing GHG emissions since it normalizes various GHG to the same metric. The reference gas is CO_2, which has a global warming potential equal to 1.

The equation below provides the basic calculation required to determine CO_2e from the total mass of a given GHG using the global warming potentials published by the IPCC.

Tonnes (Metric Tons) of CO_2e = Tonnes (Metric Tons) of GHG x GWP

Where: CO_2e = carbon dioxide equivalent
GHG = greenhouse gas
GWP = global warming potential

This method would be used to evaluate GHG emissions during construction and operation of the Proposed Project. For this analysis only, CO_2, CH_4, and N_2O are considered. This is due to the relatively large contribution of these gases in comparison to other GHGs expected to be produced during the project construction and operation phases. An individual project cannot generate enough GHG emissions to significantly influence climate change, but individual projects can incrementally contribute toward the potential for the cumulative emissions driving GCC. This analysis analyzes whether the project's contribution to the impact is "cumulatively considerable."

The Proposed Project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The CalEEMod Version 2013.2.2 was used to calculate the GHG emissions from the Proposed Project. CalEEMod stands for "California Emissions Estimator Model," and is an air quality modeling program that estimates air pollution emissions in pounds per day (lbs/day) or tons per year (tpy) for various land uses, area sources, construction projects, and project operations. CalEEMod estimates a project's CO_2, N_2O, and CH_4 emissions from area and mobile sources, energy and water consumption, and waste generation. Mitigation measures can also be specified to analyze the effects of mitigation on project emissions.

3.7.2 Impact Analysis

(a) **Less Than Significant Impact.** Construction GHG emissions associated with the Proposed Project would include those emissions generated during development of the project site with the proposed Ganahl Lumber retail store and lumber storage yard. Operation emissions include those project-related GHG emissions associated with the operation of the proposed Ganahl Lumber retail store and lumber storage yard. The generation of new GHG emissions associated with development on the project site would occur from energy consumption (and associated GHG

emissions generation) occurring during the project's operation. Typically, more than 80 percent of total energy consumption takes place during the use of buildings, and less than 20 percent is consumed during construction (United Nations Environment Programme 2007).

Overall, the following activities associated with the Proposed Project could directly or indirectly contribute to the generation of GHG emissions:

1. **Construction Activities:** During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O.
2. **Gas, Electricity, and Water Use:** Natural gas use results in the emissions of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Approximately one-fifth of the electricity and one-third of the nonpowerplant natural gas consumed in California are associated with water delivery, treatment, and use (ARB 2010).
3. **Solid Waste Disposal:** Solid waste generated by the Proposed Project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 25 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.
4. **Motor Vehicle Use:** Transportation associated with the Proposed Project would result in GHG emissions from fuel combustion in daily automobile and truck trips. CO_2 is the most significant GHG emitted by vehicles, but lesser amounts of CH_4 and N_2O are also emitted in vehicle exhaust.

Construction GHG Emissions. GHG emissions associated with the Proposed Project would occur over the short term from construction, consisting primarily of emissions from equipment exhaust. As discussed below, there would also be long-term regional emissions associated with project-related vehicular trips and stationary source emissions such as natural gas used for heating.

GHG emissions generated from construction of the Proposed Project would predominantly consist of CO_2. In comparison to criteria air pollutants such as ozone (O_3) and particulate matter less than 10 microns in size (PM_{10}), CO_2 emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs such as CH_4 are important with respect to GCC, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO_2.

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.

Operational GHG Emissions. Long-term operation of the Proposed Project would generate GHG emissions from the proposed Ganahl Lumber retail store and lumber storage yard, area and mobile sources, and indirect emissions from stationary sources associated with energy consumption. The existing emissions are added to the Proposed Project emissions as the combination represents the total project emissions when the project is complete. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with mixed-use on-site facilities and customers/employees/deliveries 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 from the existing uses on site. 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.

Table 3.7.A provides the estimated GHG emissions for the Proposed Project.

Table 3.7.A Project Related GHG Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO_2	**NonBio-CO_2**	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Area Sources	0.00	0.00	0.00	0.00	0.00	0.00
Energy Usage	0.00	343.55	343.55	0.02	0.00	344.91
Mobile Sources	0.00	1,684.76	1,684.76	0.07	0.00	1,686.27
Solid Waste	177.96	0.00	177.96	10.52	0.00	398.83
Water and Wastewater	1.86	33.23	35.09	0.19	0.00	40.62
Construction	0.00	14.77	14.77	0.00	0.00	14.82
Total Emissions	179.82	2,076.31	2,256.13	10.80	0.01	**2,485.46**
SCAQMD Draft Screening Threshold						**3,000**
Exceeds Threshold?						**No**

Source: Kunzman (2014a).
Bio-CO_2 =
CH_4 = methane
CO_2 = carbon dioxide
CO2e = carbon dioxide equivalent
N_2O = Nitrous oxide
Non Bio-CO_2

The project's opening year (2016) emissions would be 2,485.46 MT of CO_2e and would not exceed the SCAQMD draft screening threshold of 3,000 MT of CO_2e per year for GHG emissions for all uses (see Table 3.7.A). Impacts are considered less than significant.

Mitigation Measures: No mitigation would be required.

(b) **Less than Significant Impact.** The City of Costa Mesa does not currently have a Climate Action Plan; therefore, GHG emissions have been compared to the ARB Scoping Plan.

Scoping Plan. The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas

emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."

This Scoping Plan calls for an "ambitious but achievable" reduction in California's GHG emissions, cutting approximately 30 percent from business as usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020.

The Proposed Project would include passive energy conservation features as described in Section 2.2.4, Project Characteristics, of this Initial Study to meet applicable strategies of the plan. The Proposed Project is consistent with the applicable strategies resulting in a less than significant impact. The Proposed Project's operational GHG emissions do not exceed the draft SCAQMD threshold for all land uses. Although the Proposed Project would generate GHG emissions, these emissions would not have a significant impact on the environment.

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

3.8.1 Introduction

A Phase I Environmental Site Assessment (Phase I ESA) (Appendix E) was completed for the Proposed Project by AEI Consultants (AEI Consultants 2014). The purpose of the Phase I ESA was to identify the presence of any hazardous substances or petroleum products on the project site that may indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum product into the soil, groundwater, or surface water of the project site. The Phase I ESA results are summarized below.

3.8.2 Environmental Setting

The project site currently contains a concrete wall, an asphalt paved entrance area, landscaping along the Bristol Street frontage, and an underground concrete lined flood channel (Santa Ana Delhi Channel).

Previous land uses of the project site were determined using historical aerial photographs, historic city directories, Sanborn fire insurance maps, and agency records. From at least 1927 through 1947, the project site appeared to be undeveloped, contained agricultural land uses, and had a drainage ditch running through it. From 1952 to 1993, the project site appeared to be vacant land, had a drainage ditch running through it, and contained soil stockpiles. From 1994 through 2008, the project site was

developed with Bristol Street Mini Storage and Recreational Vehicle (RV) Storage. The project site has been vacant since 2009 (AEI Consultants 2014).

The Phase I ESA identified two environmental issues within the project site that were not expected to represent a significant environmental concern. Environmental issues associated with the project site are described below:

- Based on a review of aerial photographs, there is a potential that portions of the project site were historically used for agricultural purposes. There is a potential that agricultural chemicals, such as pesticides, herbicides and fertilizers, were used on site, and that the project site has been affected by the use of such agricultural chemicals. In general, historical agricultural use is not the subject of environmental enforcement actions by regulatory agencies, and therefore, could be considered a *de minimis* condition. As described above, the project site was previously developed with an RV and self-storage facility from 1994 until 2008. Development of this facility likely involved grading activities that would have likely removed or disturbed near surface soils. When this RV and self-storage facility was demolished, additional grading/earthmoving activities likely occurred that would have further reduced the potential for residual agricultural contaminants (AEI Consultants 2014).
- The underground Santa Ana Delhi Channel was observed bisecting the project site. No hazardous materials or petroleum products were observed stored on the project site, or near the Santa Ana Delhi Channel traversing the project site. Therefore, these areas are not expected to represent a significant environmental concern (AEI Consultants 2014).

No recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), or historical recognized environmental conditions (HRECs) were found to affect the project site (AEI Consultants 2014).

Although not considered a REC, there is the potential to encounter aerially-deposited lead (ADL) in shallow soil within 50 feet of Bristol Street. Based on the fact that the site has been unpaved until 1994 and its location adjacent to a major road and freeways, there is the potential for ADL in shallow soil along this roadway.

According to the Phase I ESA and records maintained by the Orange County Solid Waste Local Enforcement Agency (LEA), a closed solid waste disposal site, Newport Avenue Station No. 1 (Solid Waste Disposal System Number 30 CR-0071), is located approximately 700 feet northwest of the project site at the northwest corner of Newport Boulevard and Bristol Street. This closed disposal site is inspected by the LEA on a quarterly basis. Although no combustible gas studies or monitoring reports were on file in the CalRecycle Solid Waste Information System (SWIS) for the Newport Avenue Station No. 1 closed disposal site, LEA has indicated that methane gas generated by decomposing refuse buried at the closed disposal site could possibly migrate toward the project site.

3.8.3 Impact Analysis

(a) **Less Than Significant Impact with Mitigation Incorporated.** Hazardous materials are chemicals that could potentially cause harm during an accidental release or mishap, and are defined as being toxic, corrosive, flammable, reactive, an irritant, or strong sensitizer. Hazardous substances include all chemicals regulated under the United States Department of Transportation

"hazardous materials" regulations and the United States Environmental Protection Agency (EPA) "hazardous waste" regulations. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment. The probable frequency and severity of consequences from the use, transport, or disposal of hazardous materials is affected by the type of substance, quantity used or managed, and the nature of the activities and operations.

Construction. During construction activities for the Proposed Project, there is a possibility of generating small quantities of hazardous materials. Construction activities would also use a limited amount of hazardous and flammable substances/oils during heavy equipment operations for site grading and construction. The amount of hazardous chemicals present during construction is limited and would be in compliance with existing government regulations to ensure the amounts of these materials present during construction would be limited and would not pose a significant adverse impact to workers or the environment. Furthermore, the construction contractor would be required to implement standard best management practices regarding hazardous materials storage, handling, and disposal during construction in compliance with the State Construction General Permit to protect water quality (refer to Section 3.9, Hydrology and Water Quality). Any associated risk would be adequately reduced to a level that is less than significant through compliance with these standards and regulations; thus, the limited use and storage of hazardous materials during construction of the Proposed Project would not pose a significant hazard to the public or the environment. Accordingly, the potential for the release of hazardous materials during project construction would be low and, even if a release would occur, it would not result in a significant hazard to the public, surrounding land uses, or environment due to the small quantities of these materials associated with construction, and no mitigation would be required.

The *Phase I ESA* did not identify any properties adjacent to the project site that were anticipated to have adversely impacted conditions at the project site. However, in the unlikely event that unknown hazardous materials are discovered during construction activities, the project contractor would be required to comply with a Contingency Plan developed and approved prior to the commencement of grading activities. As stated in Mitigation Measure HAZ-1, in the event that construction workers encounter underground tanks, gases, odors, uncontained spills, or other unidentified substances, the Contingency Plan requires the contractor to stop work, cordon off the affected area, and notify the Costa Mesa Fire Department (CMFD). The CMFD responder shall determine the next steps regarding possible site evacuation, sampling, and disposal of the substance consistent with local, State, and federal regulations. In addition, the California Department of Transportation, the California Highway Patrol, and local police and fire departments are trained in emergency response procedures for safely responding to accidental spills of hazardous substances on public roads, further reducing potential impacts to a less than significant level. With implementation of Mitigation Measure HAZ-1, potential risks associated with encountering unknown hazardous wastes during construction would be reduced to a less than significant level.

With implementation of Mitigation Measure HAZ-1, construction of the Proposed Project would not create a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous materials.

Operation. Long-term operational activities typical of the proposed retail and lumber storage yard uses, such as landscape and building maintenance, would occur on the project site. Maintenance activities related to landscaping include the use of fertilizers and light equipment (such as lawn mowers and edgers). These types of activities do not involve the use of a large or substantial amount of hazardous materials. The proposed retail and lumber storage yard uses would involve the use and storage of small quantities of potentially hazardous materials in the form of cleaning solvents and pesticides. However, such materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. During operation of the Proposed Project, the diesel fueling station would be enclosed within integrated containment vessels, and would be required to be operated in compliance with all applicable State and federal regulations governing the handling of diesel fuels. In addition, the station would meet all best management practice (BMPs) and City code requirements, including a roof shed above the fueling area. The existing Ganahl Lumber facility has a similar fueling station on the existing site located directly above the Delhi Channel. .Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations.The Proposed Project would relocate the existing Ganahl Lumber store located adjacent to the project site; therefore, operational impacts would be the same as the existing conditions for the existing Ganahl Lumber store next door. Thus, potential impacts from the routine transport, use, or disposal of hazardous materials resulting from operation of the Proposed Project would be less than significant, and no mitigation would be required.

As indicated by the LEA, it is possible that methane gas from the nearby closed disposal site may be migrating toward the project site and could concentrate beneath the Proposed Project's structures resulting in health and safety hazards. Mitigation Measure HAZ-2 would address these potential hazards by requiring that a soil gas investigation be conducted on the project site prior to the issuance of grading permits to evaluate whether combustible landfill gas concerns exist and, if necessary, that appropriate building design measures be incorporated into the Proposed Project to protect against the accumulation of methane beneath structures. With implementation of Mitigation Measure HAZ-2, operation-related impacts would be reduced to a less than significant level.

Mitigation Measures:

HAZ-1: **Contingency Plan.** Prior to commencement of grading activities, the Director of the Orange County Environmental Health Division, or designee, shall review and approve a contingency plan that addresses the procedures to be followed should on-site unknown hazards or hazardous substances be encountered during demolition and construction activities. The plan shall indicate that if construction workers encounter underground tanks, gases, odors, uncontained spills, or other unidentified substances, the contractor shall stop work, cordon off the affected area, and notify the Costa Mesa Fire Department (CMFD). The CMFD responder shall determine the next steps regarding possible site evacuation, sampling, and disposal of the substance consistent with local, State, and federal regulations.

HAZ-2: **Protection Against Landfill Gas Hazards.** Prior to the issuance of any grading permits, the Applicant shall conduct a soil gas investigation on the project site in accordance with the Orange County Fire Authority's Combustible Gas Hazard Mitigation Guidance to evaluate whether combustible landfill gas concerns exist on the project site. If the investigation concludes that such concerns do not exist, no further mitigation is necessary. If the investigation concludes that combustible landfill gases are present beneath the project site, the Applicant shall coordinate with the Orange County Solid Waste Local Enforcement Agency (LEA) to determine appropriate mitigation to protect the Proposed Project's structures from combustible landfill gases, which may include the installation of systems designed to protect against the accumulation of methane beneath structures, which may include passive ventilation systems, flexible building membrane liners, landfill gas alarms, or other measures listed per Section 20939, Title 27 California Code of Regulations in accordance with LEA recommendations. If mitigation is required, the City of Costa Mesa's Building Official, or designee, shall review the building and grading plans prior to the start of grading to verify that the mitigation developed as a result of the combustible landfill gas evaluation has been appropriately incorporated into the project plans. On-site inspection during grading and construction shall be conducted by the City of Costa Mesa's Building Official, or designee, to ensure compliance with the mitigation specifications, if any are required to be incorporated into project plans.

(b) **Less than Significant Impact with Mitigation Incorporated.** During construction, some hazardous materials, such as diesel fuel, would be used. A Storm Water Pollution Prevention Plan (SWPPP), listing Best Management Practices (BMPs) to prevent construction pollutants and products from violating any water quality standard or waste discharge requirements would be prepared for the Proposed Project (refer to Standard Condition WQ-1 in Section 3.9, Hydrology and Water Quality). The release of any spills would be prevented through the implementation of BMPs listed in the SWPPP. In addition, Mitigation Measure HAZ-1, which outlines the requirements for a contingency plan, would reduce impacts related to the possible discovery of unknown wastes or suspect materials during construction activities to a less than significant level. The Proposed Project would relocate the existing Ganahl Lumber store next door to the project site. Operation of the Proposed Project would result in similar hazard conditions as the existing hazard conditions associated with the current Ganahl Lumber store. Daily operation of the new lumber store would not result in a new hazard to the public or the environment. During operation of the Proposed Project, the diesel fueling station would be enclosed within integrated containment vessels, and would be required to be operated in compliance with all applicable State and federal regulations governing the handling of diesel fuels. In addition, the diesel fueling station would meet all best management practice (BMPs) and City code requirements, including a roof shed above the fueling area. The existing Ganahl Lumber facility has a similar fueling station on the existing site located directly above the Delhi Channel. Further, the WQMP contains BMPs to prevent the release of fuel into the environment (refer to Standard Condition WQ-2 in Section 3.9, Hydrology and Water Quality). Therefore, with adherence to Standard Condition WQ-2, the Proposed Project would result in a less than significant impact during operation.

Mitigation Measures: Refer to Mitigation Measure HAZ-1 above.

Standard Conditions: Refer to Standard Conditions WQ-1 and WQ-2 in Section 3.9, Hydrology and Water Quality.

(c) **Less than Significant Impact.** There are no schools within one-quarter mile of the project site. However, there are ten schools within a one-mile vicinity of the project site: Mariners Christian School, Sonora Elementary School, Pacific Coast High School/Community Home Education Program (CHEP), Vineyard Christian School, Montessori Christian School, Back Bay Montessori, Saint John the Baptist Catholic School, Access County Community School, Costa Mesa High School, and Davis Magnet School. Impacts would be less than significant.

(d) **No Impact.** The Phase I ESA included a search of the Regional Water Quality Control Board's (RWQCB) online GeoTracker database, which resulted in no information indicating any recorded release of hazardous materials on the project site. A search of the Department of Toxic Substances Control's (DTSC) Hazardous Waste Tracking System (HWTS) database resulted in one record indicating that the project site generated 0.8000 ton of methyl ethyl ketone. The project site was not listed in the regulatory database as a Resource Conservation and Recovery Act (RCRA) generator, and as such, it is presumed that the wastes generated would have been in quantities which did not trigger RCRA reporting requirements. Therefore, the recorded wastes are not expected to represent a significant environmental concern (AEI Consultants 2014).

The project site was identified in the regulatory database as a Clandestine Drug Labs (CDL) site and a Facility and Manifest Data (HAZNET) site. AEI interviewed Mr. Adam Palmer of the DTSC Emergency Response Program for more information regarding the database CDL Listing. According to Mr. Palmer, the DTSC was called on January 7, 1998 to remove drug lab equipment from a storage container related to the previous storage use of the project site. The items were removed from the site and the case was both opened and closed on January 7, 1998. No release case was listed. Due to the items being removed and the demolition of the former storage facility structures this listing is not likely to represent a significant environmental concern (AEI Consultants 2014). No significant hazard to the public or the environment is expected from implementation of the Proposed Project. A less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(e) **Less than Significant Impact.** The project site is located approximately 0.5 miles west of John Wayne Airport, and is within the land use planning area managed by the Airport Environs Land Use Plan for John Wayne Airport (AELUP) (ALUC 2008). The project site is located within the 60 decibels (dB) Community Noise Equivalent Level (CNEL) contour (ALUC 2008). Commercial land uses exposed to noise levels of 60 dB CNEL are considered "Normally Consistent" (conventional construction methods used, no special noise reduction requirements) by the AELUP (ALUC 2008). The project site is located within Safety Compatibility Zone 6 (Traffic Pattern Zone) for runway 1L and 19R (ALUC 2008). Zone 6 has the following basic compatibility qualities:

- Allow residential land uses;

- Allows most nonresidential uses (prohibits outdoor stadiums and similar uses with very high intensities; and
- Avoid children's schools, large day care centers, hospitals, and nursing homes (ALUC 2008).

The Proposed Project would not result in a safety hazard for people residing or working in the vicinity of the project site because it would relocate the existing Ganahl Lumber store from the parcel adjacent to the project site. No new or incompatibility conflicts would result because similar commercial land uses already exist in the area. Impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(f) **No Impact.** There are no private airstrips within the vicinity of the project site, and as a result, the Proposed Project would not result in a safety hazard for people residing or working in the vicinity of the project site. Therefore, no impact would occur.

Mitigation Measures: No mitigation would be required.

(g) **Less than Significant Impact with Mitigation Incorporated.** The City of Costa Mesa has an Emergency Operations Plan that identifies the City's planning, organization, and response policies and procedures during an emergency (City of Costa Mesa 2013). Construction of the Proposed Project would require construction to occur within Bristol Street and would result in temporary construction truck traffic which has the potential to interfere with emergency response access to areas near the project site. With implementation of Mitigation Measure HAZ-3, which requires that the Applicant prepare a construction staging and traffic control plan that would ensure that emergency vehicles would be able to navigate through streets adjacent to the project site, impacts to emergency access would be less than significant.

Construction. Construction may result in increased travel time due to flagging or stopping of traffic to accommodate trucks entering and exiting the project site. While it is unlikely that such activities would result in complete closure of Bristol Street, they may temporarily close a single travel lane. The development of a Construction Staging and Traffic Control Plan, as required by Mitigation Measure HAZ-3, would ensure that emergency vehicles would be able to navigate through streets adjacent to the project site. Traffic management personnel (flagpersons) required as part of the Congestion Staging and Traffic Management Plan would be trained to assist in emergency response by restricting or controlling the movement of traffic that could interfere with emergency vehicle access. With implementation of the Construction Staging and Traffic Control Plan, it is not anticipated that construction of the Proposed Project would impede any passing emergency vehicles or impair any emergency evacuation plans. Therefore, impacts to emergency response and evacuation plans associated with construction of the Proposed Project would be reduced to a less than significant level with implementation of Mitigation Measure HAZ-3.

Operation. Operation of the Proposed Project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. The Proposed Project would be developed in accordance with the City Emergency Operations Plan. Access to, from, and on site for emergency vehicles would be reviewed and approved by the Costa Mesa Fire Department (CMFD) prior to project construction. The Proposed Project would also be required to comply with all applicable codes and ordinances for emergency vehicle access, which would ensure

adequate access to, from, and on site for emergency vehicles. Therefore, operation of the Proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Potential project impacts would be less than significant, and no mitigation would be required.

Mitigation Measures:

HAZ-3: Construction Staging and Traffic Control Plan. Prior to the issuance of any grading permits, the Applicant (or its contractor) shall prepare a Construction Staging and Traffic Control Plan for approval by the City of Costa Mesa (City) Transportation Services Manager, or designee, to ensure proper access to residences and businesses in the area by emergency vehicles during construction and to maintain traffic flow prior to any lane closures.

The Construction Staging and Traffic Control Plan shall also include the name and phone number of a contact person who can be reached 24 hours a day regarding construction traffic complaints or emergency situations. In addition, the Construction Staging and Traffic Control Plan shall take into account and be coordinated with other Construction Staging and Traffic Control Plans that are in effect or have been proposed for other projects in the City of Costa Mesa. The Construction Staging and Traffic Control Plan shall include, but not be limited to, the following:

- All emergency access to the project site and adjacent areas shall be kept clear and unobstructed during all phases of construction. Flag persons shall be provided in adequate numbers to minimize impacts to traffic flow and to ensure safe access into and out of the site.
- Flag persons shall be trained to assist in emergency response by restricting or controlling traffic movements that could interfere with emergency vehicle access.
- Construction vehicles, including construction personnel vehicles shall not park on public streets.
- Construction vehicles shall not stage or queue where they would interfere with pedestrian and vehicular traffic or block access to nearby businesses or residential areas.
- If feasible, any traffic lane closures would be limited to off-peak traffic periods, as approved by the City Transportation Services Department.

(h) **No Impact.** The Proposed Project is located in a developed area of the City of Costa Mesa, and is bounded by commercial, residential, and transportation uses. There are no wildlands in the vicinity, and therefore, the Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

Mitigation Measures: No mitigation would be required.

3.9 HYDROLOGY AND WATER QUALITY

Would the project:		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
(b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
(c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
(d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
(e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
(f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐
(g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
(h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
(i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
(j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
(k)	Potentially impact storm water runoff from construction activities?	☐	☐	☒	☐
(l)	Potentially impact storm water runoff from post-construction activities?	☐	☐	☒	☐
(m)	Result in a potential for discharge of storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?	☐	☐	☒	☐
(n)	Result in potential for discharge of storm water to affect the beneficial uses of the receiving waters?	☐	☐	☒	☐
(o)	Create the potential for significant changes in the flow velocity or volume of storm water runoff to cause environmental harm?	☐	☐	☒	☐
(p)	Create significant increases in erosion of the project site or surrounding areas?	☐	☐	☒	☐

3.9.1 Impact Analysis

(a) **Less than Significant Impact.** During construction of the Proposed Project, water quality impacts could occur without proper controls. Soils loosened during grading, spills of fluids or fuels from vehicles and equipment or miscellaneous construction materials and debris, if mobilized and transported offsite in overland flow, could degrade water quality. Therefore, the Proposed Project would be required to comply with all pertinent requirements of the National Pollutant Discharge Elimination System (NPDES). The first requirement involves compliance with the State Water Resources Control Board's NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit) (Standard Condition WQ-1). Because the Proposed Project would disturb greater than 1 acre of soil during construction, the project must comply with the requirements of the Construction General Permit, including the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of the construction Best Management Practices (BMPs) detailed in the SWPPP during construction activities. Construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. To comply with the requirements of the Construction General Permit, the Applicant must ensure that the Permit Registration Document, including a SWPPP and Notice of Intent, are filed with the State Water Resources Control Board prior to issuance of a grading permit.

In addition, a Preliminary Water Quality Management Plan (WQMP) (see Appendix F) has been prepared for the Proposed Project to comply with the requirements of the local NPDES Stormwater Program (Joseph C. Truxaw and Associates, Inc. 2014b). As described in Standard Condition WQ-2, a Final WQMP that includes design features and BMPs to target pollutants of concern in stormwater runoff from the project site will be prepared and approved prior to issuance of a grading permit. Proposed BMPs include rainwater capture and storage, planter boxes, and bioswales. During operation, expected pollutants associated with the commercial and industrial uses on the project site include suspended solids/sediments, nutrients, pathogens (bacteria/virus), pesticides, oil and grease, and trash. The project site was previously fully developed with a storage facility with approximately 13 percent pervious surfaces and 87 percent impervious surfaces. Post- project conditions would result in 7.5 percent pervious surfaces and 92.5 percent impervious surfaces (Joseph C. Truxaw and Associates, Inc. 2014b).With adherence to the aforementioned requirements, outlined below as Standard Conditions WQ-1 and WQ-2, potential impacts related to waste discharge requirements would be less than significant.

Standard Conditions:

WQ-1 **Construction General Permit.** Prior to issuance of a grading permit, the Applicant shall demonstrate to the City of Costa Mesa (City) Public Works Department that coverage has been obtained under California's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing. A copy of the current Storm Water

Pollution Prevention Program (SWPPP) required by the General Permit shall be kept at the project site and be available for review by City representatives upon request.

WQ-2 **Final Water Quality Management Plan.** Prior to issuance of a grading permit, the Applicant shall submit a Final Water Quality Management Plan (WQMP) to the City Public Works Department for review and approval. Both Source Control best management practices (BMPs) and Site Design BMPs designed to reduce impacts to water quality from operation of the Proposed Project shall be identified in the Final WQMP.

Mitigation Measures: No mitigation would be required.

(b) **Less than Significant Impact**. The project site is currently vacant, and contains a mixture of impervious and pervious surfaces. As described above, the Proposed Project would result in an increase in the amount of impervious surfaces on the project site. Even though the pervious surfaces of the project site would allow groundwater recharge during storm events it would not allow groundwater recharge to occur at rates that would significantly affect groundwater levels due to its size. Operation of the Proposed Project would not require groundwater extraction. Furthermore, the project site is not located in a designated recharge area. According to the *Geotechnical Investigation Report* prepared for the Proposed Project, groundwater was encountered in several borings and stabilized at depths ranging from 23.5 to 244.5 feet below the existing ground surface (bgs) and 10.7 to 12 feet above mean sea level (amsl) (G.A. Nicoll and Associates 2014). Based on the depth of excavation required for the Proposed Project, it is not anticipated that groundwater would be encountered during construction; therefore, groundwater dewatering would not be required.

The Proposed Project would have additional water needs resulting from the operation of a store of a larger size and other new operational needs including the cleaning of solar panels compared to the existing Ganahl Lumber Costa Mesa store. However, the Proposed Project would incorporate various water capture and conservation measures that would reduce water requirements and offset any reduction in infiltration that results from the increase in impervious surface area on the project site. For example, the Proposed Project would be designed to capture rain water from the roof system and store it in five aboveground cisterns for later use in landscape areas. The cisterns could store approximately 100,000 gallons of rainwater. The landscaping plan also includes the use of permeable pavers and bioswales to allow for groundwater recharge and native and drought tolerant plants that thrive in extended periods of drought with seasonal floods. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(c) **Less than Significant Impact.** The Proposed Project would require grading of the project site, which would affect the drainage patterns of the site and expose soil that could result in an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As discussed above in the response to question 3.9 (a) above and specified in Standard Condition WQ-1, the Construction General Permit requires preparation of a SWPPP to identify Construction BMPs to be implemented as part of the Proposed Project to reduce impacts to water quality during

construction, including those impacts associated with soil erosion and siltation. In addition, the Proposed Project's drainage plan would be designed by a registered civil engineer to safely retain, detain, and/or convey stormwater runoff. Drainage patterns would remain similar to existing conditions. No streams or rivers would be altered; the Santa Ana Delhi Channel would not be affected by the Proposed Project. Implementation of BMPs would minimize the potential erosion or siltation from the project site. A less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(d) **Less than Significant Impact**. Please see the response to question 3.9. (c) above. As a result of the increase in impervious surface area on the project site, the Proposed Project is anticipated to increase the peak flow of runoff during storm events. However, the Proposed Project includes infiltration BMPs to offset any increase in stormwater runoff that would result from the increase in impervious surface area on the project site. With implementation of infiltration BMPs as part of the project design, impacts related to the alteration of the existing drainage pattern in a manner that would result in on- or off-site flooding would be less than significant.

Mitigation Measures: No mitigation would be required.

(e) **Less than Significant Impact.** The landscaping plan includes the use of permeable pavers to allow water infiltration on site and bioswale features to help treat stormwater runoff. Stormwater that is not retained on site would be directed to the existing Santa Ana Delhi Channel and Bristol Street, and would be accepted by the existing public storm drain system. Calculations of pre-development and post development runoff from the project site show that the Proposed Project would result in an approximately 13.8 percent decrease in runoff from the project site for the 10-year storm frequency, and an approximately 13.6 percent decrease in runoff from the project site for the 25-year and 100-year storm frequencies (Joseph C. Truxaw and Associates, Inc. 2014a). Therefore, impacts to the existing stormwater drainage system would be less than significant.

Mitigation Measures: No mitigation would be required.

(f) **Less than Significant Impact.** Please refer to the response to question 3.9 (a) above. A Preliminary WQMP has been prepared for the Proposed Project to comply with the requirements of the local NPDES Stormwater Program (Joseph C. Truxaw and Associates, Inc. 2014b). The Applicant would implement a SWPPP for the Proposed Project listing BMPs to prevent construction pollutants and products from violating any water quality standards. A less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(g) **No Impact.** The Proposed Project does not include housing. No impact would occur.

Mitigation Measures: No mitigation would be required.

(h) **Less than Significant Impact.** Areas adjacent to Santa Ana Delhi Channel are located within both the 100-year and 500-year flood zone (City of Costa Mesa 2000). The Ganahl Lumber store

would be designed such that flood flows would not be impeded or redirected to create hazards in an area that currently does not have flooding hazards. A less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(i) **No Impact.** Only a small portion of the City of Costa Mesa is located within the dam inundation area of Prado Dam, and that portion is limited to the area closest to Newport Bay. The project site is not located in the Prado Dam inundation area. No impact would occur.

Mitigation Measures: No mitigation would be required.

(j) **No Impact.** The project site and surrounding area are relatively flat; therefore, the Proposed Project would not be built in an area subject to mudflows. The project site is located approximately five miles from the Pacific Ocean. Due to the distance to the ocean, the project site would not be subject to inundation from seiches or tsunamis. No impact would occur. Seiching is a phenomenon that occurs when seismic ground shaking induces standing waves (seiches) inside water retention facilities such as reservoirs and water tanks. Such waves can cause retention structures to fail and flood downstream properties. Because there are no water retention facilities located in close proximity to the project site, the risk associated with possible seiche waves is, therefore, not considered a potential constraint. No impact would occur.

Mitigation Measures: No mitigation would be required.

(k) **Less than Significant Impact.** Please refer to the response to question 3.9 (a) above. During construction of the Proposed Project, water quality impacts could occur without proper controls and compliance with regulations pertaining to the protection of water quality. However, the Proposed Project would be subject to the requirements of the statewide NPDES stormwater permit for construction activity (Standard Condition WQ-1), and implementation of the construction Best Management Practices (BMPs) detailed in the SWPPP during construction activities. To comply with the requirements of the Construction General Permit, the Applicant must ensure that the Permit Registration Document, including a SWPPP and Notice of Intent, are filed with the State Water Resources Control Board prior to issuance of a grading permit. Therefore, a less than significant impact would occur with adherence to Standard Condition WQ-1.

Mitigation Measures: No mitigation would be required.

(l) **Less than Significant Impact.** Please refer to the response to question 3.9 (a) above. During operation, expected pollutants associated with the proposed retail and lumber sales and storage uses on the project site include suspended solids/sediments, nutrients, pathogens (bacteria/virus), pesticides, oil and grease, and trash and debris. A Preliminary WQMP has been prepared for the Proposed Project to comply with the requirements of the local NPDES Stormwater Program (Joseph C. Truxaw and Associates, Inc. 2014b). The Final WQMP will include design features and BMPs to target pollutants of concern in stormwater runoff from the project site (Standard Condition WQ-2). The Proposed Project would include design features that improve water quality. Roof cisterns installed on the roof of the Proposed Project would store approximately 100,000 gallons of rainwater, and thereby reduce stormwater runoff from the project site. The

landscaping plan for the Proposed Project also includes the use of permeable pavers and bioswales to allow for groundwater recharge that would reduce stormwater runoff. With implementation of the measures included in the WQMP and the additional design features associated with the Proposed Project operational water quality impacts as a result of the Proposed Project would be less than significant.

Mitigation Measures: No mitigation would be required.

(m) **Less than Significant Impact.** Please refer to the response to question 3.9 (a) above. Although the Proposed Project would involve operational activities associated with lumber sales and storage, including but not limited to material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), delivery areas, loading docks and other outdoor work areas, the Proposed Project would be expected to comply with the NPDES permit, WQMP, and SWPPP prepared for the Proposed Project. As specified in Standard Condition WQ-2, a variety of BMPs would also be implemented on site to reduce stormwater runoff and increase infiltration. Compliance with these plans and measures would reduce impacts to a less than significant level.

Mitigation Measures: No mitigation would be required.

(n) **Less than Significant Impact.** The Proposed Project is part of the Newport Bay Watershed (Environmental Protection Agency [EPA] 2009), and is located across the street from an open tributary to Upper Newport Bay. Runoff from the project site drains to the existing Santa Ana Delhi Channel beneath the project site and Bristol Street, which both drain to the Newport Bay Watershed. The Newport Bay Watershed eventually drains to the Upper Newport Bay Preserve located approximately one mile from the project site and the Pacific Ocean located approximately five miles from the project site. The Newport Bay Watershed is currently listed as impaired by a variety of pollutants (EPA 2009). Runoff from the project site would not substantially impact the Newport Bay Watershed, Upper Newport Bay Preserve, or the Pacific Ocean given the size and scale of the Proposed Project. In addition, the Proposed Project would be required to conform to the NPDES permit and implement measures from the SWPPP and WQMP, including BMPs. The Proposed Project would not interfere with the beneficial uses of aforementioned bodies of water. Therefore, impacts to water bodies that serve as drainage for the Proposed Project would be less than significant.

Mitigation Measures: No mitigation would be required.

(o) **Less than Significant Impact.** Grading on the project site would affect drainage patterns and expose soil that could result in an increased potential for soil erosion and siltation compared to existing conditions. However, grading on the project site and changes in drainage would not result in a significant change in the flow or velocity of stormwater runoff. The site's drainage plan would be designed by a registered civil engineer to safely retain, detain, and/or convey stormwater runoff. According to the Preliminary Drainage Study prepared for the Proposed Project, drainage patterns on and surrounding the project site would remain similar to existing conditions (Joseph C. Truxaw and Associates, Inc. 2014a). As described in the response to question 3.9 (e) above, the Proposed Project would result in decreases in runoff from the project

site for the 10-year, 25-year, and 100-year storm frequencies. Therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(p) **Less than Significant Impact.** Grading on the project site would affect drainage patterns and expose soil that could result in an increased potential for soil erosion and siltation compared to existing conditions. As discussed above in the response to question 3.9 (a) and specified in Standard Condition WQ-1, the Construction General Permit requires preparation of a SWPPP to identify Construction BMPs to be implemented as part of the Proposed Project to reduce impacts to water quality during construction, including those impacts associated with soil erosion and siltation. Through compliance with Standard Condition WQ-1, a less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

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3.10 LAND USE/PLANNING

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

3.10.1 Impact Analysis

(a) **No Impact.** The Proposed Project is located in an area zoned for local business uses and has a general commercial land use designation (City of Costa Mesa 2004; City of Costa Mesa 2007). The project site previously served as a self-storage site. The Proposed Project is located directly south of the SR-55 and SR-73 juncture, and would not divide any established communities. Therefore, no impact would occur.

Mitigation Measures: No mitigation would be required.

(b) **Less than Significant Impact.** Land uses on and around the project site are regulated by the City of Costa Mesa's (City's) General Plan and Zoning Ordinance.

General Plan. The Costa Mesa General Plan (2000) is the City's most fundamental planning document. The General Plan establishes a vision for the City's future growth and change and provides a blueprint for development throughout the community. The project site is designated for General Commercial land uses by the City's General Plan. Allowable uses within the General Commercial General Plan land use designation include a combination of junior department stores and retail clothing stores, theaters, restaurants, hotels and motels, automobile sales and service establishments, markets, drug stores, retail shops, financial institutions, service establishments and support office uses. The General Commercial land use designation allows a Floor Area Ratio (FAR) between 0.20-0.75 for high to very low traffic uses, respectively. Because the proposed hardware store and outdoor lumber yard contains both a commercial use (retail store, office mezzanine) and industrial use (material storage structures, mill shed), a 0.35 maximum FAR is applied. The Proposed Project would be subject to a maximum FAR of 0.35 in accordance with General Plan Policy LU-1E.1(a). The FAR calculated for the Proposed Project is 0.346, and therefore, the Proposed Project would comply with the City's FAR requirements. Title 13 of the Costa Mesa Zoning Code allows the exclusion of outdoor, unenclosed storage sheds from the FAR calculation, as well as allowances for the outdoor material storage uses as low traffic generators. In this case, the unenclosed pole shed was not calculated in the FAR ratio. The Proposed Project would not conflict with any applicable land use plans or policies; therefore, no impacts would occur.

Zoning Ordinance. The City's Zoning Ordinance is the primary implementation tool for the City's General Plan Land Use Element and the goals and policies contained therein. For this reason, the Zoning Map must be consistent with the General Plan Land Use Map. The General

Plan Land Use Map indicates the general location and extent of future land use in the City. The Zoning Ordinance, which includes the Zoning Map, contains more detailed information about permitted land uses, building intensities, and required development standards.

The Zoning Ordinance designation for the project site is C1 (Local Business). The C1 zoning designation allows a FAR between 0.20-0.75 for high to very low traffic uses, respectively. As indicated previously, the Proposed Project would be subject to a maximum FAR of 0.35. Because the Proposed Project's FAR would be 0.346, the Proposed Project would comply with the City's FAR requirements.

The following discretionary approvals are required:

- Conditional Use Permit for Hardware Store and Outdoor Lumber Yard;
- Development Review for new construction of 65,263 sf store and associated outdoor material storage structures and mill shed;
- Variances from building height from 34 to 41 feet for the solar roof canopy, elevator overrun, B-shed, and roof-deck parking level;
- Variance from front setback requirement (20 feet required, 10 feet proposed); and
- Planned Signing Program for freestanding signs up to 25 feet in height (12 feet allowed; 25 feet proposed)

Approval of the Proposed Project would require a variance to allow a maximum height of 41 feet for the Proposed Project. Code establishes a maximum height limit of two stories/30 feet in the commercial zone. The following building heights are proposed from grade level:

- Elevator/Stairwell Overrun: 41 feet
- Solar Panel Deck: 34 feet
- Shed B: 34 feet
- Roof Level Parking

In addition, a Planned Sign Program would be required to allow a proposed sign height of 25 feet, which is higher than the maximum 12-foot height allowed by the development standards contained in the City's Zoning Ordinance.

Table 3.10.A, Zoning Ordinance Development Standards Consistency Analysis, provides a list of applicable development standards and an evaluation of the Proposed Project's consistency with each standard.

As described in Table 3.10.A, the Proposed Project would require variances related to the building heights and the front setback along Bristol Street. With approval of such variances, the Proposed Project would be consistent with the City's Zoning Code.

Table 3.10.A: Zoning Ordinance Development Standards Consistency Analysis

City of Costa Mesa Development Standards for C1 (Local Business) Zone[1]	Project Consistency Analysis
Minimum Lot Area: 12,000 square feet (116m^2)	**Consistent.** The lot size for the Proposed Project is 6.6 ac, or 287,696 sf.
Minimum Lot Width for Newly Subdivided Lots: 120 feet	**Consistent:** The lot width for the project site is approximately 1,127 feet.
Minimum Lot Width: 60 feet	**Consistent:** The lot width for the project site is approximately 1,127 feet.
Maximum Floor Area Ratio: 0.35	**Consistent:** The Proposed Project's FAR would be 0.346.
Maximum Building/Structure Height: 2 stories/30 feet	**Variances Required.** With the solar roof canopy, the proposed height for Building A would be approximately 34 feet, with the exception of the elevator and stairwell providing roof access for Building A, which would be 41 feet. The B Shed would be 34 feet tall. Roof level parking is proposed. All other structures on site would be less than 30 feet in height, and would therefore comply with the maximum building height specified in the City's Zoning Code. With approval of a height variance for Building A and B Shed, the Proposed Project would be consistent with the City's Zoning Code.
Minimum Setbacks • **Front:** 20 feet • **Side (Interior):** 15 feet on one side and 0 feet on the other side. Exception: If the side property line is adjacent to a residential zone, all buildings shall maintain a side setback from the residential property line of 2 times the building height at all locations. • **Rear (Interior):** 0 feet	• Front: 10 feet. **Variance Required.** • Side (Interior): **Consistent.** • Rear (Interior): **Consistent.**
Maximum Projections Depth • **Roof or Eaves Overhang; Awning:** 2 feet 6 inches into required side setback. 5 feet into required front or rear setback. • **Open, Unenclosed Stairways:** 2 feet 6 inches into required setback area.	**Consistent.** The Proposed Project would not include any roof eaves, awnings, or open, unenclosed stairways into the required setback area for the project site.
Parking: 2.5 spaces per 1,000 sf (239 spaces)[2]	**Consistent.** The Proposed Project would provide 286 spaces in the form of both at-grade and roof-top parking stalls.
Landscaping: 5% of total site area	**Consistent.** The Proposed Project would provide 15,748 sf of landscaping, a surplus of 1,363 sf over the required 14,385 sf.

Table 3.10.A: Zoning Ordinance Development Standards Consistency Analysis

City of Costa Mesa Development Standards for C1 (Local Business) Zone[1]	Project Consistency Analysis
Signs • **Maximum Area**: 0.5 sf per lineal foot of building frontage facing the street, with a maximum of 75 sf per tenant • **Maximum Height**: 12 feet	**Consistent (Maximum Area).** The Proposed Project would be allowed 1,329 sf of signage, but proposes only 1,293 sf of signage. **Consistent (Maximum Height):** 25 feet. **Planned Signing Program Required.** The Proposed Project would require a Planned Sign Program (PSP) for a proposed sign height of 25 feet. With approval of a PSP for the proposed signage, the Proposed Project would be consistent with the City's Zoning Code.
Planned Signing Program: Required.	**Consistent.** The Proposed Project would implement a planned signage program.
Conditional Use Permit, Variances, Development Review: Required. The final review authority is the Planning Commission.	**Consistent.** The Proposed Project would be considered by the Planning Commission.
Uses Underroof: All uses shall be conducted underroof except as allowed by a minor conditional use permit or as permitted elsewhere in this Zoning Code. Exception: Sidewalk and parking lot sales may be allowed for a maximum of 4 sales per fiscal year with a maximum length of 3 days per sale and subject to obtaining a business permit.	**Consistent.** The Proposed Project would comply with zoning code requirements to maintain all operations underroof, except as allowed in the outdoor lumber yard area by CUP.
Outdoor Storage: Permitted when: Storage does not interfere with required parking or vehicular access; storage is not in required setback area abutting a public right-of-way; storage does not decrease required landscaping; storage is completely screened from view from street or adjacent properties; storage complies with all applicable codes and regulations including, but not limited to, the Uniform Fire Code. Shipping containers shall also comply with setback requirements for structures, floor area ratio standards, and parking requirements. A permanent foundation shall be required for shipping containers. Storage not meeting these criteria requires approval of a minor conditional use permit.	**Consistent.** The Proposed Project would comply with all outdoor storage requirements as allowed by CUP.

Source: City of Costa Mesa. *Costa Mesa Municipal Code Commercial Development Standards,* as amended.
[1] City of Costa Mesa. Costa Mesa *Municipal Code,* as amended.
[2] Parking as determined by LLG study dated December 18, 2014.
ac = acres
ft = foot/feet
sf = square feet

The Proposed Project would be a compatible use subject to a Conditional Use Permit (CUP) that would allow for a hardware store and outdoor storage yard in an area zoned for commercial uses. With approval of the CUP and Development Review, the Proposed Project would be consistent with applicable goals and policies outlined in the City's General Plan and development standards outlined in the City's Zoning Code. Therefore, implementation of the Proposed Project would not result in conflicts with any applicable land use plan, policy, or regulation applicable to the project.

Mitigation Measures: No mitigation would be required.

(c) **No Impact.** The project site is not located within a "Habitat Reserve System" or a "Covered Habitat" area as identified by the Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) (County of Orange 1996). No impact would occur.

Mitigation Measures: No mitigation would be required.

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3.11 MINERAL RESOURCES

Would the project:		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
(b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.11.1 Impact Analysis

(a) **No Impact.** No known mineral resources are present on the project site (City of Costa Mesa 2000). There are no oil wells located in, or immediately adjacent to, the Proposed Project site according to the State of California Department of Conservation Regional Wildcat District W1-6 Map (California Department of Conservation 2008). The Proposed Project is not located in a Significant Mineral Aggregate Resource Area (SMARA), and no mining activity has been conducted on site (California Department of Conservation). Therefore, the Proposed Project would not result in the loss of a valuable commercial or locally important mineral resource. No impacts would occur.

Mitigation Measures: No mitigation would be required.

(b) **No Impact.** The project area is not located within a locally-important mineral resource recovery site (City of Costa Mesa 2000). No impacts would occur.

Mitigation Measures: No mitigation would be required.

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3.12 NOISE

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

3.12.1 Introduction

A noise impact analysis study (see Appendix G) was performed by Kunzman Associates, Inc. to address the possibility of significant impacts due to noise (Kunzman 2014b). The findings of this study are summarized in the following sections.

3.12.2 Environmental Setting

Sensitive Receptors. Some land uses are considered more sensitive to intrusive noise than others due to the amount of noise exposure and the types of activities typically involved at the receptor location. Noise exposure at these sensitive receptors is predicated on the magnitude and frequency of said noise event, exposure duration, and exterior-to-interior sound attenuation. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses. For purposes of the noise analysis, the nearest sensitive receptors to the project site are single family residential units located west of Bristol Street approximately 335 feet southwest of the proposed Ganahl Lumber facility on Master's Circle. These sensitive receptors would have direct line of sight exposure to the noisiest activities associated with the construction of the Proposed Project.

City of Costa Mesa General Plan Noise Element. The City of Costa Mesa (City) aims to protect its citizens and property from injury, damage, or destruction from noise hazards and to work towards improved noise abatement. Objectives and policies applicable to the Proposed Project are presented below:

- Objective N-1A: Control noise levels within the City for the protection of residential areas and other sensitive land uses from excessive and unhealthful noise.
    - Policy N-1A.1: Require, as a part of the environmental review process, that full consideration be given to the existing and projected noise environment.

The Noise Element also establishes the noise/land use compatibility criteria to be used in determining whether a new use is appropriate within a given noise environment. The proposed land use can be considered both an industrial land use (outdoor mill and wood processing yard) and a commercial land use (retail store) for purpose of determining noise impacts. Industrial land uses are considered to be normally acceptable in environments with noise levels of up to 70 A-weighted decibels (dBA) community noise equivalent (CNEL) and conditionally acceptable in environments with noise levels of up to 75 dBA CNEL. Commercial land uses are considered normally acceptable in environments with noise levels of up to 67.5 dBA CNEL and conditionally acceptable in environments with noise levels of up to 77.5 dBA CNEL.

City of Costa Mesa Municipal Code. The City's Municipal Code provides standards for both exterior and interior noise levels in Section 13-280 and 13-281, respectively (City of Costa Mesa as amended). These regulations are meant to prevent excessive noise levels in the City. Throughout the City, it is unlawful to create noise levels that will affect residential properties that exceed:

(1) The noise standard for a cumulative period of more than thirty (30) minutes in any hour;
(2) The noise standard plus five (5) dB(A) for a cumulative period of more than fifteen (15) minutes in any hour;
(3) The noise standard plus ten (10) dB(A) for a cumulative period of more than five (5) minutes in any hour;
(4) The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one (1) minute in any hour; or
(5) The noise standard plus twenty (20) dB(A) for any period of time.

In addition, Section 13-283, Loud, Unnecessary Noise, of the City's Municipal Code addresses other noise impacts that may be considered a nuisance.

Industry Accepted Standards. It is generally recognized that in an urban noise environment, a 3 dBA increase in noise level is considered to be barely perceptible, while an increase of 5 dBA would be clearly perceptible. An increase above ambient noise levels between 3 dBA and 5 dBA would result in an adverse, but not significant impact, while an increase in noise level of 5 dBA or more would be considered a significant impact. These guidelines are commonly used in acoustics and noise impact assessments to address increases in noise levels. Table 3.12.A provides land use compatibility standards for exterior noise levels.

Ambient Noise Measurements. Noise measurements were taken on-site at the existing Ganahl Lumber Facility between 11:53 a.m. and 12:33 p.m. on March 18, 2014. Noise sources included traffic from State Route 73 (SR-73) and Bristol Street, trucks, forklifts, and other lumberyard operations. Please see Table 3.12.B, Ambient Noise Levels, below for the ambient noise levels at the existing Ganahl Lumber Facility and the nearest sensitive receptors to the project site.

Table 3.12.A: 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	50-70	70-80	80-85	N/A
Auditoriums, concert halls, amphitheaters	N/A	50-70	N/A	70-85
Residential—low-density single-family, duplex, mobile homes	50–60	60-70	70–75	75-85
Residential—multifamily	50–65	65–70	70–75	75-85
Transient lodging—motels, hotels	50–65	65-70	70–80	80-85
Schools, libraries, churches, hospitals, nursing homes	50–60	60–65	65-80	80-85
Actively used open spaces—playgrounds, neighborhood parks	50–67.5	N/A	67.5-75	75-85
Golf courses, riding stables, water recreation, cemeteries	50–70	N/A	70–80	80-85
Office buildings, business commercial, and professional	50–67.5	67.5–7.5	77.5-85	N/A
Industrial, manufacturing, utilities, agriculture	50–70	70–80	80-85	N/A

Source: Modified from U.S. Department of Housing and Urban Development Guidelines and State of California Standards and the City of Costa Mesa General Plan.

Notes: 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, would 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.

dB = decibels
CNEL = community noise equivalent level
L_{dn} = day-night average level
N/A = not applicable

Table 3.12.B: Ambient Noise Levels

Name	Land Use	Time Period	Measurement Period	Existing Ambient Noise Levels (dBA)					
				L_{eq}	L_{max}	L_2	L_g	L_{25}	L_{50}
NM1	Existing Ganahl Lumber Facility	11:53 AM-12:08 PM	15 minutes	70.3	86.6	79.8	74.2	68.3	65.7
NM2	Single-Family Residential	12:18 PM-12:33 PM	15 minutes	63.9	82.2	73.9	65.6	59.9	57.7

Source: Kunzman (2014b).

3.12.3 Impact Analysis

(a) **Less than Significant Impact**

Construction Impacts. Construction-related short-term noise levels would be higher than existing ambient noise levels in the vicinity of the project site, but would no longer occur once construction of the Proposed Project is complete. For purposes of the noise impact analysis, sensitive receptors that may be affected by project construction include the single-family detached residential dwelling units located southwest of the Proposed Project and west of Bristol Street on The Masters Circle. The closest single-family detached residential dwelling unit to the project site is approximately 335 feet to the southwest.

Construction noise varies depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week), and the duration of the construction work. The initial phase of construction would involve mass grading of the site, along with site development activities, including construction of internal roadways which involves fine grading, trenching, and paving activities. Following site preparation activities, the Proposed Project would include construction of buildings. Construction of the buildings would require the following phases: site development (fine grading, trenching, and paving), building construction, architectural coatings application, and paving associated with buildings.

Mass site grading is expected to produce the highest construction noise levels. Grading of the site is estimated to require a grader, backhoe, dozer, excavator, and water truck (modeled as a dump truck). Typical noise sources and noise levels associated with the site grading phase of construction are shown in Table 3.12.C, Typical Construction Equipment Noise Levels.

A worst case construction scenario was conducted to estimate construction noise at the closest sensitive receptors using the Road Construction Noise Model (RCNM) provided by the Federal Highway Administration (FHWA). Project construction noise levels may reach 64.3 dBA average noise levels (L_{eq}) and up to 65.0 dBA maximum noise level (L_{max}) at the nearest sensitive receptor located southwest of the project site. It should be noted that there is a six foot concrete barrier along the northeastern boundary of the potentially affected single family neighborhood. This barrier can be expected to reduce construction noise at back yards and first floor rooms by 5 dBA.

Project construction activities could temporarily increase ambient noise levels at the nearest sensitive receptor by less than 1 dB during daytime hours. This increase would not result in an audible change. As long as project construction activities adhere to Standard Condition NOISE-1 described below, which limits construction noise to the hours and days exempt from the City's Noise Ordinance, impacts would be less than significant.

Operation Impacts.

On-Site Operational Noise. As stated previously, for purposes of the noise impact analysis, the nearest sensitive receptors to the project site are the single-family detached residential dwelling units located approximately 335 feet southwest of the project site.

Table 3.12.C Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft)
Rock Drills	83-99	96
Jack Hammers	75-85	82
Pneumatic Tools	78-88	85
Pumps	74-84	80
Dozers	77-90	85
Scrapers	83-91	87
Haul Trucks	83-94	88
Cranes	79-86	82
Portable Generators	71-87	80
Rollers	75-82	80
Tractors	77-82	80
Front-End Loaders	77-90	86
Hydraulic Backhoe	81-90	86
Hydraulic Excavators	81-90	86
Graders	79-89	86
Air Compressors	76-89	86
Trucks	81-87	86

Source: Kunzman (2014b).
dBA = A-weighted decibels
ft = foot/feet

Representative operational noise measurements were taken in the existing lumber yard at the adjacent Ganahl Lumber facility. Average hour noise sources were comprised of trucks, backhoes, wood processing and loading equipment. Measured noise levels reached 70.3 dBA L_{eq} and 86.6 dBA L_{max}.

The above noise source levels were assigned to the project site approximately 80 feet northeast of Bristol Street to represent noise associated with the Proposed Project. This noise was then projected to the nearest sensitive receptors (approximately 335 feet to the southwest) where it is expected to reach 44.6 dBA L_{eq} and 60.9 dBA L_{max}. Project operational noise would not be discernible over existing daytime ambient noise levels (63.9 dBA L_{eq} and 82.2 dBA L_{max}) at sensitive receptors.

The Proposed Project would also include employee and visitor parking areas. Typical noises that may be generated by the proposed parking lot include landscaping maintenance, conversations and/or yelling in parking lots, vehicle doors closing, and car alarms. These types of activities can generate noise levels between 49 dBA (tire squeals) and 74 dBA (car alarms) at 50 feet and would attenuate to 32.6 dBA and 57.6 dBA at the nearest sensitive receptor to the proposed parking lot (approximately 330 feet). Noise associated with parking lot activities would not be discernible over existing ambient noise levels at the nearest sensitive receptors. Therefore, impacts would be less than significant.

Project Generated Traffic Noise Impacts to Sensitive Receptors. In order to determine if the project generated vehicle traffic would result in substantial increases in ambient noise levels at sensitive receptors along Bristol Street, *Existing and Existing Plus Project* vehicle noise were modeled utilizing trip generation provided in the traffic study prepared for the Proposed Project (LLG 2014). The existing average daily traffic (ADT) along the affected portion of Bristol Street is 22,800. The Proposed Project would add approximately 2,287 ADT. Modeled *Existing* noise levels at a distance of 100 feet from the centerline are 69.3 dBA CNEL; and modeled *Existing Plus Project* traffic noise levels at 100 feet from the centerline are 69.5 dBA CNEL. The Proposed Project would result in an increase of approximately 0.2 dBA CNEL and would not result in a substantial increase in ambient noise levels. Impacts would be less than significant.

Traffic Noise Impacts to the Proposed Project. The City of Costa Mesa Noise Element establishes the noise/land use compatibility criteria to be used in determining whether a new use is appropriate within a given noise environment. As described above, industrial land uses are considered to be normally acceptable in environments with noise levels of up to 70 dBA CNEL and conditionally acceptable in environments of up to 80 dBA CNEL. Commercial land uses are considered normally acceptable in environments with noise levels of up to 67.5 dBA CNEL and conditionally acceptable in environments with noise levels of up to 77.5. Noise levels associated with SR-73, the dominant noise source at the project site, are expected to reach up to 74.7 dBA CNEL at the lumber yard and 72.6 at the exterior of the proposed retail store. As shown in Table 3.12.A, Land Use Compatibility for Exterior Community Noise, these noise levels are considered to be conditionally acceptable according to the City of Costa Mesa's Noise Element, which means that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Mitigation Measure NOISE-1 would require Building A to be designed to include closed windows and air conditioning, which would reduce potential noise impacts on the retail portion of the Proposed Project. The Ganahl Lumber facility would be subject to Section 1910.95(b)(1) of State of California Code Regulations, which establishes noise level exposure criteria at which employees must utilize personal protective equipment. With implementation of Mitigation Measure NOISE-1, noise impacts during operations would be less than significant.

Standard Conditions:

NOISE-1: **Short-Term Construction Related Noise Impacts.** The following standard conditions are required of all development within the City of Costa Mesa (City) and would reduce short-term construction related noise impacts resulting from the Proposed Project:

- The Applicant’s construction contractor shall limit all construction-related activities to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. No construction activities shall be permitted outside of these hours or on Sundays and federal holidays.

Mitigation Measure:

NOISE-1: **Noise Reduction Features.** Prior to the issuance of building permits for Building A, the Applicant shall submit the building plans for review and approval by the City of Costa Mesa (City) Building Official, or designee, to ensure the building will be designed with closed windows and an air conditioning system to reduce noise levels associated with traffic noise to an acceptable level.

(b) **Less Than Significant Impact.**

Groundborne vibration is an oscillatory motion that is often described by the average amplitude of its velocity in inches per second or more specifically, peak particle velocity (ppv). Groundborne vibration is much less common than airborne noise; the ambient peak particle velocity of a residential area is commonly .0003 inches per second or less, well below the threshold of human perception of .0059 inches per second. Nonetheless, human reactions to vibration are highly subjective, and even levels below the threshold can cause minor annoyances like rattling of dishes, doors, or fixtures.

Table 3.12.D shows the peak particle velocities of some common construction equipment and haul trucks (loaded trucks). The most vibration causing piece of equipment that would likely be used on the site is the vibratory roller. This machine can cause vibration strong enough to annoy people over 100 feet away. However, there are no sensitive receptors located within 100 feet of the project site; therefore, there would not be an impact.

Table 3.12.D: Construction Equipment Vibration Source Levels

Equipment	Peak Particle Velocity in inches per second		
	at 25 ft	at 50 ft	at 100 ft
Clam Shovel Drop (slurry wall)	0.202	0.071	0.025
Vibratory Roller	0.210	0.074	0.026
Hoe Ram	0.089	0.031	0.011
Large Bulldozer	0.089	0.031	0.011
Caisson Drilling	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Jackhammer	0.035	0.012	0.004
Small Bulldozer	0.003	0.001	0.0004

Source: Kunzman (2014b).

Haul trucks would not be anticipated to exceed 0.10 inch/second ppv at 10 feet (Kunzman 2014b). Predicted vibration levels at the nearest off-site structures, which are located in excess of 25 feet from the Bristol Street and Newport Boulevard roadway segments in the vicinity of the project site, would not be anticipated to exceed even the most conservative threshold of 0.2 inch/second ppv. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(c) **Less Than Significant Impact.** As previously stated in the response to question 3.12 (a) above, operational noise would not be discernible over existing daytime ambient noise levels (63.9 dBA L_{eq} and 82.2 dBA L_{max}) at sensitive receptors. Furthermore, noise associated with parking lot activities would not be discernible over existing ambient noise levels at the nearest sensitive receptors. Impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(d) **Less than Significant Impact.** As previously stated in the response to question 3.12 (a) above, construction activities could temporarily increase ambient noise levels at the nearest sensitive receptor by less than 1 dB during daytime hours. This increase would not result in an audible change. With adherence to Standard Condition NOISE-1, which limits construction noise to the hours and days exempt from the City's Noise Ordinance, impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(e) **Less than Significant Impact.** The project site is located approximately 0.5 mile to the west of the John Wayne Airport and is within the land use planning area managed by the Airport Environs Land Use Plan for John Wayne Airport (AELUP) (ALUC 2008). The project site is located within the 60 dB Community Noise Equivalent Level (CNEL) contour (ALUC 2008). Commercial land uses exposed to noise levels of 60 dB CNEL are considered "Normally Consistent" (conventional construction methods used, no special noise reduction requirements) by the AELUP (ALUC 2008). Impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(f) **No Impact.** There are no private airstrips within the vicinity of the project site. No impact would occur.

Mitigation Measures: No mitigation would be required

3.13 POPULATION AND HOUSING

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

3.13.1 Impact Analysis

(a) **Less than Significant Impact.** The Proposed Project would replace the existing Ganahl Lumber store located adjacent to the project site with a new Ganahl Lumber store. Initially, the new store would employ 90 to 100 people, an increase of approximately 10 to 20 employees over the existing Ganahl Costa Mesa store. At full capacity, the store would employ approximately 120 employees, an increase of 40 employees. Because all of the additional employees would be able to be hired from the existing local labor pool, the Proposed Project would not substantially increase the employment opportunities in the area capable of inducing population growth. A less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(b) **No Impact.** The Proposed Project would not displace housing. The project site is located on a vacant lot adjacent to the existing Ganahl Lumber store. No impact would occur.

Mitigation Measures: No mitigation would be required.

(c) **No Impact.** The Proposed Project would not remove housing; therefore, it would not displace people. No impact would occur.

Mitigation Measures: No mitigation would be required.

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3.14 PUBLIC SERVICES

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

3.14.1 Impact Analysis

(a) i) **Less than Significant Impact. .** The City of Costa Mesa (City) Fire Department is located less than two miles southwest of the project site and provides fire services to the project site (City of Costa Mesa 2014b). The Proposed Project would not create a substantial new fire hazard. At full capacity, the store would employ approximately 120 employees, an increase of 40 employees over the existing Ganahl Costa Mesa store. These employees would be hired from the local labor pool. Therefore, the Proposed Project would not result in the need for new or physically altered government facilities or affect response time or other performance objectives. The Proposed Project includes construction of a new Ganahl Lumber retail store and lumber storage yard that would replace the existing Ganahl Lumber store on the property adjacent to the project site. The Proposed Project would result in an increase in the total square footage of the retail store and lumber storage yard; however, this increase in size would not result in a significant increase in demand for fire protection services. Because the Proposed Project involves relocation of an existing use that has been anticipated by the City's General Plan, impacts to fire protection services would be less than significant.

Mitigation Measures: No mitigation would be required.

(a) ii) **Less than Significant Impact.** The City of Costa Mesa Police Department is located less than two miles southwest of the project site and provides police services to the project site (City of Costa Mesa 2014a). As discussed above, the new store would employ approximately 120 employees, an increase of 40 employees over the existing Ganahl Costa Mesa store.These employees would be hired from the local labor pool. Therefore, the Proposed Project would not result in the need for new or physically altered government facilities or affect response time or other performance objectives. The Proposed Project includes construction of a new Ganahl Lumber retail store and storage yard that would replace the existing Ganahl Lumber store on a property adjacent to the project site. Because the Proposed Project involves relocation of an existing use that has been anticipated by the City's General Plan, and no increase in police protection services is expected, a less than significant impact to police protection services would occur.

Mitigation Measures: No mitigation would be required.

(a) iii) **No Impact.** There are ten schools in the vicinity of the project site: Mariners Christian School, Sonora Elementary School, Pacific Coast High School/Community Home Education Program (CHEP), Vineyard Christian School, Montessori Christian School, Back Bay Montessori, Saint John the Baptist Catholic School, Access County Community School, Costa Mesa High School, and Davis Magnet School. All schools are located within one mile of the project site, but are physically separated from the project site by State Route (SR-55) or State Route 73 (SR-73). The Proposed Project would generate between 10 and 40 new employees, which would be able to be hired from the local labor pool. This increase in employment would not be growth-inducing; therefore, there would not be a substantial demand for schools, parks, or other public facilities. No impact would occur. The Applicant would pay applicable development impact fees as determined by the Newport-Mesa Unified School District. The Proposed Project includes construction of a new Ganahl Lumber retail store and lumber storage yard that would replace the existing Ganahl Lumber store on the property adjacent to the project site. Because the Proposed Project involves relocation of an existing use anticipated by the City's General Plan, and no increase in demand for public schools is expected, no impacts to schools would occur.

Mitigation Measures: No mitigation would be required.

(a) iv) **No Impact.** The City of Costa Mesa operates 30 parks within its City boundaries. Bark Park and Tewinkle Park located at 890 and 970 Arlington Drive, respectively, are located within 0.5 miles of the project site. The Proposed Project would generate between 10 and 40 new employees, which would be able to be hired from the local labor pool. This increase in employment would not be growth-inducing; therefore, there would not be a substantial demand for schools, parks, or other public facilities. Because the Proposed Project involves relocation of an existing use anticipated by the City's General Plan, no increase in demand for parks is expected. Therefore, no impact would occur.

Mitigation Measures: No mitigation would be required.

(a) v) **No Impact.** The Proposed Project would generate between 10 and 40 new employees, which would be able to be hired from the local labor pool. This increase in employment would not be growth-inducing; therefore, there would not be a substantial demand for other public facilities. The project would not result in the need for new or physically altered government facilities or affect response time or other performance objectives. Because the Proposed Project involves relocation of an existing use anticipated by the City's General Plan, and no increase in demand for government facilities is expected, no impacts to other government facilities would occur.

Mitigation Measures: No mitigation would be required.

3.15 RECREATION

Would the project:		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
(b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.15.1 Impact Analysis

(a) **No Impact.** The Proposed Project does not involve residential uses and would not cause a direct increase in the population of the City or surrounding areas. At full capacity, the new store would employ approximately 120 employees, an increase of 40 employees over the existing Ganahl Costa Mesa store. No substantial increase in demand, or use of, existing parks or recreational facilities would result from the implementation of the Proposed Project.

Mitigation Measures: No mitigation would be required.

(b) **No Impact.** The Proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse effect on the environment. No impact would occur.

Mitigation Measures: No mitigation would be required.

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3.16 TRANSPORTATION/TRAFFIC

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

3.16.1 Introduction

A focused traffic impact study (see Appendix H) was completed for the Proposed Project by Linscott, Law, & Greenspan, Engineers (LLG 2014). The focused traffic impact study evaluated three key study intersections in the vicinity of the project site which included:

1. Southbound Newport Boulevard at Bristol Street (signalized);
2. Northbound Newport Boulevard at Bristol Street (signalized); and
3. Red Hill Avenue/Santa Ana Avenue at Bristol Street (signalized).

These key locations were selected for evaluation based on discussions with City of Costa Mesa (City) staff and in consideration of the Orange County Congestion Management Program (CMP). The Level of Service (LOS) analysis at these key locations were used to evaluate the potential traffic related impacts associated with area growth, cumulative projects, and the Proposed Project. The findings of this investigation are summarized in the following sections.

3.16.2 Environmental Setting

The principal local street network serving the project site includes Bristol Street, Red Hill Avenue, and Newport Boulevard. The following discussion provides a brief synopsis of these key area streets.

Bristol Street is generally a six-lane roadway, divided with a two-way left turn pocket, oriented in the east-west direction. The existing two-way left-turn along the project site's frontage and the

existing Ganahl Lumber store now serves to provide left-turn ingress and egress to the existing development along the south side as well as the development on the north side. It is classified as a Major Arterial in the City of Costa Mesa Circulation Element. The posted speed limit on Bristol Street is 45 miles per hour (mph). On-street parking is not permitted along this roadway in the vicinity of the project site. Traffic signals control the study intersections of Bristol Street at Newport Boulevard (southbound), Newport Boulevard (northbound), and Red Hill Avenue. Bristol Street borders the project site to the south.

Red Hill Avenue is generally a four-lane, divided roadway, oriented in the north-south direction. The posted speed limit on Red Hill Avenue is 50 mph. On-street parking is not permitted along this roadway in the vicinity of the project site. Red Hill Avenue is classified as a Major Arterial in the City of Costa Mesa Circulation Element.

Newport Boulevard is a one-way, two-lane roadway oriented in the north-south direction. The Newport Boulevard frontage road parallels the Costa Mesa Freeway (State Route 55 [SR-55]) and provides local access to the development that straddles the freeway on both sides. The posted speed limit on Newport Boulevard is 45 mph. On-street parking is not permitted along this roadway in the vicinity of the project site.

Existing a.m. and p.m. peak hour operating conditions for the three key study intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology for signalized intersections (LLG 2014).

Table 3.16.A summarizes the existing peak hour LOS for the three key study intersections based on existing traffic volumes and current street geometrics. It should be noted that the existing traffic volumes include traffic that is now generated by the existing Costa Mesa Ganahl Lumber store and current LOS are representative of this condition.

Table 3.16.A: Existing Peak Hour Intersection Capacity Analysis

Key Intersection	Time Period	Jurisdiction	Control Type	ICU	LOS
Newport Boulevard (SB) at Bristol Street	AM	City of Costa Mesa	3 Phase Signal	0.233	A
	PM			0.492	A
Newport Boulevard (NB) at Bristol Street	AM	City of Costa Mesa	2 Phase Signal	0.276	A
	PM			0.415	A
Red Hill Avenue at Bristol Street	AM	City of Costa Mesa	8 Phase Signal	0.409	A
	PM			0.287	A

Source: Linscott, Law, & Greenspan, Engineers (2014).
ICU = Intersection Capacity Utilization
LOS = level of service
SB = southbound
NB = northbound

3.16.3 Impact Analysis

(a) **Less than Significant Impact.** The City of Costa Mesa's General Plan Circulation Element identifies and establishes the City's policies governing the system of roadways, intersections, bike paths, pedestrian ways, and other components of the circulations system, which collectively provide for the movement of persons and goods throughout the City (City of Costa Mesa 2000). The Circulation Element includes two goals:

- **Goal CIR-1:** Transportation – It is the goal of the City of Costa Mesa to provide for a balanced, uncongested, safe, and energy-efficient transportation system, incorporating all feasible modes of transportation; and
- **Goal CIR-2:** Transportation System Management – It is the goal of the City of Costa Mesa to provide for standard service levels at signalized intersections by constructing capacity improvements for all various modes of circulation, adopting land use intensities commensurate with planned circulation improvements and implementing traffic demand reduction programs, thereby creating a more energy efficient transportation system.

The Circulation Element also lists several objectives and policies to achieve the City's circulation goals.

Construction Impacts

The Proposed Project would generate short-term construction related vehicle trips. However, traffic generated by construction of the Proposed Project would be temporary and would not conflict with the City of Costa Mesa's Circulation Element. Impacts would be less than significant.

Operational Impacts

The traffic impacts of the Proposed Project during the a.m. peak hour and p.m. peak hour were evaluated based on analysis of future operating conditions at the three key study intersections and the two future site driveways. The future volume-to-capacity relationships and service level characteristics at each study intersection were analyzed. The significance of the potential impacts of the Proposed Project at each key intersection was then evaluated using the following traffic impact criteria.

Impact Criteria and Thresholds

Per the City of Costa Mesa guidelines, LOS D is the minimum acceptable level of service that should be maintained during the weekday a.m. peak hour and weekday p.m. peak hour. Per the City's criteria, the Proposed Project is considered to have a significant impact if the following criteria are met:

For signalized intersections:

- The ICU value under "with the Proposed Project" conditions is 0.91 or greater (LOS E or F); and
- The ICU increase attributable to the Proposed Project is 0.01 or greater.

For unsignalized intersections:

- The estimated delay under "with the Proposed Project" conditions is 35.1 seconds/vehicle (s/v) or greater (LOS E or F).

Traffic Impact Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed at the three key intersections for existing plus project and near-term (Year 2016) traffic conditions:

A. Existing Traffic Conditions;
B. Existing Plus Proposed Project Traffic Conditions;
C. Scenario (B) with Improvements, if necessary;
D. Near-Term (Year 2016) Cumulative Traffic Conditions;
E. Near-Term (Year 2016) Cumulative plus Project Traffic Conditions;
F. Scenario (E) with Improvements, if necessary.

Existing Plus Proposed Project Analysis

Table 3.16.B summarizes the peak hour LOS results for existing plus project traffic conditions at the three key study intersections using the ICU methodology and the Proposed Project's unsignalized driveway using the methodology outlined in Chapter 17 of the Highway Capacity Manual 2000 (HCM 2000).

Table 3.16.B: Existing Plus Proposed Project's Peak Hour Intersection Capacity Analysis

Key Intersection	Time Period	Existing Traffic Conditions		Existing Plus Project Traffic Conditions		Significant Impact
		ICU/ HCM	LOS	ICM/ HCM	LOS	Yes/No
Newport Boulevard (SB) at Bristol Street	AM	0.233	A	0.233	A	No
	PM	0.492	A	0.492	A	No
Newport Boulevard (NB)/Driveway 1 at Bristol Street	AM	0.276	A	0.426	A	No
	PM	0.415	A	0.444	A	No
Red Hill Avenue at Bristol Street	AM	0.409	A	0.409	A	No
	PM	0.287	A	0.287	A	No
Driveway 2 (truck-entry only) at Bristol Street	AM	--	--	8.3 s/v	A	No
	PM	--	--	13.3 s/v	B	No

Source: Linscott, Law, & Greenspan, Engineers (2014).
HCM = Highway Capacity Manual
ICU = Intersection Capacity Utilization
LOS = level of service
NB = northbound
SB = southbound
s/v = seconds per vehicle
-- = intersection is part of Proposed Project and does not currently exist

Table 3.16.B indicates that traffic associated with the Proposed Project would not have an impact at any of the key study locations when compared to the LOS standards and significance impact criteria. As shown, the key study intersections, inclusive of the site driveways, are forecast to operate at LOS B or better during the weekday a.m. and p.m. peak hours.

Year 2016 Traffic Conditions. Table 3.16.C summarizes the peak hour LOS results at the three key study intersections and site driveway for the Year 2016 horizon year.

Table 3.16.C: Year 2016 Peak Hour Intersection Capacity Analysis

Key Intersection	Time Period	Existing Traffic Conditions		Year 2016 Cumulative Traffic Conditions		Year 2016 Cumulative Plus Project Traffic Conditions		Significant Impact
		ICU/ HCM	LOS	ICU/ HCM	LOS	ICU/ HCM	LOS	Yes/No
Newport Boulevard (SB) at Bristol Street	AM	0.233	A	0.246	A	0.246	A	No
	PM	0.492	A	0.506	A	0.506	A	No
Newport Boulevard (NB)/ Driveway 1 at Bristol Street	AM	0.276	A	0.289	A	0.447	A	No
	PM	0.415	A	0.436	A	0.467	A	No
Red Hill Avenue at Bristol Street	AM	0.409	A	0.426	A	0.426	A	No
	PM	0.287	A	0.301	A	0.301	A	No
Driveway 2 (truck-entry only) at Bristol Street	AM	--	--	--	--	8.4 s/v	A	No
	PM	--	--	--	--	13.9 s/v	B	No

Source: Linscott, Law, & Greenspan, Engineers (2014).
HCM = Highway Capacity Manual
ICU = Intersection Capacity Utilization
LOS = level of service
NB = northbound
SB = southbound
s/v = seconds per vehicle
--= intersection is part of Proposed Project and does not currently exist

Year 2016 Cumulative Traffic Conditions. An analysis of future (Year 2016) cumulative traffic conditions indicates that the addition of ambient traffic growth and related projects traffic would not impact any of the key study intersections. All three locations are projected to continue to operate at LOS A during the weekday a.m. and p.m. peak hours.

Year 2016 Cumulative Plus Proposed Project Conditions. Table 3.16.C indicates that traffic associated with the Proposed Project would not impact any of key study intersections. All study intersections are forecast to operate at an acceptable service level (LLG 2014). Operational impacts would be less than significant.

Therefore, increases in traffic related to the Proposed Project would be less than significant, and are not anticipated to result in conflicts with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

Mitigation Measures: No mitigation would be required.

(b) **Less than Significant Impact.** The analysis completed in the focused traffic impact study (LLG 2014) is consistent with the requirements and procedures outlined in the current Orange County CMP. The CMP requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System. Per the CMP guidelines, this number is based on the desire to analyze any impacts that will be three percent or more of the existing CMP highway system facilities' capacity. The Proposed Project is expected to generate 2,287 daily trips; however, Bristol Street and the portion of Newport Boulevard in the vicinity of the project site are not part of the County's designated CMP Highway System (the nearest CMP roadway is Harbor Boulevard, approximately 1.7 miles to the west of the project site). Therefore, the Proposed Project does not meet the criteria required for a CMP traffic analysis. Therefore, it is concluded that the Proposed Project would not have any significant traffic impacts on the CMP Highway System. It is noted that the three key study intersections along Bristol Street are forecast to continue to operate at acceptable service levels with the Proposed Project (LLG 2014). Impacts would be less than significant.

Mitigation Measures: No mitigation would be required.

(c) **No Impact.** The Proposed Project would be in compliance with the AELUP for John Wayne Airport, located approximately 2.7 miles from the project site, as demonstrated in the response to question 3.8 (e). The Proposed Project would not include structures or operational conditions that would require a change of air traffic patterns or increase traffic levels or a change in location that would result in substantial safety risks. No impact would occur.

Mitigation Measures: No mitigation would be required.

(d) **No Impact.** The Proposed Project would relocate the existing Costa Mesa Ganahl Lumber store to an adjacent parcel. The Proposed Project would have two driveways along Bristol Street that would be designed to allow for a safe and efficient movement of traffic to and from the project site. The internal circulation of the Proposed Project's site plan has been reviewed by LLG and was determined to be adequate to accommodate service/delivery trucks (SU-30), fire trucks, and large trucks (WB-62). No impact would occur.

Mitigation Measures: No mitigation would be required.

(e) **Less than Significant with Mitigation Incorporated.** Temporary impacts to emergency access may occur during construction. Implementation of Mitigation Measure HAZ-3, which requires the development of a Construction Staging and Traffic Control Plan that would ensure that emergency vehicles would be able to navigate through streets adjacent to the project site, would reduce impacts to emergency access to a less than significant level.

Mitigation Measures: Refer to Mitigation Measure HAZ-2 above.

(f) **No Impact.** The Orange County Transit Authority (OCTA) provides public transit service throughout the City and in proximity to the project site (i.e., Bristol Street and Red Hill Avenue). Approximately six OCTA bus stops are located within 0.5 mi of the project site. The Proposed Project would not affect existing transit service (i.e., bus stops or routes), or conflict with public

transportation programs, plans, or policies. Traffic could increase during construction, but would be temporary (see response to question 3.16 (a) above. During operation, traffic would be similar as the current conditions and transportation facilities would continue to perform as they do currently. No impact would occur.

Mitigation Measures: No mitigation would be required.

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3.17 UTILITIES/SERVICE SYSTEMS

Would the project:		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
(b)	Require or result in the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
(c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
(d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
(e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
(f)	Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
(g)	Comply with federal, state, and local statutes and regulations related to solid wastes.	☐	☐	☐	☒
(h)	Would the project include a new or retrofitted storm water treatment control Best Management Practice (e.g. water quality treatment basin, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g. increased vectors and odors?	☐	☐	☐	☒

3.17.1 Impact Analysis

(a) **No Impact.** Costa Mesa Sanitary District (CMSD) provides sewer services to the City of Costa Mesa and the project site (CMSD 2014a). The CMSD maintains 224.2 miles of gravity sewer mains. CMSD has 20 sewer pumping stations located within the collection system to convey flow from low lying areas to higher elevations (CMSD 2014b). The CMSD conveys wastewater to the Sanitation Districts of Orange County plants for treatment and disposal. Wastewater is treated at treatment plants in Fountain Valley and Huntington Beach. Combined effluent treated at both plants in the years 2004 and 2005 totaled on average 244 million gallons daily (OCSD 2014).

The Proposed Project would not include any industrial uses that would be subject to an individual permit with specific treatment requirements from the Santa Ana Regional Water Quality Control Board (RWQCB). Sewage would be discharged to the CMSD for treatment at one of the wastewater treatment plants operated by the Sanitation Districts of Orange County. Any increase in wastewater generation as a result of the Proposed Project would not be considered substantial because the Proposed Project is consistent with the General Plan land use designation for the project site and, therefore, would not exceed the capacity of the wastewater treatment plants serving the CMSD. Therefore, no impact would occur, and no mitigation is required.

Mitigation Measure: No mitigation would be required.

(b) **Less than Significant Impact.** Mesa Water District (MWD) provides the City of Costa Mesa (City), including the project site, with water services. MWD's water is a blend of local groundwater from the Lower Santa Ana River Basin managed by the Orange County Water District (OCWD) and water from the Municipal Water District of Orange County imported from northern California and the Colorado River. MWD pumps groundwater from Orange County's groundwater basin using eight wells. The groundwater is replenished by water from the Santa Ana River, and imported water purchased from the Metropolitan Water District of Southern California (MWD 2014). The estimated capacity is more than adequate to meet the current water demand for the project site (MWD 2011).

The Proposed Project would not create the need for new water or wastewater treatment facilities because the Proposed Project would not substantially increase the amount of water needed or wastewater generated compared to the existing conditions at the adjacent Ganahl Lumber store. Once the Proposed Project is built, the existing Ganahl Lumber Store would close. The Proposed Project would have additional water needs resulting from the operation of a store with larger square footage and other new operational needs, including the cleaning of solar panels. However, the Proposed Project would incorporate various water conservation measures that would reduce water requirements. For example, the Proposed Project would be designed to capture rain water from the roof system and store it in five aboveground cisterns for later use in landscape areas. The cisterns could store approximately 100,000 gallons of rainwater.

Any increase in water demand or wastewater generation as a result of the Proposed Project would not be considered substantial because the Proposed Project is consistent with the General Plan land use designation for the project site. General Plans are used to determine future water demands within the service area for Mesa Water (MWD 2011) and are used for issuance of NPDES wastewater discharge permits. Because the Proposed Project is consistent with the General Plan land use designation, the Proposed Project would also be consistent with the water demand anticipated for the project site and would not exceed the capacity of the wastewater treatment plants serving the CMSD. Therefore, a less than significant impact would occur.

(c) **No Impact.** The City is served by the Orange County Flood Control District (OCFCD), which operates and maintains regional and municipal storm drainage facilities. The Proposed Project would not require or result in the construction or expansion of stormwater drainage facilities because the Proposed Project would not substantially increase the amount of stormwater generated compared to the conditions at the existing Ganahl Lumber store. Stormwater runoff either percolates through pervious surfaces on the site or is conveyed to nearby drainage facilities along Bristol Street. The Proposed Project would implement a construction Storm Water Pollution Prevention Plan (SWPPP), which includes Best Management Practices (BMPs). The landscaping plan for the Proposed Project would include permeable pavement and bioswales that would treat stormwater on the site and allow groundwater percolation to occur. No impact would occur.

Mitigation Measures: No mitigation would be required.

(d) **Less than Significant Impact.** As previously stated, Mesa Water District (MWD) provides the City of Costa Mesa, including the project site, with water services. The estimated capacity for MWD is more than adequate to meet the current water demand for the project site (MCWD 2011). The Proposed Project would not substantially increase the demand for water compared to existing conditions at the current Ganahl Lumber Costa Mesa store. As stated in the response to question 3.17 (b) above, the Proposed Project would have a slight increase in operational water needs. However, the Proposed Project would be designed to capture rain water from the roof system and store it in five aboveground cisterns for later use in landscape areas, and the Proposed Project is consistent with the water demand anticipated by the General Plan land use designations for the project site. Therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(e) **No Impact.** The Proposed Project would not increase the demand for wastewater treatment because the Proposed Project would not generate additional wastewater over existing conditions at the current Ganahl Lumber store. The Proposed Project would replace the existing Ganahl Lumber store; therefore, the wastewater treatment needs would remain similar. Furthermore, the Proposed Project is consistent with the General Plan land use designation for the project site, and General Plans are used for issuance of NPDES wastewater discharge permits. Please see response to question 3.17 (b) above. No impact would occur.

Mitigation Measures: No mitigation would be required.

(f) **Less than Significant.** The City of Costa Mesa is in the CMSD, which is serviced by CR&R for residential curbside refuse and recycling collection. The CMSD is one of the few agencies in Orange County that offer co-mingled trash and recycling services (CMSD 2014c). Any construction waste would be disposed of at the Frank R. Bowerman Landfill which is owned and operated by OC Waste and Recycling (OCWR). This landfill is a Class III landfill permitted to accept all types of nonhazardous municipal solid waste for disposal, including commercial and construction waste up to approximately 11,500 tons of solid waste per day (tpd). The anticipated closure date for the landfill is 2053 (County of Orange Waste & Recycling May 2013). The small increase in waste as a result of the Proposed Project would not be expected to affect the permitted capacity of such landfills. The Proposed Project would replace the existing Ganahl Lumber store; therefore, the operational waste generation for the Proposed Project would remain similar. Therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

(g) **No Impact.** The California Integrated Waste Management Act (Assembly Bill [AB] 939) changed the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. The purpose of the diversion strategies is to reduce dependence on landfills for solid waste disposal. AB 939 established mandatory diversion goals of 25 percent by 1995 and 50 percent by 2000. According to the CMSD, Costa Mesa currently has a diversion rate of 57 percent (CMSD 2014d). The City provides curbside recycling for both residential and commercial uses, which counts toward the City's solid waste diversion rate. The City also collects curbside residential green waste, which also counts toward the City's diversion rate. The Proposed Project would comply with existing and future statutes and regulations,

including waste diversion programs mandated by City, State, or federal law. In addition, as discussed above, the Proposed Project would not result in an excessive production of solid waste that would exceed the capacity of the existing landfill serving the project site. Therefore, the Proposed Project would not result in an impact related to federal, State, and local statutes and regulations related to solid wastes.

Mitigation Measures: No mitigation would be required.

(h) **Less than Significant Impact.** In order to comply with the SWPPP, the Proposed Project would be required to implement Best Management Practices (BMPs). In addition, during construction activities, the Proposed Project would be expected to comply with the requirements of the NPDES permit. The Proposed Project would be designed to capture rain water from the roof system and store it in five aboveground cisterns for later use in landscape areas (based on 12 inches of average rainfall per year). The cisterns would be 18 feet in diameter and 10.75 feet high, and could store approximately 100,000 gallons of rainwater. At-grade rain water would be treated and eventually filtered into the ground, replenishing the water table. Native and drought tolerant plants that thrive in extended periods of drought with seasonal floods would be used. However, none of these design features or BMPs would result in significant vectors or odors, and therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation would be required.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

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

3.18.1 Impact Analysis

(a) **Less than Significant.** The project site is located in a fully developed urban environment characterized by a variety of residential, commercial, and transportation land uses. Based on the project description and the preceding responses, development of the Proposed Project does not have the potential to degrade the quality of the natural environment. Additionally, due to the developed nature of the site in an urbanized location, there are no rare or endangered plant or animal species on the project site. Existing landscaping may, however, provide suitable habitat for nesting birds. Disturbing or destroying active nests is a violation of the Migratory Bird Treaty Act (MBTA). In addition, nests and eggs are protected under Fish and Game Code Section 3503. The project site contains two potentially jurisdictional drainage features: the Santa Ana Delhi Channel and a small drainage ditch in the northern portion of the project site. The Proposed Project is not anticipated to remove, fill, or otherwise interrupt the Santa Ana Delhi Channel; however, the drainage ditch may be impacted by construction of the Proposed Project. Condition of Approval B-1 would ensure that the Proposed Project adheres to the MBTA. Condition of Approval B-2 would require the Applicant to coordinate with the United States Army Corps of Engineers (USACE) and the California Department of Fish and Wildlife (CDFW) to verify their jurisdiction and, if necessary, obtain permits related to potential impacts to the drainage ditch. Compliance with Conditions of Approval B-1 and B-2 would reduce potential project impacts related to biological resources to a less than significant level.

It is not anticipated that the Proposed Project would eliminate important examples of the major periods of California history or prehistory because the project site has been previously developed, and the likelihood of encountering significant historic or prehistoric artifacts during grading, excavation, and site development activities would be minimal. However, if any archaeological or paleontological resources are discovered during grading and construction activities, in accordance with Conditions of Approval CR-1 and CR-2, work in the area would cease and deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in California Public Resources Code (PRC) Section 21083.2. In addition, if it is determined that an

archaeological site is a historical resource, the provisions of Section 21084.1 of the PRC and *California Environmental Quality Act (State CEQA) Guidelines* Section 15064.5 would be implemented.

Therefore, with the conditions of approval described in this Initial Study, the Proposed Project would not have a significant impact on fish and wildlife species or their habitat or eliminate important examples of major periods of California history or prehistory.

Conditions of Approval: Refer to Conditions of Approval B-1, and CR-1 and CR-2 above.

Mitigation Measures: No mitigation would be required.

(b) **Less than Significant.** The project site is located in a fully developed urban environment characterized by a variety of residential, commercial, and transportation land uses. In the existing condition, the project site is currently vacant, and does not have any existing structures. The project site has been improved with a concrete wall, asphalt-paved entrance area, and associated landscaping. The majority of the project site is unpaved and covered with gravel. As discussed further in Section 3.10, Land Use, with approval of the requested variances and conditional use permit, the Proposed Project would be consistent with the City of Costa Mesa's (City) land use and zoning designations for the project site.

As discussed above in response to question 3.16 (a), with the addition of cumulative project traffic, all study area intersections would continue to operate at acceptable LOS (LOS D or better) during the a.m. and p.m. peak hours. Therefore, with the addition of project traffic, the Proposed Project was determined to have a less than significant cumulative effect related to traffic and circulation in the area surrounding the project site, and no mitigation would be required.

As discussed above in response to questions 3.7 (a) and (b), the Proposed Project would generate 2,485.46 metric tons per year (MT/yr) of carbon dioxide equivalent (CO_2e) emissions under the cumulative project scenario, which would be below the 3,000 tons per year (tpy) threshold recommended by the South Coast Air Quality Management District (SCAQMD) for commercial development projects. Therefore, the Proposed Project would result in a less than significant impact related to greenhouse gas (GHG) emissions and would not impede or interfere with achieving the State's emission reduction objectives in Assembly Bill (AB) 32 (and Executive Order [EO] S-03-05). As a result, the Proposed Project would not result in or substantially contribute to cumulatively considerable GHG emissions, and no mitigation would be required.

As discussed above in response to question 3.3 (b), the Proposed Project would not exceed any of the established SCAQMD thresholds for pollutant emissions under the cumulative project scenario. Therefore, because the Proposed Project would not exceed the SCAQMD's localized and significance thresholds and would be consistent with the SCAQMD Air Quality Management Plan (AQMP), the Proposed Project would not result in cumulative air quality impacts that would be considered cumulative considerable, and no mitigation would be required.

The Proposed Project would not have any impacts related to agricultural and mineral resources and would, therefore, not have any cumulatively significant impacts related to these topics.

Impacts from the Proposed Project related to aesthetics, biological resources, cultural resources, geology and soils, hazards or hazardous materials, hydrology and water quality, noise, public services, recreation, or utilities/service systems are less than significant or can be reduced to a less than significant level with mitigation. Therefore, the Proposed Project would not cumulatively contribute to significant impacts related to any of these environmental topics.

In summary, the Proposed Project would rely on and can be accommodated by the existing road system, public services, and utilities. Therefore, impacts from the Proposed Project would not be cumulatively considerable.

Mitigation Measures: No mitigation would be required.

(c) **Less than Significant With Mitigation Incorporated.** The project site is located in a fully developed urban environment characterized by a variety of residential, commercial, and transportation land uses. In the existing condition, the project site is currently vacant, and does not have any existing structures. The project site has been improved with a concrete wall, asphalt-paved entrance area, and associated landscaping. The majority of the project site is unpaved and covered with gravel. As discussed further in Section 3.4, Air Quality, the Proposed Project would not result in an inconsistency with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP), violate any air quality standards, contribute to an air quality violation or expose sensitive receptors to an exceedance of local emissions thresholds. ,. As described in Section 3.12, Noise, the Proposed Project is not expected to result in excessive noise or vibration levels or result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site that could not be mitigated to a less than significant level. As described in Section 3.6, Geology and Soils, the Proposed Project would not result in any impacts related to geologic hazards that could not be mitigated to a less than significant level. Similarly, as stated in Section 3.8,Hazards and Hazardous Materials, implementation of the Proposed Project would not result in any impacts related to hazards or hazardous materials that could not be mitigated to a less than significant level. Therefore impacts related to the Proposed Project would be less than significant.

Mitigation Measures: Refer to Mitigation Measures GEO-1, HAZ-1, HAZ-2, HAZ-3, and NOSE-1.

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4.0 MITIGATION MONITORING AND REPORTING PROGRAM

4.1 MITIGATION MONITORING REQUIREMENTS

Public Resources Code (PRC) Section 21081.6 (enacted by the passage of Assembly Bill (AB) 3180) mandates that the following requirements shall apply to all reporting or mitigation monitoring programs:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a Responsible Agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the Lead Agency or a Responsible Agency, prepare and submit a proposed reporting or monitoring program.
- The Lead Agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based. A public agency shall provide the measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.
- Prior to the close of the public review period for a draft Environmental Impact Report (EIR) or Mitigated Negative Declaration (MND), a Responsible Agency, or a public agency having jurisdiction over natural resources affected by the project, shall either submit to the Lead Agency complete and detailed performance objectives for mitigation measures which would address the significant effects on the environment identified by the Responsible Agency or agency having jurisdiction over natural resources affected by the project, or refer the Lead Agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a Lead Agency by a Responsible Agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures which mitigate impacts to resources which are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance by a Responsible Agency or agency having jurisdiction over natural resources affected by a project with that requirement shall not limit that authority of the Responsible Agency or agency having jurisdiction over natural resources affected by a project, or the authority of the Lead Agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

4.2 MITIGATION MONITORING PROCEDURES

The mitigation monitoring and reporting program has been prepared in compliance with PRC Section 21081.6. It describes the requirements and procedures to be followed by the City of Costa Mesa to ensure that all standard conditions, conditions of approval, and mitigation measures adopted as part of the Proposed Project would be carried out as described in this Initial Study (IS)/Mitigated Negative Declaration (MND). Table 4.A lists each of the standard conditions, conditions of approval, and mitigation measures specified in this IS/MND and identifies the party or parties responsible for implementation and monitoring of each condition or measure.

Table 4.A: Mitigation and Monitoring Reporting Program

		Timing of Mitigation	Responsible Party
Standard Conditions, Conditions of Approval, Best Management Practices, and Requirements			
3.1 Aesthetics			
No standard conditions, conditions of approval, or best management practices related to aesthetics would be required.			
3.2 Agricultural & Forest Resources			
No standard conditions, conditions of approval, or best management practices related to agriculture or forest resources would be required.			
3.3 Air Quality			
No standard conditions, conditions of approval, or best management practices related to air quality would be required.			
3.4 Biological Resources			
B-1:	**Compliance with Migratory Bird Treaty Act.** If construction activities occur within the bird breeding season (February 15 through August 31), the Applicant (or its contractor) shall retain a qualified biologist to conduct a pre-construction nesting bird survey no more than 30 days prior to the start of construction. The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by Project activities such as noise, human activity, and dust, etc. If active bird nests are found within 100 feet of the designated construction area on the project site, the qualified biologist will establish an appropriate buffer zone around the active nests, typically a 250-foot radius for songbirds and a 500-foot radius for raptors. Project activities shall be avoided within the buffer zone until the nest is deemed no longer active by the biologist. Weekly nesting surveys and biological monitoring may be necessary if nesting birds are found on the project site. Prior to commencement of grading activities and issuance of any building permits, the City of Costa Mesa Director of Community Development, or designee, shall verify that all project grading and construction plans include specific documentation regarding the Migratory Bird Treaty Act (MBTA) requirements for a nesting bird survey should construction or grading occur from February 15 through August 31, that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.	Prior to the commencement of grading activities	City of Costa Mesa Director of Community Development, or designee
B-2:	**Permitting for Drainage Impacts.** Prior to the commencement of grading activities that may result in the placement of fill material into the potentially jurisdictional drainage feature on the northern portion of the project site, the Applicant shall prepare and submit to the United States Army Corps of Engineers (USACE) for verification a "Preliminary Delineation Report for Water of the United States" and a Streambed Alteration Notification package to the California Department of Fish and Wildlife (CDFW) for the drainage feature. If these agencies determine that the feature is not regulated under their jurisdiction, then no further mitigation is necessary. However, if the USACE considers the feature to be jurisdictional, then a Clean Water Act Section 404 permit shall be obtained from the USACE, and any permit conditions shall be agreed to, prior to the start of grading activities in the affected area. If the CDFW determines that the drainage is a regulated "streambed," then a Streambed Alteration Agreement shall be	Prior to the commencement of grading activities	United States Army Corps of Engineers; California Department of Fish and Wildlife; Santa Ana Regional Water Quality Control Board

Table 4.A: Mitigation and Monitoring Reporting Program

		Timing of Mitigation	Responsible Party
	entered into with the CDFW and any associated conditions shall be agreed to prior to the start of grading activities in the affected area. If the USACE considers the feature to be jurisdictional, the Applicant shall obtain a Water Quality Certification or waiver pursuant to Section 401 of the CWA from the Santa Ana Regional Water Quality Control Board prior to the start of grading activities in the affected area.		
3.5 Cultural Resources			
CR-1:	**Archaeological Monitors.** Prior to issuance of grading permits, and in adherence to the recommendations of the cultural resources survey, the Applicant shall retain a qualified archaeological monitor, subject to review and approval by the City of Costa Mesa (City) Community Development Director, or designee. This monitor shall be present at the pregrade conference in order to explain the cultural mitigation measures associated with the Proposed Project. The monitor, in conjunction with the City and the Applicant will prepare a plan that includes: (1) a description of circumstances that would result in the halting of work at the project site (e.g., what is considered a "significant" archaeological site); (2) a description of procedures for halting work on site and notification procedures; and (3) a description of monitoring reporting procedures. If any significant historical resources, archaeological resources, or human remains are found during monitoring, work shall stop within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing in the California Register of Historic Places. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to, the following: excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations Title 4(3) Section 5126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials.	Prior to the issuance of grading permits	City of Costa Mesa Director of Community Development Department, or designee

Table 4.A: Mitigation and Monitoring Reporting Program

		Timing of Mitigation	Responsible Party
CR-2:	**Paleontological Resources Impact Mitigation Program.** If excavation activities associated with the Proposed Project are expected to extend below 10 feet, the Applicant shall retain a qualified paleontologist, subject to the review and approval of the City of Costa Mesa's (City) Community Development Director, or designee, to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Proposed Project prior to issuance of any grading permits. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) and shall include, but not be limited to, the following: • The paleontologist, or his/her representative, shall attend a preconstruction meeting. • A qualified paleontological monitor working under the direction of an Orange County certified paleontologist shall "spot check" grading within the project site. Initially, spot checks are recommended for 2 to 3 hours twice per week during grading. If fossil resources are noted during the spot check, the monitoring level shall be increased to full time for the remaining duration of the grading. • In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and the paleontologist contacted to assess the find for scientific significance. The paleontologist shall make recommendations as to whether monitoring shall be required in these sediments on a full-time basis. • Collected resources shall be prepared to the point of identification and permanent preservation. This includes washing and picking of mass samples to recover small vertebrate and invertebrate fossils and removal of surplus sediment around larger specimens to reduce the storage volume for the repository and the storage cost for the Applicant. • Any collected resources shall be cataloged and curated into the permanent collections of an accredited scientific institution. At the conclusion of the monitoring program, a report of findings with an appended inventory of specimens shall be prepared. When submitted to the City, the report and inventory shall signify completion of the program to mitigate impacts to paleontological resources.	Prior to the issuance of grading permits	City of Costa Mesa Director of Community Development Department, or designee
CR-3:	**Human Remains.** If human remains of any kind are found during construction, the requirements of California Environmental Quality Act (CEQA) Guidelines Section 15064.5(e) and Assembly Bill (AB) 2641 shall be followed. According to these requirements, all construction activities must cease immediately and the Orange County Coroner and a qualified archaeologist must be notified. The Coroner will examine the remains and determine the next appropriate action based on his or her findings. If the Coroner determines the remains to be of	In the event of the accidental discovery or recognition of any human remains in any location on the project site during excavation	City of Costa Mesa Director of Community Development Department, or designee

Table 4.A: Mitigation and Monitoring Reporting Program

		Timing of Mitigation	Responsible Party
	Native American origin, he or she will notify the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will then identify the most likely descendants (MLD) to be consulted regarding treatment and/or reburial of the remains. If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to them, the Native American human remains and associated grave goods shall be buried with appropriate dignity on the property in a location not subject to further subsurface disturbance.	or construction activities	
3.6 Geology and Soils			
No standard conditions, conditions of approval, or best management practices related to geology and soils would be required.			
3.7 Greenhouse Gas Emissions			
No standard conditions, conditions of approval, or best management practices related to greenhouse gas emissions would be required.			
3.8 Hazards and Hazardous Materials			
Refer to Standard Conditions WQ-1 and WQ-2 below.			
3.9 Hydrology and Water Quality			
WQ-1:	**Construction General Permit.** Prior to issuance of a grading permit, the Applicant shall demonstrate to the City of Costa Mesa (City) Public Works Department that coverage has been obtained under California's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing. A copy of the current Storm Water Pollution Prevention Program (SWPPP) required by the General Permit shall be kept at the project site and be available for review by City representatives upon request.	Prior to the issuance of a grading permit	City of Costa Mesa Public Works Director, or designee
WQ-2:	**Final Water Quality Management Plan.** Prior to issuance of a grading permit, the Applicant shall submit a Final Water Quality Management Plan (WQMP) to the City Public Works Department for review and approval. Both Source Control best management practices (BMPs) and Site Design BMPs designed to reduce impacts to water quality from operation of the Proposed Project shall be identified in the Final WQMP.	Prior to the issuance of a grading permit	City of Costa Mesa Public Works Director, or designee
3.10 Land Use/Planning			
No standard conditions, conditions of approval, or best management practices related to land use and planning would be required.			
3.11 Mineral Resources			
No standard conditions, conditions of approval, or best management practices related to mineral resources would be required.			

Table 4.A: Mitigation and Monitoring Reporting Program

	Timing of Mitigation	Responsible Party
3.12 Noise		
NOISE-1: **Short-Term Construction Related Noise Impacts.** The following standard conditions are required of all development within the City of Costa Mesa (City) and would reduce short-term construction related noise impacts resulting from the Proposed Project: • The Applicant's construction contractor shall limit all construction-related activities to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. No construction activities shall be permitted outside of these hours or on Sundays and federal holidays.	During construction activities	City of Costa Mesa Director of Community Development, or designee
3.13 Population and Housing		
No standard conditions, conditions of approval, or best management practices related to population and housing would be required.		
3.14 Public Services and Utilities		
No standard conditions, conditions of approval, or best management practices related to public services and utilities would be required.		
3.15 Recreation		
No standard conditions, conditions of approval, or best management practices related to recreation would be required.		
3.16 Transportation/Traffic		
No standard conditions, conditions of approval, or best management practices related to transportation/traffic would be required.		
3.17 Utilities/Service Systems		
No standard conditions, conditions of approval, or best management practices related to utilities/service systems would be required.		
Mitigation Measures		
3.1 Aesthetics		
The Proposed Project would not result in significant adverse impacts related to aesthetics. No mitigation would be required.		
3.2 Agricultural & Forest Resources		
The Proposed Project would not result in significant adverse impacts related to agriculture or forest resources. No mitigation would be required.		
3.3 Air Quality		
The Proposed Project would not result in significant adverse impacts related to air quality. No mitigation would be required.		
3.4 Biological Resources		
The Proposed Project would not result in significant adverse impacts related to biological resources. No mitigation would be required.		
3.5 Cultural Resources		
The Proposed Project would not result in significant adverse impacts related to cultural resources. No mitigation would be required.		

Table 4.A: Mitigation and Monitoring Reporting Program

		Timing of Mitigation	Responsible Party
3.6 Geology and Soils			
GEO-1:	**Incorporation of and Compliance with the Recommendations in the Geotechnical Report.** During project construction activities, the City of Costa Mesa (City)'s Community Development Director, Director of Public Works, or designee, shall ensure that all grading operations and construction are conducted in conformance with the recommendations included in the Geotechnical Report prepared for the Proposed Project that has been prepared by G.A. Nicoll., titled *Geotechnical Investigation Report* (June 13, 2014). The Applicant shall require the project geotechnical consultant to assess whether the requirements in the *Preliminary Geotechnical Investigation* need to be modified or refined to address any changes in the project that occur prior to the start of grading. If the project geotechnical consultant identifies modifications or refinements to the requirements, the Applicant shall require appropriate changes to the final project design and specifications and shall submit any revised geotechnical reports to the Land Development Section of the Engineering Division, or designee, for approval prior to issuance of any grading or construction permits. The Development Review Section of the Engineering Division, or designee, shall review grading plans prior to the start of grading to verify that the requirements developed during the geotechnical design evaluation have been appropriately incorporated into the project plans. Design, grading, and construction shall be performed in accordance with the requirements of the City's Building Code and the California Building Code (CBC) applicable at the time of grading, as well as the recommendations of the project geotechnical consultant as summarized in a final report subject to review by the City's Building Official, or designee, prior to the start of grading activities. On-site inspection during grading shall be conducted by the project geotechnical consultant and the Development Review Section of the Engineering Division to ensure compliance with geotechnical specifications as incorporated into project plans.	Prior to the commencement of grading activities	City of Costa Mesa Building Official, or designee
3.7 Greenhouse Gas Emissions			
The Proposed Project would not result in significant adverse impacts related to greenhouse gas emissions. No mitigation would be required.			
3.8 Hazards and Hazardous Materials			
HAZ 1:	**Contingency Plan.** Prior to commencement of grading activities, the Director of the Orange County Environmental Health Division, or designee, shall review and approve a contingency plan that addresses the procedures to be followed should on-site unknown hazards or hazardous substances be encountered during demolition and construction activities. The plan shall indicate that if construction workers encounter underground tanks, gases, odors, uncontained spills, or other unidentified substances, the contractor shall stop work, cordon off the affected area, and notify the Costa Mesa Fire Department (CMFD). The CMFD responder	Prior to the commencement of grading activities	Director of the Orange County Environmental Health Division, or designee

Table 4.A: Mitigation and Monitoring Reporting Program

		Timing of Mitigation	Responsible Party
	shall determine the next steps regarding possible site evacuation, sampling, and disposal of the substance consistent with local, State, and federal regulations.		
HAZ-2:	**Protection Against Landfill Gas Hazards.** Prior to the issuance of any grading permits, the Applicant shall conduct a soil gas investigation on the project site in accordance with the Orange County Fire Authority's Combustible Gas Hazard Mitigation Guidance to evaluate whether combustible landfill gas concerns exist on the project site. If the investigation concludes that such concerns do not exist, no further mitigation is necessary. If the investigation concludes that combustible landfill gases are present beneath the project site, the Applicant shall coordinate with the Orange County Solid Waste Local Enforcement Agency (LEA) to determine appropriate mitigation to protect the Proposed Project's structures from combustible landfill gases, which may include the installation of systems designed to protect against the accumulation of methane beneath structures, which may include passive ventilation systems, flexible building membrane liners, landfill gas alarms, or other measures listed per Section 20939, Title 27 California Code of Regulations in accordance with LEA recommendations. If mitigation is required, the City of Costa Mesa's Building Official, or designee, shall review the building and grading plans prior to the start of grading to verify that the mitigation developed as a result of the combustible landfill gas evaluation has been appropriately incorporated into the project plans. On-site inspection during grading and construction shall be conducted by the City of Costa Mesa's Building Official, or designee, to ensure compliance with the mitigation specifications, if any are required to be incorporated into project plans.	Prior to the issuance of any grading permits	Director of the Orange County Solid Waste Local Enforcement Agency, or designee; City of Costa Mesa Building Official, or designee
HAZ-3:	**Construction Staging and Traffic Control Plan.** Prior to the issuance of any grading permits, the Applicant (or its contractor) shall prepare a Construction Staging and Traffic Control Plan for approval by the City of Costa Mesa (City) Transportation Services Manager, or designee, to ensure proper access to residences and businesses in the area by emergency vehicles during construction and to maintain traffic flow prior to any lane closures. The Construction Staging and Traffic Control Plan would also include the name and phone number of a contact person who can be reached 24 hours a day regarding construction traffic complaints or emergency situations. In addition, the Construction Staging and Traffic Control Plan shall take into account and be coordinated with other Construction Staging and Traffic Control Plans that are in effect or have been proposed for other projects in the City of Costa Mesa. The Construction Staging and Traffic Control Plan shall include, but not be limited to, the following: • All emergency access to the project site and adjacent areas shall be kept clear and unobstructed during all phases of construction. Flag persons shall be provided in adequate	Prior to the issuance of any grading permits	City of Costa Mesa Transportation Services Manager, or designee

Table 4.A: Mitigation and Monitoring Reporting Program

	Timing of Mitigation	Responsible Party
numbers to minimize impacts to traffic flow and to ensure safe access into and out of the site. • Flag persons shall be trained to assist in emergency response by restricting or controlling traffic movements that could interfere with emergency vehicle access. • Construction vehicles, including construction personnel vehicles shall not park on public streets • Construction vehicles shall not stage or queue where they would interfere with pedestrian and vehicular traffic or block access to nearby businesses or residential areas. If feasible, any traffic lane closures would be limited to off-peak traffic periods, as approved by the City Transportation Services Department.		
3.9 Hydrology and Water Quality		
The Proposed Project would not result in significant adverse impacts related to hydrology and water quality. No mitigation would be required.		
3.10 Land Use/Planning		
The Proposed Project would not result in significant adverse impacts related to land use/planning. No mitigation would be required.		
3.11 Mineral Resources		
The Proposed Project would not result in significant adverse impacts related to mineral resources. No mitigation would be required.		
3.12 Noise		
NOISE-1: **Noise Reduction Features.** Prior to the issuance of building permits for Building A, the Applicant shall submit the building plans for review and approval by the City of Costa Mesa (City) Building Official, or designee, to ensure the building will be designed with closed windows and an air conditioning system to reduce noise levels associated with traffic noise to an acceptable level.	Prior to the issuance of permits for Building A	City of Costa Mesa (City) Building Official, or designee
3.13 Population and Housing		
The Proposed Project would not result in significant adverse impacts related to population or housing. No mitigation would be required.		
3.14 Public Services and Utilities		
The Proposed Project would not result in significant adverse impacts related to public services or utilities. No mitigation would be required.		
3.15 Recreation		
The Proposed Project would not result in significant adverse impacts related to recreation. No mitigation would be required.		
3.16 Transportation/Traffic		
Refer to Mitigation Measure HAZ-3 above.		
3.17 Utilities/Service Systems		
The Proposed Project would not result in significant adverse impacts related to utilities/service systems. No mitigation would be required.		

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APPENDIX A

AIR QUALITY AND GLOBAL CLIMATE CHANGE IMPACT ANALYSIS REPORT

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KUNZMAN ASSOCIATES, INC.

GANAHL LUMBER
COSTA MESA RELOCATION PROJECT

AIR QUALITY AND GLOBAL CLIMATE CHANGE IMPACT ANALYSIS

December 5, 2014

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

GANAHL LUMBER
COSTA MESA RELOCATION PROJECT

AIR QUALITY AND GLOBAL CLIMATE CHANGE IMPACT ANALYSIS

December 5, 2014

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I. Introduction and Setting

A. Purpose and Objectives

This study was performed to address the possibility of regional and local air quality impacts, global climate change impacts, and cancer risk from diesel air emissions. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- discussion of the air quality, greenhouse gases, and cancer risk thresholds of significance
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- analysis of the operations related cancer risk from diesel emissions
- recommendations for mitigation measures
- analysis of the conformity of the proposed project with the SCAQMD AQMP

The City of Costa Mesa is the lead agency responsible for preparation of this air quality analysis, in accordance with the California Environmental Quality Act authorizing legislation. Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with terms unique to air quality and global climate change, a definition of terms has been provided in Appendix A.

B. Project Location

The proposed project is located at 1100 Bristol Street, just north of Bristol Street and west of the existing Ganahl Lumber facility, in the City of Costa Mesa. The project site is zoned "C1 Local Business" and has a land use designation of "General Commercial" in the City of Costa Mesa Zoning Map and General Plan Land Use Map, respectively. The site is now vacant but was previously developed with a self storage facility. Based on the City of Costa Mesa Industrial Development Standards, the project site could be developed with up to 193,700 square feet of "mini-warehouse" floor area[1]. A vicinity map showing the project location is provided on Figure 1.

C. Project Description

The proposed project includes the development of 64,000 square feet of building area to accommodate a new 50,115 square foot building materials retail store and a new 13,885 square foot building for will call storage, and up to 47,000 square feet of ancillary support "shed" buildings to house a 32,000 square foot "B" storage shed, 10,000 square feet of shed space and a 4,000 square foot mill shed. The main building, the Building Materials Lumber Store, will increase in size from 35,650 square feet to 50,115 square feet. The project is

[1] Source: Floor area estimated assuming a FAR of 0.75 as allowed by the City of Costa Mesa Industrial Development Standards for "Very Low Traffic FAR" land uses, which includes mini-warehouse (self-storage) developments.

located on approximately 258,551 square feet (5.94 acres). The project site plan is shown on Figure 2.

D. Phasing and Timing

The proposed project is expected to be completed by late 2015/early 2016. Upon completion of the new facility, the existing Ganahl Lumber store will be closed; there are no plans to reuse or continue to operate the existing site once the new store is operational.

E. Sensitive Receptors in Project Vicinity

For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain at the location for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor because employees do not typically remain on-site for a full 24 hours, but are present for shorter periods of time, such as eight hours.

The nearest sensitive receptors to the project site are the apartments located on the other side of Bristol Street from the existing Ganahl Lumber facility, southeast of the project site, at a distance of approximately 313 feet (95 meters) from the project boundary.

F. Executive Summary of Findings

Construction-Source Emissions
Project construction-source emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. For localized emissions, the project will not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD.

Project construction-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). As discussed herein, the project will comply with all applicable SCAQMD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS).

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

Operational-Source Emissions
The project operational-sourced emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the Operations-Related Local Air Quality Impacts section of this report. Additionally, project-related traffic will not cause or result in CO concentrations exceeding applicable state

and/or federal standards (CO “hotspots). Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the project.

Project operational-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). The project's emissions meet SCAQMD regional thresholds and will not result in a significant cumulative impact. The project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential operational-source odor impacts are therefore considered less-than significant. Project-related GHG emissions are also considered to be less than significant.

Figure 1
Project Location Map

Legend

= Existing Project Site

= Proposed Project Site

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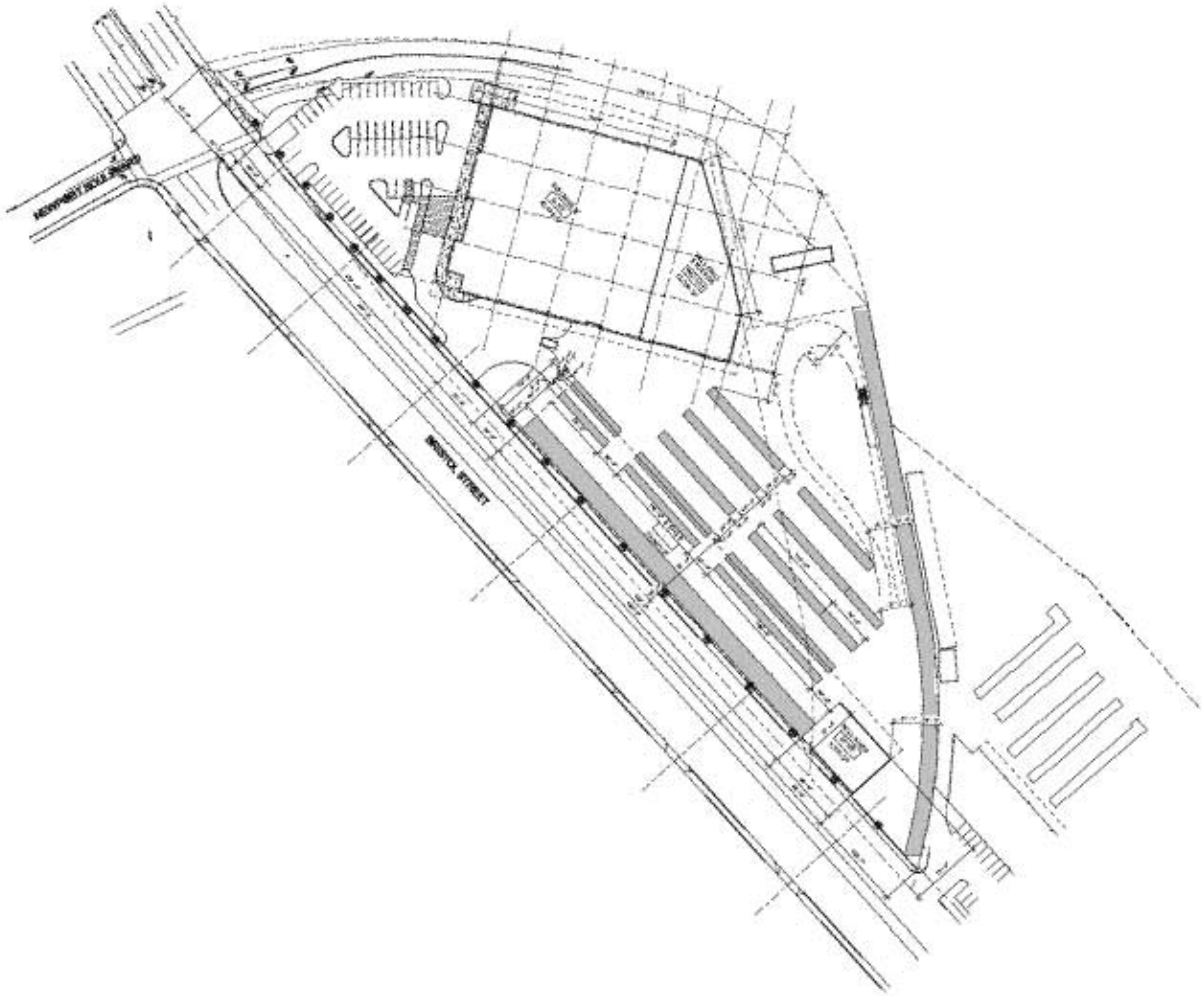
Figure 2
Site Plan



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II. Atmospheric Setting

The proposed project site is located in the north eastern portion of the City of Costa Mesa. The City of Costa Mesa is located in west Orange County and is bound by the City of Santa Ana to the north; the City of Irvine to the east; the City of Newport Beach to the east, south, and southwest; the City of Fountain Valley to the northwest; and the City of Huntington Beach to the west. The City of Costa Mesa is located within the South Coast Air Basin (Basin), which is surrounded by mountains trapping the air and its pollutants in the valleys or basins below. The Basin includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, the Basin is an area of high air pollution potential. The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality within the Basin is influenced by a wide range of emissions sources—such as dense population centers, heavy vehicular traffic, and industry. Climate change within the Basin is influenced by a wide range of emission sources, such as utility usage, heavy vehicular traffic, industry, and meteorology.

The annual average temperature varies throughout the Basin, ranging from the low to mid 60s to over 100 degrees during the summer, measured in Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The City of Costa Mesa is located in the western coastal portion of the Basin. The annual average temperature in the City ranges from 50 to 72°F, although temperatures can occasionally exceed 90°F and even 100°F.

The Basin experiences a persistent temperature inversion, which is characterized by increasing temperature with increasing altitude. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer.

Aside from a persistent temperature inversion, the vertical dispersion of air contaminants in the Basin is also affected by wind conditions. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. Conversely, on days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas in the Basin are transported eastward, predominantly into Riverside and San Bernardino Counties. Santa Ana winds, which are strong and dry north or northeasterly winds that occur during the fall and winter months, disperse air contaminants differently through the Basin, generally resulting in worse air conditions in Costa Mesa. Santa Ana conditions tend to last for several days at a time.

Wind speeds in the City of Costa Mesa annual average about 9.58 miles per hour (mph) (USA.com 2014). The City and its surrounding area also typically experience a daytime onshore sea breeze. While nighttime land breezes can also occur, wind in the Costa Mesa area is almost exclusively from the west, with the exceptions of winter storms and the Santa Ana winds discussed above.

The majority of annual rainfall in the Basin occurs between December and March. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions. The annual average total of rainfall in the City is approximately 13.92 inches (USA.com 2014).

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution "hot spots" in heavily developed coastal areas of the basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the City of Costa Mesa are shown below in Table 1. Table 1 shows that August is typically the warmest month and December is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 1

Costa Mesa Monthly Climate Data[1]

Descriptor	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature	63	63	63	64	66	68	71	72	72	70	67	63
Avg. Min. Temperature	50	51	52	55	58	61	64	65	64	60	54	49
Avg. Total Precipitation (in.)	2.07	2.68	1.67	0.72	0.13	0.07	0.02	0.02	0.17	0.38	0.96	1.82

[1] Source: http://www.weather.com/weather/wxclimatology/monthly/graph/USCA0256

III. Pollutants

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

A. Criteria Pollutants

The criteria pollutants consist of: ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, lead, and particulate matter. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants.

1. Nitrogen Dioxide

Nitrogen Oxides (NOx) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx is colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOx are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NOx and the pollutants formed from NOx can be transported over long distances, following the patterns of prevailing winds. Therefore controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

2. Ozone

Ozone is not usually emitted directly into the air but at ground-level is created by a chemical reaction between NOx and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated

with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

3. Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

4. Sulfur Dioxide

Sulfur Oxide (SOx) gases (including sulfur dioxide) are formed when fuel containing sulfur, such as coal and oil is burned, and from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

5. Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are

typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers.

6. Particulate Matter

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Particulate matter is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) have been designated as a subset of PM10 due to their increased health impacts and its ability to remain suspended in the air longer and travel further.

7. Volatile Organic Compounds (VOC)

Although not a criteria pollutant, reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM10 and lower visibility.

B. Other Pollutants of Concern

1. Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important of these toxic air contaminants, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to toxic air contaminants can result from emissions from normal operations as well as accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. Sources of toxic air

contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2005 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a toxic air contaminant in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in diesel particulate matter by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of diesel particulate matter as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

2. Asbestos

Asbestos is listed as a TAC by ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestoform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Orange County. The nearest likely locations of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

C. Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse

gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NOx) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

1. Water Vapor

   Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved in is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

2. Carbon Dioxide

   The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s. Each of these activities has increased in scale and distribution. CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an average global temperature rise of at least two degrees Celsius.

3. Methane

CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO_2. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO_2, N_2O, and Chlorofluorocarbons (CFCs). CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

4. Nitrous Oxide

Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars.

5. Chlorofluorocarbons

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

6. Hydrofluorocarbons

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 HFC-134a are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

7. Perfluorocarbons

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

8. Sulfur Hexafluoride

SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO_2. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

9. Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

10. Global Warming Potential

GHGs have varying global warming potential (GWP). The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO_2. One teragram of carbon dioxide equivalent (Tg CO_2e) is essentially the emissions of the gas multiplied by the global warming potential. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess emissions because it gives weight to the global warming potential of the gas. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 2. As shown in Table 2, the global warming potential of GHGs ranges from 1 to 23,900.

Table 2

Global Warming Potentials and Atmospheric Lifetimes[1]

Gas	Atmospheric Lifetime	Global Warming Potential[2] (100 Year Horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane	50,000	6,500
PFC: Hexafluoroethane	10,000	9,200
Sulfur Hexafluoride	3,200	23,900

[1] Source: United States Environmental Protection Agency, 2006.

[2] Compared to the same quantity of CO_2 emissions.

IV. Air Quality Management

A. Regulatory Setting

The proposed project is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

1. International

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by 2000 and methyl chloroform by 2005.

2. Federal - United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The National Ambient Air Quality Standards (NAAQS) pollutants were identified using medical evidence and are shown below in Table 3.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The State Implementation Plan (SIP) must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the State Implementation Plan (SIP).

As indicated below in Table 4, the Basin has been designated by the EPA as a non-attainment area for ozone (O_3) and suspended particulates (PM10 and PM2.5).

Currently, the Basin is in attainment with the ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2).

In 2011, the Basin exceeded federal standards for either ozone or PM2.5 at one or more locations on a total of 124 days, based on the current federal standards for 8-hour ozone and 24-hour PM2.5. Despite substantial improvements in air quality over the past few decades, some air monitoring stations in the Basin still exceed the NAAQS for ozone more frequently than any other stations in the U.S. In 2011, three of the top five stations that exceeded the 8-hour ozone NAAQS were located in the Basin (Central San Bernardino Mountains, East San Bernardino Valley, and Metropolitan Riverside County).

PM2.5 in the Basin has improved significantly in recent years, with 2010 and 2011 being the cleanest years on record. In 2011, only one station in the Basin (Metropolitan Riverside County at Mira Loma) exceeded the annual PM2.5 NAAQS and the 98th percentile form of the 24-hour PM2.5 NAAQS, as well as the 3-year design values for these standards. Basin-wide, the federal PM2.5 24-hour standard level was exceeded in 2011 on 17 sampling days.

The Basin is currently in attainment for the federal standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). While the concentration level of the new 1-hour NO_2 federal standard (100 ppb) was exceeded in the Basin at two stations (Central Los Angeles and Long Beach) on the same day in 2011, the NAAQS NO_2 design value has not been exceeded. Therefore, the Basin remains in attainment of the NO_2 NAAQS.

The EPA designated the Los Angeles County portion of the Basin as nonattainment for the recently revised (2008) federal lead standard (0.15 µg/m3, rolling 3-month average), due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard in the 2007-2009 period of data used. For the most recent 2009-2011 data period, only one of these stations (Vernon) still exceeded the lead standard.

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO_2 and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and

engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

3. State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). The California Ambient Air Quality Standards (CAAQS) for criteria pollutants are shown in Table 3. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The South Coast Air Basin has been designated by the CARB as a nonattainment area for ozone, PM10 and PM2.5. Currently, the South Coast Air Basin is in attainment with the ambient air quality standards for CO, lead, SO_2, NO_2, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

On June 20, 2002, the CARB revised the PM10 annual average standard to 20 µg/m3 and established an annual average standard for PM2.5 of 12 µg/m3. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007 CARB approved the South Coast Air Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and PM2.5 Standards. The plan projects attainment for the 8-hour Ozone standard by 2024 and the PM2.5 standard by 2015.

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NOx, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4 Final) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This

regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California.

The CARB is also responsible for regulations pertaining to toxic air contaminants. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the South Coast Air Basin. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

CARB also proposed interim statewide CEQA thresholds for GHG emissions and released Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act, on October 24, 2008. The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

On December 6, 2007 CARB released the calculated Year 1990 GHG emissions of 427 million metric tons of CO_2e ($MMTCO_2e$). The 2020 target of 427 $MMTCO_2e$ requires the reduction of 169 $MMTCO_2e$, or approximately 30 percent from the State's projected 2020 business as usual emissions of 596 $MMTCO_2e$ and the reduction of 42 $MMTCO_2e$, or almost 10 percent from the 2002-2004 average GHG emissions. Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO_2 in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources that became enforceable on or before January 1, 2010.

On December 11, 2008 the CARB Board approved a Scoping Plan, with final adoption May 11, 2009 that proposed a variety of measures including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. In current pending litigation, Association of Irritated Residents v. California Air Resources Board, a California State trial court found that the analysis of the alternatives identified in the AB 32 Scoping Plan Functional Equivalent Document (FED) was not sufficient for informed decision-making and public review under CEQA. In response, CARB has appealed the decision. In addition, CARB prepared the *Supplement to the AB 32 Scoping Plan Functional Equivalent Document,* June 13, 2011. On August 24, 2011 CARB recertified the complete AB 32 Scoping Plan Functional Equivalent Environmental Document revised by the Final Supplement. In December, 2011 the Final Supplement was accepted as sufficient to fulfill the trial court's March order.

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September, 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State,

including imported electricity, must be generated by plants that meet the standards set by California Public Utilities Commission (CPUC) and California Energy Commission (CEC).

Executive Order S-1-07
Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Senate Bill 97
Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA

guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and

land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements. The Housing Element Update is required by the State to be completed within 18 months after RTP/SCS adoption or by October 2013.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. In addition SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

Assembly Bill 939 and Senate Bill 1374

Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. CalEEMod modeling defaults to 2008 standards. 2013 Standards became effective on January 1, 2014.

California Code of Regulations (CCR) Title 24, Part 11

CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

All buildings for which an application for a building permit is submitted on or after January 1, 2014 must follow the 2013 standards. The 2013 standards are estimated to be 30 percent more efficient than the 2008 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

4. Regional

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. A revised draft of the 2012 AQMP was released on September, 2012, was adopted by the SCAQMD Board on December 7, 2012, and was adopted by CARB via Resolution 13-3 on January 25, 2013. The 2012 AQMP was prepared in order to meet the federal Clean Air Act requirement that all 24-hour PM2.5 non-attainment areas prepare a SIP, that were required to be submitted to the U.S. EPA by December 14, 2012 and demonstrate attainment with the 24-hour PM2.5 standard by 2014. The 2012 AQMP demonstrates attainment of the federal 24-hour PM2.5 standard by 2014 in the Basin through adoption of all feasible measures, and therefore, no extension of the attainment date is needed.

The 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These "black box" emissions reductions represent 65 percent of the remaining NOx emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NOx control measures have been provided in this AQMP even though the primary purpose of this AQMP is to show compliance with 24-hour PM2.5 emissions standards.

The 2012 AQMP is designed to satisfy the California Clean Air Act's (CCAA) emission reductions of 5 percent per year or adoption of all feasible measures requirements and fulfill the EPA's requirement to update transportation conformity emissions budgets based on the latest approved motor vehicle emissions model and planning assumptions. The 2012 AQMP updates and revises the previous 2007 AQMP. The 2012 AQMP was prepared to comply with the Federal and State CCAA and amendments, to accommodate growth, to reduce the high pollutant levels in the Basin, to meet Federal and State ambient air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive program that will lead this area into compliance with all federal and state air-quality planning requirements.

The 2012 AQMP builds upon the approaches taken in the 2007 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the need to engage in interagency coordinated planning of mobile sources to meet all of the federal criteria pollutant standards. Compared with the 2007 AQMP, the 2012 AQMP utilizes revised emissions inventory projections that use 2008 as the base year. On-road emissions are calculated using CARB EMFAC2011 emission factors and the transportation activity data provided by SCAG from their 2012 Regional Transportation Plan (2012 RTP). Off-road emissions were updated using CARB's 2011 In-Use Off-Road Fleet Inventory Model. Since the 2007 AQMP was finalized new area source categories such as LPG transmission losses, storage tank and pipeline cleaning and degassing, and architectural colorants, were created and included in the emissions inventories. The 2012 AQMP also includes analysis of

several additional sources of GHG emissions such as landfills and could also assist in reaching the GHG target goals in the AB32 Scoping Plan.

The control measures in the 2012 AQMP consist of three components: 1) Basin-wide and episodic short-term PM2.5 measures; 2) Section 182(e)(5) implementation measures; and 3) Transportation control measures. Many of the control measures are not based on command and control regulations, but instead focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes. More broadly, a transition to zero- and near-zero emission technologies is necessary to meet 2023 and 2032 air quality standards and 2050 climate goals. Many of the same technologies will address both air quality and climate needs.

During construction and operation, the project must comply with applicable rules and regulations. The following are rules the project may be required to comply with, either directly, or indirectly:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors. Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 445 prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. The rule states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

(1) The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.

(2) Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.

(3) An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the South Coast Air Basin. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC

content of paints available during construction. Therefore, all paints and solvents used during construction and operation of the project must comply with SCAQMD Rule 1113.

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

SCAQMD Rule 1303 governs the permitting of re-located or new major emission sources, requiring Best Available Control Measures and setting significance limits for PM_{10} among other pollutants.

SCAQMD Rule 1401, New Source Review of Toxic Air Contaminants, specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units, which emit toxic air contaminants.

SCAQMD Rule 2202, On-Road Motor Vehicle Mitigation Options, is to provide employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.

In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group and adopted Rules 2700, 2701, 2702, and 3002 which are described below.

SCAQMD Stakeholder Working Group

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual thresholds of 10,000 MTCO2e for industrial uses.

Rules 2700 and 2701

The SCAQMD adopted Rules 2700 and 2701 on December 5, 2008, which establishes the administrative structure for a voluntary program designed to quantify GHG emission reductions. Rule 2701 provides specific protocols for private parties to follow

to generate certified GHG emission reductions for projects within the district. Approved protocols include forest projects, urban tree planting, and manure management. The SCAQMD is currently developing additional protocols for other reduction measures. For a GHG emission reduction project to qualify, it must be verified and certified by the SCAQMD Executive Officer, who has 60 days to approve or deny the Plan. Upon approval of the Plan, the Executive Officer issues required to issue a certified receipt of the GHG emission reductions within 90 days.

Rule 2702

The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

Rule 3002

The SCAQMD amended Rule 3002 on November 5, 2010 to include facilities that emit greater than 100,000 tons per year of CO_2e are required to apply for a Title V permit by July 1, 2011. A Title V permit is for facilities that are considered major sources of emissions.

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the South Coast Air Basin. Instead, this is controlled through local jurisdictions in accordance to the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance issues the CEQA Air Quality Handbook (SCAQMD CEQA Handbook), prepared by the SCAQMD, 1993, with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs of the AQMP. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that the SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the South Coast Air Basin, and adverse impacts will be minimized.

Southern California Association of Governments

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

transportation, the economy, community development and the environment. SCAG is the Federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan and Regional Transportation Improvement Plan (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Regional Transportation Plan, Regional Transportation Improvement Plan, and AQMP are based on projections originating within the City and County General Plans.

5. Local – City of Costa Mesa

Local jurisdictions, such as the City of Costa Mesa, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the 2007 and 2012 AQMPs. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, the County relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

Costa Mesa General Plan. The Conservation Element of the City of Costa Mesa General Plan summarizes air quality issues in the Basin, air quality-related plans and programs administered by federal, state, and special purpose agencies, and establishes goals and policies to improve air quality. These goals and policies in the Conservation Element include:

GOAL CON-1 It is the goal of the City of Costa Mesa to provide its citizens with a high quality environment through the conservation of resources, including land, water, wildlife, and vegetation; the protection of areas of unique natural beauty; the integration of natural features into the man-made environment.

Objective CON-1C Work towards the conservation of energy resources in both existing and new buildings, utilities and infrastructure.

CON-1C.3 Pursue adoption of an Energy Conservation Program that requires the use of materials, devices, and measures to reduce energy consumption above the energy conservation requirements of Title 24. These measures may include built-in energy efficient appliances, automated controls for air conditioners and lighting, special sunlight-filtering window coatings or double-paned windows, light-colored roofing materials, and other means to reduce energy consumption and a structure's heating and cooling needs.

Objective CON-1E Pursue the prevention of the significant deterioration of local and regional air and water quality.

CON-1E.1 Cooperate with and support regional, State, and Federal agencies to improve air quality throughout the South Coast Air Basin.

CON-1E.2 Require, as a part of the environmental review procedure, an analysis of major development or redevelopment project impacts on local and regional air and water quality.

CON-1E.3 Develop and implement a Reasonable Available Control Measure Plan (including employee ridesharing, traffic signal synchronization, bicycle/pedestrian facilities, energy conservation street lighting, modified work schedules, preferential carpool parking, or other equivalent control measures) in conformance with the Air Quality Management Plan for the South Coast Air Basin.

B. Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Final 2012 Air Quality Management Plan, prepared by SCAQMD, December 2012, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NOx emissions and 40 percent of directly emitted PM2.5, with another 10 percent of PM2.5 from road dust.

The SCAQMD has divided the South Coast Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in Coastal Air Monitoring Area (Source Receptor Area 18), which is located in Los Angeles and Orange Counties and covers the area south of the 101 freeway running along the coast to just north of Laguna Niguel. The nearest air monitoring station to the project site is the Costa Mesa - Mesa Verde Drive Monitoring Station (Costa Mesa Station). The Costa Mesa Station is located approximately 2.3 miles west of the project site at 2850 Mesa Verde Dr East, Costa Mesa. Table 5 presents the monitored pollutant levels from the San Costa Mesa Station. However, it should be noted that due to the air monitoring station

distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

The monitoring data presented in Table 5 shows that ozone and particulate matter (PM10 and PM2.5) are the air pollutants of primary concern in the project area, which are detailed below.

Ozone
Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide
CO is another important pollutant that is due mainly to motor vehicles. The Costa Mesa Station did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide
The Costa Mesa Station did not record an exceedance of the State or Federal NO_2 standards for the last three years.

Particulate Matter
According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

Table 3

State and Federal Criteria Pollutant Standards[1]

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O_3)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.075 ppm/8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm/1-hour 0.03 ppm/annual	100 ppb/1-hour 0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm/1-hour 0.04 ppm/24-hour	75 ppb/1-hour 0.14 ppm/24-hour	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3/24-hour 20 µg/m^3/annual	150 µg/m^3/24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3/24-hour 12 µg/m^3/annual	
Sulfates	25 µg/m^3/24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) property damage.
Lead	1.5 µg/m^3/30-day	0.15 µg/m^3/3-month rolling	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

[1] Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf .

Table 4

South Coast Air Basin Attainment Status

Pollutant	Averaging Time	National Standards[1]	Attainment Date[2]	California Standards[3]
1979 1-Hour Ozone[4]	1-Hour (0.12 ppm)	Nonattainment (Extreme)	11/15/2010 (Not attained[4])	Extreme Nonattainment
1997 8-Hour Ozone[5]	8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024	Nonattainment
2008 8-Hour Ozone	8-Hour (0.075 ppm)	Nonattainment (Extreme)	12/31/2032	
CO	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (Attained)	Maintenance
NO_2[6]	1-Hour (100 ppb) Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (Attained)	Attainment
SO_2[7]	1-Hour (75 ppb)	Designations Pending	Pending	Attainment
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (Attained)	
PM10	24-Hour (150 µg/m^3)	Nonattainment (Serious)[8]	12/31/2006 (Redesignation request submitted)[8]	Nonattainment
PM2.5	24-Hour (35 µg/m^3)	Unclassifiable/ Attainment	Attained	Unclassified
Lead	3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial)[9]	12/31/2015	Nonattainment

[1] Obtained from Draft 2012 AQMP, SCAQMD, 2012. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable.

[2] A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

[3] Obtained from http://www.arb.ca.gov/desig/adm/adm.htm.

[4] 1-hour O_3 standard (0.13 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.

[5] 1997 8-hour O_3 standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the 1997 O3 standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.

[6] New NO_2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO_2 standard retained.

[7] The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations expected in 2012, with SSAB designated Unclassifiable/Attainment.

[8] Annual PM10 standard was revoked, effective December 18, 2006; redesignation request to Attainment of the 24-hour PM10 standard is pending with U.S. EPA

[9] Partial Nonattainment designation - Los Angeles County portion of Basin only.

Table 5

Local Area Air Quality Levels from the Costa Mesa Air Monitoring Station [1]

Pollutant (Standard)[2]	Year		
	2011	2012	2013
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.093	0.090	0.095
Days > CAAQS (0.09 ppm)	0	0	**1**
Maximum 8-Hour Concentration (ppm)	0.077	0.076	0.083
Days > NAAQS (0.08 ppm)	**1**	**1**	**1**
Days > CAAQS (0.070 ppm)	**2**	**1**	**2**
Carbon Monoxide:			
Maximum 8-Hour Concentration (ppm)	2.22	1.71	-
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppb)	60.5	74.4	75.7
Days > NAAQS (100 ppb)	0	0	0
Sulfur Dioxide:			
Maximum 24-Hour Concentration (ppm)	0.002	0.001	0.001
Days > NAAQS (0.25 ppm)	0	0	0
Inhalable Particulates (PM10):[3]			
Maximum 24-Hour Concentration (ug/m^3)	53.0	48.0	77.0
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	**2**	0	**1**
Annual Average (ug/m^3)	24.7	22.3	25.2
Ultra-Fine Particulates (PM2.5):[3]			
Maximum 24-Hour Concentration (ug/m^3)	39.2	50.1	37.8
Days > NAAQS (35 ug/m^3)	**2**	**4**	**1**
Annual Average (ug/m^3)	11.1	10.9	10.1

[1] Source: http://www.arb.ca.gov/adam/topfour/topfourdisplay.php

[2] CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb=parts per billion; N/D = no data available

[3] Data from Anaheim-Pampas Lane Station

V. Air Quality Standards

A. Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, the SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the South Coast Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table 6.

B. Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO_2 (NO_X), CO, PM10, and PM2.5.

The significance thresholds for the local emissions of NO_2 and CO are determined by subtracting the highest background concentration from the last three years of these pollutants from Table 5 above, from the most restrictive ambient air quality standards for these pollutants that are outlined in the Localized Significant Thresholds. Table 6 shows the Localized Significant Thresholds for NO_X, CO, and PM10 and PM2.5 as well as the background concentrations and resultant significance concentrations.

C. Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to hazardous air pollutants (HAP), the Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, (Diesel Analysis), prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create hazardous air pollutants through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the hazardous air pollutants and the toxicity of the hazardous air pollutants should be analyzed through a comprehensive facility-wide health risk assessment (HRA). This project would have minimal traffic/on-site idling in the form of heavy-duty trucks; therefore, an HRA is not required.

D. Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

> "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
>
> The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

E. Greenhouse Gases

The 2014 CEQA Guidelines do not establish a threshold of significance for GHG impacts; instead lead agencies have the discretion to establish significance thresholds for their respective jurisdictions. A lead agency may look to thresholds developed by other public agencies or other expert entities, such as CAPCOA, so long as the threshold chosen is supported by substantial evidence. SCAG, SCAQMD, and the City of Costa Mesa have not adopted a GHG significance threshold applicable to the development of nonstationary source projects.

AB 32, the California Global Warming Solutions Act of 2006, requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. Because AB 32 addresses global climate change in California and is in concert with international efforts to address global climate change, AB 32 has specific requirements in it that fulfills the definition of a mitigation program found in CEQA Guidelines §15064(H)(3). The SCAQMD has proposed screening level thresholds for projects such that projects that fall below 3,000 MT CO2e annually are considered to comply with the GHG emission reduction strategy as mandated by AB 32. Therefore, this analysis uses compliance with the 3,000 MT CO2e annual screening level as a threshold in determining if the proposed project's contribution of GHGs is a considerable contribution to global warming impacts.

Table 6

SCAQMD Air Quality Significance Thresholds[1]

Mass Daily Thresholds		
Pollutant	Construction (pounds/day)	Operation (pounds/day)
NOx	100	55
VOC	75	55
PM10	150	150
PM2.5	55	55
SOx	150	150
CO	550	550
Lead	3	3

Toxic Air Contaminants, Odor and GHG Thresholds	
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index > 1.0 (project increment)
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402
GHG	10,000 MT/yr CO2e for industrial facilities

Local Air Quality Thresholds	
Pollutant	SCAQMD LSTs
NO_2 -1-hour average	0.18 ppm (338 µg/m^3)
PM10 -24-hour average Construction Operations	 10.4 µg/m^3 2.5 ug/m^3
PM2.5 -24-hour average Construction Operations	 10.4 µg/m^3 2.5 µg/m^3
SO_2 1-hour average 24-hour average	 0.25 ppm 0.04 ppm
CO 1-hour average 8-hour average	 20 ppm (23,000 µg/m^3) 9 ppm (10,000 µg/m^3)
Lead 30-day average Rolling 3-month average Quarterly average	 1.5 µg/m^3 0.15 µg/m^3 1.5 µg/m^3

[1] Source: http://www.aqmd.gov/ceqa/handbook/signthres.pdf

VI. Short-Term Construction Impacts

Construction activities associated with the proposed project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the phasing, duration, and required equipment for the construction of the proposed project were obtained from the project applicant. As stated previously, the proposed project is anticipated to start construction no sooner than September 2014 and is anticipated to be complete and operational by 2016.

A. Construction-Related Regional Impacts

The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs.

1. Construction-Related Criteria Pollutants Analysis

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants.

Methodology

Typical emission rates from construction activities were obtained from CalEEMod Version 2013.2.2. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2011 computer program to calculate the emission rates specific for Orange County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2011 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions during each phase was calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions. The construction emissions printouts from CalEEMod are provided in Appendix B.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent and stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the

Project area (approximately 5.94 acres) a Fugitive Dust Control Plan or Large Operation Notification would not be required.

SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures are used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Mitigation Measure 1 was included to ensure compliance with Rule 403.

The phases of the construction activities which have been analyzed below are: 1) grading, 2) building construction, 3) paving, and 4) application of architectural coatings. For details on construction modeling, please see Appendix B.

The application of architectural coatings would occur after the completion of the construction phase. Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings applied after January 1, 2014 will be limited to an average of 50 grams per liter or less and the CalEEMod model default VOC emissions have been adjusted accordingly.

Project Impacts

The construction-related criteria pollutant emissions for each phase are shown below in Table 7. Table 7 shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from construction of the proposed project.

B. Construction-Related Local Impacts

Construction-related air emissions may also have the potential to exceed the State and Federal air quality standards in the project vicinity. The proposed project has been analyzed for the potential local air quality impacts created from: construction-related fugitive dust and diesel emissions; from toxic air contaminants; and from construction-related odor impacts.

1. Local Air Quality Impacts from Construction

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

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

3) Any emission control devices added onto off-road equipment.
4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The CalEEMod output sheets included in Appendix B show the equipment used for this analysis.

As shown in Table 8, the maximum number of acres disturbed in a day would be two and one-half acres.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The localized assessment methodology limits the emissions in the analysis to those generated from on-site activities. To be conservative, the emission thresholds were calculated based on the Coastal source receptor area (SRA 18) disturbance of two acres per day (which is slightly less than the maximum area of 2.5 acres anticipated to be disturbed each day during construction).

The nearest sensitive receptors to the project site are the apartments located on the other side of Bristol Street from the existing Ganahl Lumber facility, southeast of the project site, at a distance of approximately 313 feet (95 meters) from the project boundary. Table 9 shows the on-site emissions from the CalEEMod model for the different construction phases and the LST emissions thresholds. As the receptors are less than 100 meters from the site boundary, the LST thresholds for 50 meters were used.

The data provided in Table 9 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

2. Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the relatively short-term construction schedule, the proposed project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore,

no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

3. Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement and diesel exhaust emissions. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

Table 7

Construction-Related Regional Criteria Pollutant Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading						
On-Site[2]	3.87	41.10	26.75	0.03	4.83	3.48
Off-Site[3]	0.06	0.08	1.00	0.00	0.17	0.05
Total	**3.93**	**41.18**	**27.76**	**0.03**	**5.00**	**3.53**
Building Construction						
On-Site[2]	3.87	31.25	18.93	0.03	2.23	2.10
Off-Site[3]	0.89	5.28	11.74	0.02	1.49	0.46
Total	**4.75**	**36.53**	**30.67**	**0.05**	**3.72**	**2.56**
Paving						
On-Site[2]	2.79	25.18	14.98	0.02	1.41	1.30
Off-Site[3]	0.06	0.07	0.91	0.00	0.17	0.05
Total	**2.84**	**25.25**	**15.88**	**0.02**	**1.58**	**1.35**
Architectural Coating						
On-Site[2]	18.20	2.57	1.90	0.00	0.22	0.22
Off-Site[3]	0.08	0.10	1.21	0.00	0.23	0.06
Total	**18.28**	**2.67**	**3.11**	**0.01**	**0.45**	**0.28**
Total of overlapping phases[4]	**26**	**64**	**50**	**0**	**6**	**4**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	no	no	no	no	no	no

[1] Source: CalEEMod Version 2013.2.2

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction, architectural coatings and paving phases may overlap.

Table 8

Maximum Number of Acres Disturbed Per Day[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Site Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Excavators	0	0.5	0
	Scrapers	0	1	0
	Tractors/Loaders/Backhoes	3	0.5	1.5
Total per phase		-	-	**2.5**

[1] Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds.

Table 9

Local Construction Emissions at the Nearest Receptor[1]

Phase	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Grading	41.10	26.75	4.83	3.48
Building Construction	31.25	18.93	2.23	2.10
Paving	25.18	14.98	1.41	1.30
Architectural Coating	2.57	1.90	0.22	0.22
SCAQMD Threshold for 50 meters (164 feet)[2]	**128**	**1,089**	**21**	**7**
Exceeds Threshold?	no	no	no	no

[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in Coastal Source Receptor Area (SRA 18) . Project will disturb a maximum of two and one-half acres per day (see Table 8).

[2] The estimated distance from the project site to the nearest sensitive receptor (apartments) located southeast of the project site is 313 feet (95 meters). As the distance is less than 100 meters, the 50 meter thresholds were used.

VII. Long-Term Air Quality Operational Impacts

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be mainly due to emissions from the project-generated vehicle trips and through operational emissions from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to: regional air quality and local air quality impacts with the on-going operation of the proposed project.

A. Operations-Related Regional Air Quality Impacts

The potential operations-related air emissions have been analyzed below for the criteria pollutants and cumulative impacts.

1. Operations-Related Criteria Pollutant Analysis

The operations-related criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model. The proposed project was analyzed based on 42,224 square feet of Building A, 11,072 square feet of Will-Call Storage, 21,450 space B Shed and 4,315 square feet of Mill Shed (for a total building area of 79,061 square feet). The operating emissions were based on the year 2016, which is the anticipated opening year for the proposed project. The operations daily emissions printouts from the CalEEMod model are provided in Appendix B. The CalEEMod analyzes operational emissions from area sources, energy usage, and mobile sources, which are analyzed below.

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Focused Traffic Impact Study Ganahl Lumber Costa Mesa Relocation Project (Traffic Impact Analysis), prepared by Linscott, Law, and Greenspan, 2014, into the CalEEMod Model. The trip generation rate was determined by dividing the total trips of 2,287 by 70.061 thousand square feet (TSF) which gave us a trip generation rate of 28.93 trips TSF.

The worst-case summer or winter VOC, NOx, CO, SO_2, PM10, and PM2.5 emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table 10. The data provided in Table 10 shows that for the on-going operations activities for the proposed project, none of the emissions would exceed the SCAQMD regional thresholds of significance discussed above in Section V. Therefore, operation of the proposed project would not create a significant regional impact.

2. Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air

quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The project area is out of attainment for both ozone and PM10 particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. With respect to long-term emissions, this project would create a less than significant cumulative impact.

B. Operations-Related Local Air Quality Impacts

Project-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. The proposed project has been analyzed for the potential local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analysis analyzes the vehicular CO emissions, local impacts from on-site operations, and odor impacts.

1. Local CO Emission Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in above in Section V.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section V, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" typically occur at high traffic volume intersections with a Level of Service E or worse.

The Traffic Impact Analysis found that with the proposed road improvements, no analyzed intersection would operate at a Level of Service E or worse. Therefore no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

2. Local Air Quality Impacts from On-Site Operations

The proposed project involves the construction and operation of a building materials retail store. The long-term emissions, as discussed previously, are primarily in the form of mobile source emissions and consumer products. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site; such as warehouse/transfer facilities. The proposed project does not include such uses. Therefore, due to the lack of stationary source emissions, no long-term LST analysis is warranted.

3. Operations-Related Odor Impacts

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from diesel truck emissions and trash storage areas. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed project.

4. Operations-Related Toxic Air Contaminant Impacts

According to the SCAQMD's MATES-III study, the northwestern side of the project area has an estimated cancer risk of 615 in one million and the southeastern side of the project area has an estimated cancer risk of 713 in one million. This cancer risk at the site is largely due to the proximity to the 73 and 55 Freeways.

ARB recommends avoiding siting new sensitive land uses such as residences, schools, daycare centers, playgrounds, or medical facilities within 500 feet of a freeway, urban roads with traffic volumes exceeding 100,000 vehicles/day, or rural roads with volumes greater than 50,000 vehicles/day. The project involves the construction and operation of a building materials retail store and is not considered to be a sensitive land use.

According to the project-specific traffic analysis (LLG 2014), the project would have no more than 34 heavy trucks utilizing the site on a daily basis. There are no loading docks available and the trucks would not be idling on-site; therefore, the project is not considered to be a substantial source of diesel emissions.

Residential uses within the vicinity of the project are more impacted by diesel particulate matter (DPM) emissions from the nearby 73 and 55 freeways than emissions from the low number of trucks frequenting the site. A project-specific health risk assessment is neither warranted, nor required.

Table 10

Operational Criteria Pollutant Regional Air Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	5.56	0.00	0.01	0.00	0.00	0.00
Energy Usage[3]	0.00	0.04	0.04	0.00	0.00	0.00
Mobile Sources[4]	6.81	11.52	56.68	0.12	8.67	2.41
Total Emissions	**12**	**12**	**57**	**0**	**9**	**2**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	no	no	no	no	no	no

[1] Source: CalEEMod Version 2013.2.2

[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

[3] Energy usage consists of emissions from on-site natural gas usage.

[4] Mobile sources consist of emissions from vehicles and road dust.

VIII. Global Climate Change Analysis

The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project-related GHG emissions, the project impacts and a consistency analysis of the proposed project with any applicable GHG reduction plans, policies or regulations.

A. Methodology

The CalEEMod Version 2013.2.2 was used to calculate the GHG emissions from the proposed project. The project's year 2016 (opening year) emissions were calculated, compared to the SCAQMD draft screening threshold of 3,000 metric tons of CO_2e per year and the results are shown in Table 11.

1. Area Sources

   Area sources include emissions from consumer products, landscape equipment and architectural coatings. No changes were made to the default area source emissions.

2. Energy Usage

   Energy usage includes emissions from the generation of electricity and natural gas used on-site. No changes were made to the default energy usage parameters.

3. Mobile Sources

   Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Traffic Impact Analysis into the CalEEMod Model. See Section VII for details.

4. Solid Waste

   Solid waste includes the GHG emissions generated from the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. The CalEEMod default value for waste generated was utilized in the analysis.

5. Water

   Water includes the water used for the interior of the buildings as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. CalEEMod defaults were used.

6. Construction

The construction-related GHG emissions were also included in the analysis and were based on a 30 year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The construction-related GHG emissions were calculated by CalEEMod and detailed above in Section VI.

B. Project Greenhouse Gas Emissions

The project's opening year (2016) emissions would be approximately 2,485.46 metric tons of CO_2e per year and would not exceed the SCAQMD draft screening threshold of 3,000 metric tons of CO_2e per year for greenhouse gas emissions for all uses (see Table 11). Impacts are considered less than significant.

The project is subject to the requirements of the California Green Building Standards Code. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires:

- Water Efficiency and Conservation [Indoor Water Use (4.303.1)]. Fixtures and fixture fittings reducing the overall use of potable water within the building by at least 20 percent shall be provided. The 20 percent reduction shall be demonstrated by one of the following methods:
  - Prescriptive Method: Showerheads (≤ 2.0 gpm @ 80 psi); Residential Lavatory Faucets (≤ 1.5 gpm @ 60 psi); Nonresidential Lavatory Faucets (≤ .4 gpm @ 60 psi); Kitchen Faucets (≤ 1.8 gpm @ 60 psi); Toilets (≤ 1.28 gal/flush); and urinals (≤ 0.5 gal/flush).
  - Performance Method: Provide a calculation demonstrating a 20% reduction of indoor potable water using the baseline values set forth in Table 4.303.1. The calculation will be limited to the total water usage of showerheads, lavatory faucets, water closets and urinals within the dwelling.
- Water Efficiency and Conservation [Outdoor Water Use (4.304.1)]. Irrigation Controllers. Automatic irrigation system controllers for landscaping provided by

the builder and installed at the time of final inspection shall comply with the following:

- Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' watering needs as weather or soil conditions change.

- Weather-based controllers without integral rain sensors or communication systems that account for rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s).

- Construction Waste Reduction of at least 50 percent (4.408.1). Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4; OR meet a more stringent local construction and demolition waste management ordinance. Documentation is required per Section 4.408.5. Exceptions:

  - Excavated soil and land-clearing debris.

  - Alternate waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.

  - The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

- Materials pollution control (4.504.1 – 4.504.6). Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard.

- Installer and Special Inspector Qualifications (702.1-702.2). Mandatory special installer inspector qualifications for installation and inspection of energy systems (e.g., heat furnace, air conditioner, mechanical equipment).

C. Greenhouse Gas Plan Consistency

As stated previously, the City of Costa Mesa does not currently have a Climate Action Plan; therefore, GHG emissions have been compared to the CARB Scoping Plan.

S*coping Plan*

Emission reductions in California alone would not be able to stabilize the concentration of greenhouse gases in the earth's atmosphere. However, California's actions set an example and drive progress towards a reduction in greenhouse gases elsewhere. If other states and countries were to follow California's emission reduction targets, this could avoid medium or higher ranges of global temperature increases. Thus, severe consequences of climate change could also be avoided.

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

Project consistency with applicable strategies in the Plan is assessed. As shown in Table 12, the project is consistent with the applicable strategies and the project would result in a less than significant impact. The project's operational GHG emissions do not exceed the draft SCAQMD threshold for all land uses. Although the project would generate greenhouse gas emissions, either directly or indirectly, these emissions would not have a significant impact on the environment.

Table 11

Project-Related Greenhouse Gas Emissions[1]

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Area Sources[2]	0.00	0.00	0.00	0.00	0.00	0.00
Energy Usage[3]	0.00	343.55	343.55	0.02	0.00	344.91
Mobile Sources[4]	0.00	1,684.76	1,684.76	0.07	0.00	1,686.27
Solid Waste[5]	177.96	0.00	177.96	10.52	0.00	398.83
Water and Wastewater[6]	1.86	33.23	35.09	0.19	0.00	40.62
Construction[7]	0.00	14.77	14.77	0.00	0.00	14.82
Total Emissions	179.82	2,076.31	2,256.13	10.80	0.01	**2,485.46**
SCAQMD Draft Screening Threshold						**3,000**
Exceeds Threshold?						**No**

[1] Source: CalEEMod Version 2013.2.2

[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

[3] Energy usage consist of GHG emissions from electricity and natural gas usage.

[4] Mobile sources consist of GHG emissions from vehicles.

[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Construction GHG emissions based on a 30 year amortization rate.

Table 12

CARB Scoping Measure Project Comparison[1]

Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The project will be compliant with the current Title 24 standards.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that will become mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 50 percent reduction required in AB 939.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. The project will comply with all applicable City ordinances.

[1] Source: CARB Scoping Plan (2008)

IX. Air Quality Compliance

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

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

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

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

A. Criterion 1 - Increase in the Frequency or Severity of Violations

Based on the air quality modeling analysis contained in this Air Analysis, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. This Air Analysis also found that long-term operations impacts will not result in significant impacts based on the SCAQMD regional, local and toxic air contaminant thresholds of significance.

Therefore, the proposed project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

B. Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to

ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCP&G) consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of Costa Mesa General Plan defines the assumptions that are represented in the AQMP.

The project site is zoned "C1 Local Business" and has a land use designation of "General Commercial" in the City of Costa Mesa Zoning Map and General Plan Land Use Map, respectively. Based on the City of Costa Mesa Industrial Development Standards, the project site could be developed with up to 193,700 square-feet (SF) of "mini-warehouse" floor area. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

X. Mitigation Measures

A. Construction Measures

None required.

B. Operational Measures

None required.

XI. References

California Air Pollution Control Officers Association

2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board

2008 Resolution 08-43

2008 Airborne Toxic Control Measure for in-use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, Section 2477 of Division 3, Chapter 9, Title 13, California Code of Regulations

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Historical Air Quality, Top 4 Summary

City of Costa Mesa

2002 City of Costa Mesa 2000 General Plan. January.

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2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Linscott, Law and Greenspan (LLG 2104).

2014 Focused Traffic Impact Study, Ganahl Lumber Costa Mesa Relocation Project. June 3.

Office of Environmental Health Hazard Assessment

2003 Air Toxics Hot Spots Program Risk Assessment Guidelines

South Coast Air Quality Management District

1993 CEQA Air Quality Handbook

2003 Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis

2005 Rule 403 Fugitive Dust

2007 2007 Air Quality Management Plan

2008 Final Localized Significance Threshold Methodology, Revised

2011 Appendix A Calculation Details for CalEEMod

2012 Final 2012 Air Quality Management Plan

Appendices

Appendix A – Glossary of Terms

Appendix B – CalEEMod Model Daily Emissions Printouts

Appendix C – CalEEMod Model Annual Emissions Printouts

APPENDIX A

Glossary of Terms

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride

SIP	State Implementation Plan
SOx	Sulfur Oxides
T7	Heavy-Heavy Duty Trucks from EMFAC 2007 classifications
TAC	Toxic air contaminants
VOC	Volatile organic compounds

APPENDIX B

CalEEMod Model Daily Emissions Printouts

Ganahl - Costa Mesa

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.13	Acre	4.13	179,902.80	0
Hardware/Paint Store	79.06	1000sqft	1.81	79,061.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 5.94acres total

Construction Phase - Lot is vacant no demo or site prep required. Timing from developer.

Grading - total site acreage is 5.94.

Architectural Coating - SCAQMD Rule 1113 50g/L VOCs.

Vehicle Trips - Trip rates 28.93 per traffic study

Area Coating - SCAQMD rule 1113 50g/L VOC

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - SCAQMD Rule 1113 50g/L VOCs

Energy Mitigation - 2014 title 24 is 30% more efficient than 2008 title 24.

Water Mitigation - Green building standards.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	230.00	174.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	AcresOfGrading	11.50	5.94
tblLandUse	LandUseSquareFeet	79,060.00	79,061.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	82.52	28.93
tblVehicleTrips	SU_TR	68.65	28.93
tblVehicleTrips	WD_TR	51.29	28.93

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					
2014	4.7541	41.1823	30.6686	0.0497	6.4636	2.3727	8.8364	3.3843	2.1881	5.5672	0.0000	4,873.6336	4,873.6336	0.9440	0.0000	4,893.4579
2015	18.2767	34.6423	29.4177	0.0496	1.3914	2.1942	3.5855	0.3741	2.0616	2.4357	0.0000	4,798.0391	4,798.0391	0.7403	0.0000	4,813.5855
Total	**23.0307**	**75.8246**	**60.0864**	**0.0993**	**7.8550**	**4.5669**	**12.4219**	**3.7584**	**4.2497**	**8.0029**	**0.0000**	**9,671.6726**	**9,671.6726**	**1.6843**	**0.0000**	**9,707.0434**

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					
2014	4.7541	41.1823	30.6686	0.0497	2.6231	2.3727	4.9958	1.3470	2.1881	3.5299	0.0000	4,873.6336	4,873.6336	0.9440	0.0000	4,893.4579
2015	18.2767	34.6423	29.4177	0.0496	1.3914	2.1942	3.5855	0.3741	2.0616	2.4357	0.0000	4,798.0391	4,798.0391	0.7403	0.0000	4,813.5855
Total	**23.0307**	**75.8246**	**60.0864**	**0.0993**	**4.0144**	**4.5669**	**8.5814**	**1.7211**	**4.2497**	**5.9656**	**0.0000**	**9,671.6726**	**9,671.6726**	**1.6843**	**0.0000**	**9,707.0434**

	ROG	NOx	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	48.89	0.00	30.92	54.21	0.00	25.46	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					
Area	5.5573	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Energy	4.7900e-003	0.0435	0.0366	2.6000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003		52.2402	52.2402	1.0000e-003	9.6000e-004	52.5581
Mobile	6.3482	10.9471	54.9118	0.1213	8.5276	0.1438	8.6714	2.2751	0.1323	2.4074		10,547.7743	10,547.7743	0.4358		10,556.9254
Total	**11.9103**	**10.9907**	**54.9571**	**0.1216**	**8.5276**	**0.1471**	**8.6747**	**2.2751**	**0.1356**	**2.4108**		**10,600.0327**	**10,600.0327**	**0.4368**	**9.6000e-004**	**10,609.5027**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.2356	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Energy	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5953	44.5953	8.5000e-004	8.2000e-004	44.8667
Mobile	6.3482	10.9471	54.9118	0.1213	8.5276	0.1438	8.6714	2.2751	0.1323	2.4074		10,547.7743	10,547.7743	0.4358		10,556.9254
Total	**11.5879**	**10.9843**	**54.9517**	**0.1216**	**8.5276**	**0.1466**	**8.6742**	**2.2751**	**0.1351**	**2.4103**		**10,592.3878**	**10,592.3878**	**0.4367**	**8.2000e-004**	**10,601.8113**

	ROG	NOx	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	**2.71**	**0.06**	**0.01**	**0.03**	**0.00**	**0.33**	**0.01**	**0.00**	**0.36**	**0.02**	**0.00**	**0.07**	**0.07**	**0.03**	**14.58**	**0.07**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2014	10/1/2014	5	23	
2	Building Construction	Building Construction	10/2/2014	6/2/2015	5	174	
3	Paving	Paving	6/3/2015	7/3/2015	5	23	
4	Architectural Coating	Architectural Coating	7/4/2015	8/4/2015	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5.94

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,687; Non-Residential Outdoor: 42,229 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	101.00	42.00	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	20.00	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 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2960	0.0000	6.2960	3.3398	0.0000	3.3398			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.4266	3,162.4266	0.9345		3,182.0518
Total	**3.8669**	**41.0997**	**26.7538**	**0.0298**	**6.2960**	**2.3714**	**8.6674**	**3.3398**	**2.1817**	**5.5215**		**3,162.4266**	**3,162.4266**	**0.9345**		**3,182.0518**

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
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
Worker	0.0634	0.0827	1.0030	2.0400e-003	0.1677	1.3000e-003	0.1690	0.0445	1.1900e-003	0.0457		182.8557	182.8557	9.4800e-003		183.0549
Total	**0.0634**	**0.0827**	**1.0030**	**2.0400e-003**	**0.1677**	**1.3000e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**182.8557**	**182.8557**	**9.4800e-003**		**183.0549**

3.2 Grading - 2014

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					2.4554	0.0000	2.4554	1.3025	0.0000	1.3025			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,182.0518
Total	**3.8669**	**41.0997**	**26.7538**	**0.0298**	**2.4554**	**2.3714**	**4.8269**	**1.3025**	**2.1817**	**3.4843**	**0.0000**	**3,162.4266**	**3,162.4266**	**0.9345**		**3,182.0518**

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
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
Worker	0.0634	0.0827	1.0030	2.0400e-003	0.1677	1.3000e-003	0.1690	0.0445	1.1900e-003	0.0457		182.8557	182.8557	9.4800e-003		183.0549
Total	**0.0634**	**0.0827**	**1.0030**	**2.0400e-003**	**0.1677**	**1.3000e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**182.8557**	**182.8557**	**9.4800e-003**		**183.0549**

3.3 Building Construction - 2014

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	3.8680	31.2537	18.9298	0.0268		2.2280	2.2280		2.0973	2.0973		2,709.1969	2,709.1969	0.6889		2,723.6630
Total	**3.8680**	**31.2537**	**18.9298**	**0.0268**		**2.2280**	**2.2280**		**2.0973**	**2.0973**		**2,709.1969**	**2,709.1969**	**0.6889**		**2,723.6630**

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
Vendor	0.4594	4.7200	4.9855	9.1300e-003	0.2624	0.0900	0.3524	0.0747	0.0828	0.1575		933.2080	933.2080	8.2000e-003		933.3803
Worker	0.4267	0.5565	6.7533	0.0137	1.1289	8.7500e-003	1.1377	0.2994	8.0200e-003	0.3074		1,231.2287	1,231.2287	0.0639		1,232.5696
Total	**0.8861**	**5.2765**	**11.7388**	**0.0229**	**1.3913**	**0.0988**	**1.4901**	**0.3741**	**0.0908**	**0.4649**		**2,164.4366**	**2,164.4366**	**0.0721**		**2,165.9499**

3.3 Building Construction - 2014

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	3.8680	31.2537	18.9298	0.0268		2.2280	2.2280		2.0973	2.0973	0.0000	2,709.1969	2,709.1969	0.6889		2,723.6630
Total	**3.8680**	**31.2537**	**18.9298**	**0.0268**		**2.2280**	**2.2280**		**2.0973**	**2.0973**	**0.0000**	**2,709.1969**	**2,709.1969**	**0.6889**		**2,723.6630**

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
Vendor	0.4594	4.7200	4.9855	9.1300e-003	0.2624	0.0900	0.3524	0.0747	0.0828	0.1575		933.2080	933.2080	8.2000e-003		933.3803
Worker	0.4267	0.5565	6.7533	0.0137	1.1289	8.7500e-003	1.1377	0.2994	8.0200e-003	0.3074		1,231.2287	1,231.2287	0.0639		1,232.5696
Total	**0.8861**	**5.2765**	**11.7388**	**0.0229**	**1.3913**	**0.0988**	**1.4901**	**0.3741**	**0.0908**	**0.4649**		**2,164.4366**	**2,164.4366**	**0.0721**		**2,165.9499**

3.3 Building Construction - 2015

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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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
Vendor	0.4041	4.1120	4.5770	9.1000e-003	0.2624	0.0693	0.3317	0.0747	0.0637	0.1384		920.8780	920.8780	7.1400e-003		921.0279
Worker	0.3853	0.5004	6.0962	0.0137	1.1289	8.2000e-003	1.1371	0.2994	7.5300e-003	0.3069		1,187.5839	1,187.5839	0.0584		1,188.8093
Total	**0.7893**	**4.6124**	**10.6732**	**0.0228**	**1.3914**	**0.0775**	**1.4688**	**0.3741**	**0.0712**	**0.4453**		**2,108.4619**	**2,108.4619**	**0.0655**		**2,109.8372**

3.3 Building Construction - 2015

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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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
Vendor	0.4041	4.1120	4.5770	9.1000e-003	0.2624	0.0693	0.3317	0.0747	0.0637	0.1384		920.8780	920.8780	7.1400e-003		921.0279
Worker	0.3853	0.5004	6.0962	0.0137	1.1289	8.2000e-003	1.1371	0.2994	7.5300e-003	0.3069		1,187.5839	1,187.5839	0.0584		1,188.8093
Total	**0.7893**	**4.6124**	**10.6732**	**0.0228**	**1.3914**	**0.0775**	**1.4688**	**0.3741**	**0.0712**	**0.4453**		**2,108.4619**	**2,108.4619**	**0.0655**		**2,109.8372**

3.4 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016		2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.4705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.7877**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**		**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

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
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
Worker	0.0572	0.0743	0.9054	2.0400e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		176.3739	176.3739	8.6700e-003		176.5558
Total	**0.0572**	**0.0743**	**0.9054**	**2.0400e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**176.3739**	**176.3739**	**8.6700e-003**		**176.5558**

3.4 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016	0.0000	2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.4705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.7877**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**	**0.0000**	**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

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
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
Worker	0.0572	0.0743	0.9054	2.0400e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		176.3739	176.3739	8.6700e-003		176.5558
Total	**0.0572**	**0.0743**	**0.9054**	**2.0400e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**176.3739**	**176.3739**	**8.6700e-003**		**176.5558**

3.5 Architectural Coating - 2015

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	17.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209		281.4481	281.4481	0.0367		282.2177
Total	**18.2004**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**		**281.4481**	**281.4481**	**0.0367**		**282.2177**

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
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
Worker	0.0763	0.0991	1.2072	2.7100e-003	0.2236	1.6200e-003	0.2252	0.0593	1.4900e-003	0.0608		235.1651	235.1651	0.0116		235.4078
Total	**0.0763**	**0.0991**	**1.2072**	**2.7100e-003**	**0.2236**	**1.6200e-003**	**0.2252**	**0.0593**	**1.4900e-003**	**0.0608**		**235.1651**	**235.1651**	**0.0116**		**235.4078**

3.5 Architectural Coating - 2015

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	17.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209	0.0000	281.4481	281.4481	0.0367		282.2177
Total	**18.2004**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**	**0.0000**	**281.4481**	**281.4481**	**0.0367**		**282.2177**

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
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
Worker	0.0763	0.0991	1.2072	2.7100e-003	0.2236	1.6200e-003	0.2252	0.0593	1.4900e-003	0.0608		235.1651	235.1651	0.0116		235.4078
Total	**0.0763**	**0.0991**	**1.2072**	**2.7100e-003**	**0.2236**	**1.6200e-003**	**0.2252**	**0.0593**	**1.4900e-003**	**0.0608**		**235.1651**	**235.1651**	**0.0116**		**235.4078**

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	6.3482	10.9471	54.9118	0.1213	8.5276	0.1438	8.6714	2.2751	0.1323	2.4074		10,547.7743	10,547.7743	0.4358		10,556.9254
Unmitigated	6.3482	10.9471	54.9118	0.1213	8.5276	0.1438	8.6714	2.2751	0.1323	2.4074		10,547.7743	10,547.7743	0.4358		10,556.9254

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hardware/Paint Store	2,287.21	2,287.21	2287.21	4,036,817	4,036,817
Parking Lot	0.00	0.00	0.00		
Total	2,287.21	2,287.21	2,287.21	4,036,817	4,036,817

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
Hardware/Paint Store	16.60	8.40	6.90	13.60	67.40	19.00	45	29	26
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511008	0.057223	0.191597	0.152361	0.041328	0.005882	0.015289	0.014281	0.001428	0.002141	0.004713	0.000509	0.002239

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5953	44.5953	8.5000e-004	8.2000e-004	44.8667
NaturalGas Unmitigated	4.7900e-003	0.0435	0.0366	2.6000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003		52.2402	52.2402	1.0000e-003	9.6000e-004	52.5581

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					
Hardware/Paint Store	444.041	4.7900e-003	0.0435	0.0366	2.6000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003		52.2402	52.2402	1.0000e-003	9.6000e-004	52.5581
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.7900e-003**	**0.0435**	**0.0366**	**2.6000e-004**		**3.3100e-003**	**3.3100e-003**		**3.3100e-003**	**3.3100e-003**		**52.2402**	**52.2402**	**1.0000e-003**	**9.6000e-004**	**52.5581**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hardware/Paint Store	0.37906	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5953	44.5953	8.5000e-004	8.2000e-004	44.8667
Total		**4.0900e-003**	**0.0372**	**0.0312**	**2.2000e-004**		**2.8200e-003**	**2.8200e-003**		**2.8200e-003**	**2.8200e-003**		**44.5953**	**44.5953**	**8.5000e-004**	**8.2000e-004**	**44.8667**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.2356	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Unmitigated	5.5573	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193

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	0.4290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Total	**5.5573**	**8.0000e-005**	**8.7100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0182**	**0.0182**	**5.0000e-005**		**0.0193**

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	0.1073					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Total	**5.2356**	**8.0000e-005**	**8.7100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0182**	**0.0182**	**5.0000e-005**		**0.0193**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

Ganahl - Costa Mesa

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.13	Acre	4.13	179,902.80	0
Hardware/Paint Store	79.06	1000sqft	1.81	79,061.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 5.94acres total

Construction Phase - Lot is vacant no demo or site prep required. Timing from developer.

Grading - total site acreage is 5.94.

Architectural Coating - SCAQMD Rule 1113 50g/L VOCs.

Vehicle Trips - Trip rates 28.93 per traffic study

Area Coating - SCAQMD rule 1113 50g/L VOC

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - SCAQMD Rule 1113 50g/L VOCs

Energy Mitigation - 2014 title 24 is 30% more efficient than 2008 title 24.

Water Mitigation - Green building standards.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	230.00	174.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	AcresOfGrading	11.50	5.94
tblLandUse	LandUseSquareFeet	79,060.00	79,061.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	82.52	28.93
tblVehicleTrips	SU_TR	68.65	28.93
tblVehicleTrips	WD_TR	51.29	28.93

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					
2014	4.8279	41.1906	31.2112	0.0489	6.4636	2.3727	8.8364	3.3843	2.1892	5.5672	0.0000	4,800.7658	4,800.7658	0.9440	0.0000	4,820.5901
2015	18.2808	34.7920	29.9639	0.0488	1.3914	2.1951	3.5864	0.3741	2.0624	2.4365	0.0000	4,727.4985	4,727.4985	0.7405	0.0000	4,743.0492
Total	**23.1087**	**75.9826**	**61.1752**	**0.0977**	**7.8550**	**4.5678**	**12.4228**	**3.7584**	**4.2516**	**8.0037**	**0.0000**	**9,528.2643**	**9,528.2643**	**1.6845**	**0.0000**	**9,563.6393**

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					
2014	4.8279	41.1906	31.2112	0.0489	2.6231	2.3727	4.9958	1.3470	2.1892	3.5299	0.0000	4,800.7658	4,800.7658	0.9440	0.0000	4,820.5901
2015	18.2808	34.7920	29.9639	0.0488	1.3914	2.1951	3.5864	0.3741	2.0624	2.4365	0.0000	4,727.4985	4,727.4985	0.7405	0.0000	4,743.0492
Total	**23.1087**	**75.9826**	**61.1752**	**0.0977**	**4.0144**	**4.5678**	**8.5822**	**1.7211**	**4.2516**	**5.9664**	**0.0000**	**9,528.2643**	**9,528.2643**	**1.6845**	**0.0000**	**9,563.6393**

	ROG	NOx	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**	**48.89**	**0.00**	**30.92**	**54.21**	**0.00**	**25.45**	**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					
Area	5.5573	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Energy	4.7900e-003	0.0435	0.0366	2.6000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003		52.2402	52.2402	1.0000e-003	9.6000e-004	52.5581
Mobile	6.8079	11.5228	56.6759	0.1160	8.5276	0.1449	8.6724	2.2751	0.1333	2.4084		10,088.1922	10,088.1922	0.4361		10,097.3501
Total	**12.3700**	**11.5664**	**56.7212**	**0.1162**	**8.5276**	**0.1482**	**8.6758**	**2.2751**	**0.1366**	**2.4118**		**10,140.4505**	**10,140.4505**	**0.4371**	**9.6000e-004**	**10,149.9275**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.2356	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Energy	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5953	44.5953	8.5000e-004	8.2000e-004	44.8667
Mobile	6.8079	11.5228	56.6759	0.1160	8.5276	0.1449	8.6724	2.2751	0.1333	2.4084		10,088.1922	10,088.1922	0.4361		10,097.3501
Total	**12.0476**	**11.5600**	**56.7159**	**0.1162**	**8.5276**	**0.1477**	**8.6753**	**2.2751**	**0.1361**	**2.4113**		**10,132.8056**	**10,132.8056**	**0.4370**	**8.2000e-004**	**10,142.2361**

	ROG	NOx	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	**2.61**	**0.06**	**0.01**	**0.03**	**0.00**	**0.33**	**0.01**	**0.00**	**0.36**	**0.02**	**0.00**	**0.08**	**0.08**	**0.03**	**14.58**	**0.08**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2014	10/1/2014	5	23	
2	Building Construction	Building Construction	10/2/2014	6/2/2015	5	174	
3	Paving	Paving	6/3/2015	7/3/2015	5	23	
4	Architectural Coating	Architectural Coating	7/4/2015	8/4/2015	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5.94

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,687; Non-Residential Outdoor: 42,229 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	101.00	42.00	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	20.00	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 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2960	0.0000	6.2960	3.3398	0.0000	3.3398			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.4266	3,162.4266	0.9345		3,182.0518
Total	**3.8669**	**41.0997**	**26.7538**	**0.0298**	**6.2960**	**2.3714**	**8.6674**	**3.3398**	**2.1817**	**5.5215**		**3,162.4266**	**3,162.4266**	**0.9345**		**3,182.0518**

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
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
Worker	0.0669	0.0909	0.9498	1.9300e-003	0.1677	1.3000e-003	0.1690	0.0445	1.1900e-003	0.0457		173.1848	173.1848	9.4800e-003		173.3839
Total	**0.0669**	**0.0909**	**0.9498**	**1.9300e-003**	**0.1677**	**1.3000e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**173.1848**	**173.1848**	**9.4800e-003**		**173.3839**

3.2 Grading - 2014

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					2.4554	0.0000	2.4554	1.3025	0.0000	1.3025			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,182.0518
Total	**3.8669**	**41.0997**	**26.7538**	**0.0298**	**2.4554**	**2.3714**	**4.8269**	**1.3025**	**2.1817**	**3.4843**	**0.0000**	**3,162.4266**	**3,162.4266**	**0.9345**		**3,182.0518**

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
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
Worker	0.0669	0.0909	0.9498	1.9300e-003	0.1677	1.3000e-003	0.1690	0.0445	1.1900e-003	0.0457		173.1848	173.1848	9.4800e-003		173.3839
Total	**0.0669**	**0.0909**	**0.9498**	**1.9300e-003**	**0.1677**	**1.3000e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**173.1848**	**173.1848**	**9.4800e-003**		**173.3839**

3.3 Building Construction - 2014

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	3.8680	31.2537	18.9298	0.0268		2.2280	2.2280		2.0973	2.0973		2,709.1969	2,709.1969	0.6889		2,723.6630
Total	**3.8680**	**31.2537**	**18.9298**	**0.0268**		**2.2280**	**2.2280**		**2.0973**	**2.0973**		**2,709.1969**	**2,709.1969**	**0.6889**		**2,723.6630**

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
Vendor	0.5096	4.8382	5.8861	9.0700e-003	0.2624	0.0913	0.3536	0.0747	0.0839	0.1586		925.4582	925.4582	8.4200e-003		925.6349
Worker	0.4503	0.6122	6.3953	0.0130	1.1289	8.7500e-003	1.1377	0.2994	8.0200e-003	0.3074		1,166.1106	1,166.1106	0.0639		1,167.4516
Total	**0.9599**	**5.4503**	**12.2814**	**0.0221**	**1.3913**	**0.1000**	**1.4913**	**0.3741**	**0.0919**	**0.4660**		**2,091.5689**	**2,091.5689**	**0.0723**		**2,093.0865**

3.3 Building Construction - 2014

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	3.8680	31.2537	18.9298	0.0268		2.2280	2.2280		2.0973	2.0973	0.0000	2,709.1969	2,709.1969	0.6889		2,723.6630
Total	**3.8680**	**31.2537**	**18.9298**	**0.0268**		**2.2280**	**2.2280**		**2.0973**	**2.0973**	**0.0000**	**2,709.1969**	**2,709.1969**	**0.6889**		**2,723.6630**

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
Vendor	0.5096	4.8382	5.8861	9.0700e-003	0.2624	0.0913	0.3536	0.0747	0.0839	0.1586		925.4582	925.4582	8.4200e-003		925.6349
Worker	0.4503	0.6122	6.3953	0.0130	1.1289	8.7500e-003	1.1377	0.2994	8.0200e-003	0.3074		1,166.1106	1,166.1106	0.0639		1,167.4516
Total	**0.9599**	**5.4503**	**12.2814**	**0.0221**	**1.3913**	**0.1000**	**1.4913**	**0.3741**	**0.0919**	**0.4660**		**2,091.5689**	**2,091.5689**	**0.0723**		**2,093.0865**

3.3 Building Construction - 2015

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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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
Vendor	0.4482	4.2116	5.4609	9.0300e-003	0.2624	0.0701	0.3325	0.0747	0.0645	0.1392		913.1486	913.1486	7.3400e-003		913.3028
Worker	0.4061	0.5504	5.7585	0.0130	1.1289	8.2000e-003	1.1371	0.2994	7.5300e-003	0.3069		1,124.7728	1,124.7728	0.0584		1,125.9981
Total	**0.8543**	**4.7621**	**11.2194**	**0.0220**	**1.3914**	**0.0783**	**1.4697**	**0.3741**	**0.0720**	**0.4461**		**2,037.9213**	**2,037.9213**	**0.0657**		**2,039.3009**

3.3 Building Construction - 2015

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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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
Vendor	0.4482	4.2116	5.4609	9.0300e-003	0.2624	0.0701	0.3325	0.0747	0.0645	0.1392		913.1486	913.1486	7.3400e-003		913.3028
Worker	0.4061	0.5504	5.7585	0.0130	1.1289	8.2000e-003	1.1371	0.2994	7.5300e-003	0.3069		1,124.7728	1,124.7728	0.0584		1,125.9981
Total	**0.8543**	**4.7621**	**11.2194**	**0.0220**	**1.3914**	**0.0783**	**1.4697**	**0.3741**	**0.0720**	**0.4461**		**2,037.9213**	**2,037.9213**	**0.0657**		**2,039.3009**

3.4 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016		2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.4705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.7877**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**		**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

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
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
Worker	0.0603	0.0818	0.8552	1.9300e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		167.0455	167.0455	8.6700e-003		167.2274
Total	**0.0603**	**0.0818**	**0.8552**	**1.9300e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**167.0455**	**167.0455**	**8.6700e-003**		**167.2274**

3.4 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3172	25.1758	14.9781	0.0223		1.4148	1.4148		1.3016	1.3016	0.0000	2,339.8984	2,339.8984	0.6986		2,354.5681
Paving	0.4705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.7877**	**25.1758**	**14.9781**	**0.0223**		**1.4148**	**1.4148**		**1.3016**	**1.3016**	**0.0000**	**2,339.8984**	**2,339.8984**	**0.6986**		**2,354.5681**

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
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
Worker	0.0603	0.0818	0.8552	1.9300e-003	0.1677	1.2200e-003	0.1689	0.0445	1.1200e-003	0.0456		167.0455	167.0455	8.6700e-003		167.2274
Total	**0.0603**	**0.0818**	**0.8552**	**1.9300e-003**	**0.1677**	**1.2200e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**167.0455**	**167.0455**	**8.6700e-003**		**167.2274**

3.5 Architectural Coating - 2015

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	17.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209		281.4481	281.4481	0.0367		282.2177
Total	**18.2004**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**		**281.4481**	**281.4481**	**0.0367**		**282.2177**

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
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
Worker	0.0804	0.1090	1.1403	2.5700e-003	0.2236	1.6200e-003	0.2252	0.0593	1.4900e-003	0.0608		222.7273	222.7273	0.0116		222.9699
Total	**0.0804**	**0.1090**	**1.1403**	**2.5700e-003**	**0.2236**	**1.6200e-003**	**0.2252**	**0.0593**	**1.4900e-003**	**0.0608**		**222.7273**	**222.7273**	**0.0116**		**222.9699**

3.5 Architectural Coating - 2015

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	17.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209	0.0000	281.4481	281.4481	0.0367		282.2177
Total	**18.2004**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**	**0.0000**	**281.4481**	**281.4481**	**0.0367**		**282.2177**

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
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
Worker	0.0804	0.1090	1.1403	2.5700e-003	0.2236	1.6200e-003	0.2252	0.0593	1.4900e-003	0.0608		222.7273	222.7273	0.0116		222.9699
Total	**0.0804**	**0.1090**	**1.1403**	**2.5700e-003**	**0.2236**	**1.6200e-003**	**0.2252**	**0.0593**	**1.4900e-003**	**0.0608**		**222.7273**	**222.7273**	**0.0116**		**222.9699**

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	6.8079	11.5228	56.6759	0.1160	8.5276	0.1449	8.6724	2.2751	0.1333	2.4084		10,088.1922	10,088.1922	0.4361		10,097.3501
Unmitigated	6.8079	11.5228	56.6759	0.1160	8.5276	0.1449	8.6724	2.2751	0.1333	2.4084		10,088.1922	10,088.1922	0.4361		10,097.3501

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hardware/Paint Store	2,287.21	2,287.21	2287.21	4,036,817	4,036,817
Parking Lot	0.00	0.00	0.00		
Total	2,287.21	2,287.21	2,287.21	4,036,817	4,036,817

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
Hardware/Paint Store	16.60	8.40	6.90	13.60	67.40	19.00	45	29	26
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511008	0.057223	0.191597	0.152361	0.041328	0.005882	0.015289	0.014281	0.001428	0.002141	0.004713	0.000509	0.002239

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5953	44.5953	8.5000e-004	8.2000e-004	44.8667
NaturalGas Unmitigated	4.7900e-003	0.0435	0.0366	2.6000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003		52.2402	52.2402	1.0000e-003	9.6000e-004	52.5581

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					
Hardware/Paint Store	444.041	4.7900e-003	0.0435	0.0366	2.6000e-004		3.3100e-003	3.3100e-003		3.3100e-003	3.3100e-003		52.2402	52.2402	1.0000e-003	9.6000e-004	52.5581
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.7900e-003**	**0.0435**	**0.0366**	**2.6000e-004**		**3.3100e-003**	**3.3100e-003**		**3.3100e-003**	**3.3100e-003**		**52.2402**	**52.2402**	**1.0000e-003**	**9.6000e-004**	**52.5581**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hardware/Paint Store	0.37906	4.0900e-003	0.0372	0.0312	2.2000e-004		2.8200e-003	2.8200e-003		2.8200e-003	2.8200e-003		44.5953	44.5953	8.5000e-004	8.2000e-004	44.8667
Total		**4.0900e-003**	**0.0372**	**0.0312**	**2.2000e-004**		**2.8200e-003**	**2.8200e-003**		**2.8200e-003**	**2.8200e-003**		**44.5953**	**44.5953**	**8.5000e-004**	**8.2000e-004**	**44.8667**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.2356	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Unmitigated	5.5573	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193

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	0.4290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Total	**5.5573**	**8.0000e-005**	**8.7100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0182**	**0.0182**	**5.0000e-005**		**0.0193**

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	0.1073					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.1275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	8.7100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0182	0.0182	5.0000e-005		0.0193
Total	**5.2356**	**8.0000e-005**	**8.7100e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0182**	**0.0182**	**5.0000e-005**		**0.0193**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

APPENDIX C

CalEEMod Model Annual Emissions Printouts

Ganahl - Costa Mesa

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.13	Acre	4.13	179,902.80	0
Hardware/Paint Store	79.06	1000sqft	1.81	79,061.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 5.94acres total

Construction Phase - Lot is vacant no demo or site prep required. Timing from developer.

Grading - total site acreage is 5.94.

Architectural Coating - SCAQMD Rule 1113 50g/L VOCs.

Vehicle Trips - Trip rates 28.93 per traffic study

Area Coating - SCAQMD rule 1113 50g/L VOC

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - SCAQMD Rule 1113 50g/L VOCs

Energy Mitigation - 2014 title 24 is 30% more efficient than 2008 title 24.

Water Mitigation - Green building standards.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	230.00	174.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	AcresOfGrading	11.50	5.94
tblLandUse	LandUseSquareFeet	79,060.00	79,061.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	82.52	28.93
tblVehicleTrips	SU_TR	68.65	28.93
tblVehicleTrips	WD_TR	51.29	28.93

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					
2014	0.2006	1.6702	1.3303	1.9600e-003	0.1187	0.1029	0.2217	0.0509	0.0962	0.1471	0.0000	177.0199	177.0199	0.0323	0.0000	177.6979
2015	0.4774	2.2215	1.8438	3.0100e-003	0.0788	0.1383	0.2172	0.0212	0.1298	0.1510	0.0000	266.0387	266.0387	0.0445	0.0000	266.9725
Total	**0.6780**	**3.8917**	**3.1741**	**4.9700e-003**	**0.1976**	**0.2413**	**0.4388**	**0.0721**	**0.2260**	**0.2981**	**0.0000**	**443.0586**	**443.0586**	**0.0768**	**0.0000**	**444.6704**

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					
2014	0.2006	1.6702	1.3303	1.9600e-003	0.0746	0.1029	0.1775	0.0275	0.0962	0.1237	0.0000	177.0198	177.0198	0.0323	0.0000	177.6978
2015	0.4774	2.2215	1.8438	3.0100e-003	0.0788	0.1383	0.2172	0.0212	0.1298	0.1510	0.0000	266.0385	266.0385	0.0445	0.0000	266.9723
Total	**0.6780**	**3.8917**	**3.1741**	**4.9700e-003**	**0.1534**	**0.2413**	**0.3947**	**0.0487**	**0.2260**	**0.2747**	**0.0000**	**443.0583**	**443.0583**	**0.0768**	**0.0000**	**444.6700**

	ROG	NOx	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**	**22.36**	**0.00**	**10.06**	**32.50**	**0.00**	**7.86**	**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	tons/yr										MT/yr					
Area	1.0142	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0600e-003	2.0600e-003	1.0000e-005	0.0000	2.1900e-003
Energy	8.7000e-004	7.9400e-003	6.6700e-003	5.0000e-005		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	343.5487	343.5487	0.0156	3.3400e-003	344.9120
Mobile	1.1575	2.1346	10.2906	0.0214	1.5246	0.0262	1.5508	0.4074	0.0241	0.4315	0.0000	1,684.7627	1,684.7627	0.0719	0.0000	1,686.2723
Waste						0.0000	0.0000		0.0000	0.0000	177.9642	0.0000	177.9642	10.5174	0.0000	398.8293
Water						0.0000	0.0000		0.0000	0.0000	1.8579	33.2326	35.0905	0.1924	4.8200e-003	40.6246
Total	**2.1725**	**2.1425**	**10.2983**	**0.0214**	**1.5246**	**0.0268**	**1.5514**	**0.4074**	**0.0247**	**0.4321**	**179.8221**	**2,061.5460**	**2,241.3681**	**10.7972**	**8.1600e-003**	**2,470.6403**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9554	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0600e-003	2.0600e-003	1.0000e-005	0.0000	2.1900e-003
Energy	7.5000e-004	6.7800e-003	5.7000e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	317.9841	317.9841	0.0144	3.0900e-003	319.2446
Mobile	1.1575	2.1346	10.2906	0.0214	1.5246	0.0262	1.5508	0.4074	0.0241	0.4315	0.0000	1,684.7627	1,684.7627	0.0719	0.0000	1,686.2723
Waste						0.0000	0.0000		0.0000	0.0000	177.9642	0.0000	177.9642	10.5174	0.0000	398.8293
Water						0.0000	0.0000		0.0000	0.0000	1.4863	28.1722	29.6586	0.1539	3.8700e-003	34.0897
Total	**2.1137**	**2.1413**	**10.2974**	**0.0214**	**1.5246**	**0.0267**	**1.5513**	**0.4074**	**0.0246**	**0.4320**	**179.4505**	**2,030.9211**	**2,210.3716**	**10.7576**	**6.9600e-003**	**2,438.4380**

	ROG	NOx	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	**2.71**	**0.05**	**0.01**	**0.05**	**0.00**	**0.30**	**0.01**	**0.00**	**0.32**	**0.02**	**0.21**	**1.49**	**1.38**	**0.37**	**14.71**	**1.30**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/1/2014	10/1/2014	5	23	
2	Building Construction	Building Construction	10/2/2014	6/2/2015	5	174	
3	Paving	Paving	6/3/2015	7/3/2015	5	23	
4	Architectural Coating	Architectural Coating	7/4/2015	8/4/2015	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5.94

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,687; Non-Residential Outdoor: 42,229 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	101.00	42.00	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	20.00	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 Grading - 2014

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					0.0724	0.0000	0.0724	0.0384	0.0000	0.0384	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0445	0.4727	0.3077	3.4000e-004		0.0273	0.0273		0.0251	0.0251	0.0000	32.9924	32.9924	9.7500e-003	0.0000	33.1972
Total	**0.0445**	**0.4727**	**0.3077**	**3.4000e-004**	**0.0724**	**0.0273**	**0.0997**	**0.0384**	**0.0251**	**0.0635**	**0.0000**	**32.9924**	**32.9924**	**9.7500e-003**	**0.0000**	**33.1972**

3.2 Grading - 2014

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	7.2000e-004	1.0700e-003	0.0111	2.0000e-005	1.8900e-003	1.0000e-005	1.9100e-003	5.0000e-004	1.0000e-005	5.2000e-004	0.0000	1.8340	1.8340	1.0000e-004	0.0000	1.8361
Total	**7.2000e-004**	**1.0700e-003**	**0.0111**	**2.0000e-005**	**1.8900e-003**	**1.0000e-005**	**1.9100e-003**	**5.0000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.8340**	**1.8340**	**1.0000e-004**	**0.0000**	**1.8361**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0282	0.0000	0.0282	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0445	0.4727	0.3077	3.4000e-004		0.0273	0.0273		0.0251	0.0251	0.0000	32.9924	32.9924	9.7500e-003	0.0000	33.1971
Total	**0.0445**	**0.4727**	**0.3077**	**3.4000e-004**	**0.0282**	**0.0273**	**0.0555**	**0.0150**	**0.0251**	**0.0401**	**0.0000**	**32.9924**	**32.9924**	**9.7500e-003**	**0.0000**	**33.1971**

3.2 Grading - 2014

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	7.2000e-004	1.0700e-003	0.0111	2.0000e-005	1.8900e-003	1.0000e-005	1.9100e-003	5.0000e-004	1.0000e-005	5.2000e-004	0.0000	1.8340	1.8340	1.0000e-004	0.0000	1.8361
Total	**7.2000e-004**	**1.0700e-003**	**0.0111**	**2.0000e-005**	**1.8900e-003**	**1.0000e-005**	**1.9100e-003**	**5.0000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.8340**	**1.8340**	**1.0000e-004**	**0.0000**	**1.8361**

3.3 Building Construction - 2014

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	0.1257	1.0158	0.6152	8.7000e-004		0.0724	0.0724		0.0682	0.0682	0.0000	79.8766	79.8766	0.0203	0.0000	80.3031
Total	**0.1257**	**1.0158**	**0.6152**	**8.7000e-004**		**0.0724**	**0.0724**		**0.0682**	**0.0682**	**0.0000**	**79.8766**	**79.8766**	**0.0203**	**0.0000**	**80.3031**

3.3 Building Construction - 2014

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	0.0160	0.1603	0.1844	3.0000e-004	8.4000e-003	2.9400e-003	0.0113	2.4000e-003	2.7100e-003	5.1000e-003	0.0000	27.4183	27.4183	2.4000e-004	0.0000	27.4234
Worker	0.0137	0.0204	0.2119	4.3000e-004	0.0360	2.8000e-004	0.0363	9.5700e-003	2.6000e-004	9.8300e-003	0.0000	34.8986	34.8986	1.8800e-003	0.0000	34.9382
Total	**0.0297**	**0.1807**	**0.3963**	**7.3000e-004**	**0.0444**	**3.2200e-003**	**0.0477**	**0.0120**	**2.9700e-003**	**0.0149**	**0.0000**	**62.3169**	**62.3169**	**2.1200e-003**	**0.0000**	**62.3616**

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	0.1257	1.0157	0.6152	8.7000e-004		0.0724	0.0724		0.0682	0.0682	0.0000	79.8765	79.8765	0.0203	0.0000	80.3030
Total	**0.1257**	**1.0157**	**0.6152**	**8.7000e-004**		**0.0724**	**0.0724**		**0.0682**	**0.0682**	**0.0000**	**79.8765**	**79.8765**	**0.0203**	**0.0000**	**80.3030**

3.3 Building Construction - 2014

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	0.0160	0.1603	0.1844	3.0000e-004	8.4000e-003	2.9400e-003	0.0113	2.4000e-003	2.7100e-003	5.1000e-003	0.0000	27.4183	27.4183	2.4000e-004	0.0000	27.4234
Worker	0.0137	0.0204	0.2119	4.3000e-004	0.0360	2.8000e-004	0.0363	9.5700e-003	2.6000e-004	9.8300e-003	0.0000	34.8986	34.8986	1.8800e-003	0.0000	34.9382
Total	**0.0297**	**0.1807**	**0.3963**	**7.3000e-004**	**0.0444**	**3.2200e-003**	**0.0477**	**0.0120**	**2.9700e-003**	**0.0149**	**0.0000**	**62.3169**	**62.3169**	**2.1200e-003**	**0.0000**	**62.3616**

3.3 Building Construction - 2015

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	0.1994	1.6366	1.0216	1.4600e-003		0.1154	0.1154		0.1085	0.1085	0.0000	132.9769	132.9769	0.0334	0.0000	133.6776
Total	**0.1994**	**1.6366**	**1.0216**	**1.4600e-003**		**0.1154**	**0.1154**		**0.1085**	**0.1085**	**0.0000**	**132.9769**	**132.9769**	**0.0334**	**0.0000**	**133.6776**

3.3 Building Construction - 2015

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	0.0235	0.2340	0.2861	4.9000e-004	0.0141	3.7900e-003	0.0179	4.0200e-003	3.4900e-003	7.5100e-003	0.0000	45.3692	45.3692	3.6000e-004	0.0000	45.3767
Worker	0.0207	0.0308	0.3201	7.2000e-004	0.0604	4.5000e-004	0.0609	0.0161	4.1000e-004	0.0165	0.0000	56.4478	56.4478	2.8800e-003	0.0000	56.5083
Total	**0.0443**	**0.2648**	**0.6063**	**1.2100e-003**	**0.0745**	**4.2400e-003**	**0.0788**	**0.0201**	**3.9000e-003**	**0.0240**	**0.0000**	**101.8169**	**101.8169**	**3.2400e-003**	**0.0000**	**101.8850**

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	0.1994	1.6366	1.0216	1.4600e-003		0.1154	0.1154		0.1085	0.1085	0.0000	132.9768	132.9768	0.0334	0.0000	133.6774
Total	**0.1994**	**1.6366**	**1.0216**	**1.4600e-003**		**0.1154**	**0.1154**		**0.1085**	**0.1085**	**0.0000**	**132.9768**	**132.9768**	**0.0334**	**0.0000**	**133.6774**

3.3 Building Construction - 2015

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	0.0235	0.2340	0.2861	4.9000e-004	0.0141	3.7900e-003	0.0179	4.0200e-003	3.4900e-003	7.5100e-003	0.0000	45.3692	45.3692	3.6000e-004	0.0000	45.3767
Worker	0.0207	0.0308	0.3201	7.2000e-004	0.0604	4.5000e-004	0.0609	0.0161	4.1000e-004	0.0165	0.0000	56.4478	56.4478	2.8800e-003	0.0000	56.5083
Total	**0.0443**	**0.2648**	**0.6063**	**1.2100e-003**	**0.0745**	**4.2400e-003**	**0.0788**	**0.0201**	**3.9000e-003**	**0.0240**	**0.0000**	**101.8169**	**101.8169**	**3.2400e-003**	**0.0000**	**101.8850**

3.4 Paving - 2015

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	0.0267	0.2895	0.1723	2.6000e-004		0.0163	0.0163		0.0150	0.0150	0.0000	24.4113	24.4113	7.2900e-003	0.0000	24.5643
Paving	5.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0321**	**0.2895**	**0.1723**	**2.6000e-004**		**0.0163**	**0.0163**		**0.0150**	**0.0150**	**0.0000**	**24.4113**	**24.4113**	**7.2900e-003**	**0.0000**	**24.5643**

3.4 Paving - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	9.7000e-004	0.0100	2.0000e-005	1.8900e-003	1.0000e-005	1.9100e-003	5.0000e-004	1.0000e-005	5.2000e-004	0.0000	1.7690	1.7690	9.0000e-005	0.0000	1.7709
Total	**6.5000e-004**	**9.7000e-004**	**0.0100**	**2.0000e-005**	**1.8900e-003**	**1.0000e-005**	**1.9100e-003**	**5.0000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.7690**	**1.7690**	**9.0000e-005**	**0.0000**	**1.7709**

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	0.0267	0.2895	0.1723	2.6000e-004		0.0163	0.0163		0.0150	0.0150	0.0000	24.4113	24.4113	7.2900e-003	0.0000	24.5643
Paving	5.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0321**	**0.2895**	**0.1723**	**2.6000e-004**		**0.0163**	**0.0163**		**0.0150**	**0.0150**	**0.0000**	**24.4113**	**24.4113**	**7.2900e-003**	**0.0000**	**24.5643**

3.4 Paving - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	9.7000e-004	0.0100	2.0000e-005	1.8900e-003	1.0000e-005	1.9100e-003	5.0000e-004	1.0000e-005	5.2000e-004	0.0000	1.7690	1.7690	9.0000e-005	0.0000	1.7709
Total	**6.5000e-004**	**9.7000e-004**	**0.0100**	**2.0000e-005**	**1.8900e-003**	**1.0000e-005**	**1.9100e-003**	**5.0000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.7690**	**1.7690**	**9.0000e-005**	**0.0000**	**1.7709**

3.5 Architectural Coating - 2015

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	0.1957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4700e-003	0.0283	0.0209	3.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	2.8086	2.8086	3.7000e-004	0.0000	2.8163
Total	**0.2002**	**0.0283**	**0.0209**	**3.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.4300e-003**	**2.4300e-003**	**0.0000**	**2.8086**	**2.8086**	**3.7000e-004**	**0.0000**	**2.8163**

3.5 Architectural Coating - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	1.2300e-003	0.0128	3.0000e-005	2.4200e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2561	2.2561	1.2000e-004	0.0000	2.2585
Total	**8.3000e-004**	**1.2300e-003**	**0.0128**	**3.0000e-005**	**2.4200e-003**	**2.0000e-005**	**2.4300e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.2561**	**2.2561**	**1.2000e-004**	**0.0000**	**2.2585**

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	0.1957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4700e-003	0.0283	0.0209	3.0000e-005		2.4300e-003	2.4300e-003		2.4300e-003	2.4300e-003	0.0000	2.8086	2.8086	3.7000e-004	0.0000	2.8163
Total	**0.2002**	**0.0283**	**0.0209**	**3.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.4300e-003**	**2.4300e-003**	**0.0000**	**2.8086**	**2.8086**	**3.7000e-004**	**0.0000**	**2.8163**

3.5 Architectural Coating - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	1.2300e-003	0.0128	3.0000e-005	2.4200e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2561	2.2561	1.2000e-004	0.0000	2.2585
Total	**8.3000e-004**	**1.2300e-003**	**0.0128**	**3.0000e-005**	**2.4200e-003**	**2.0000e-005**	**2.4300e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.2561**	**2.2561**	**1.2000e-004**	**0.0000**	**2.2585**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1575	2.1346	10.2906	0.0214	1.5246	0.0262	1.5508	0.4074	0.0241	0.4315	0.0000	1,684.7627	1,684.7627	0.0719	0.0000	1,686.2723
Unmitigated	1.1575	2.1346	10.2906	0.0214	1.5246	0.0262	1.5508	0.4074	0.0241	0.4315	0.0000	1,684.7627	1,684.7627	0.0719	0.0000	1,686.2723

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hardware/Paint Store	2,287.21	2,287.21	2287.21	4,036,817	4,036,817
Parking Lot	0.00	0.00	0.00		
Total	2,287.21	2,287.21	2,287.21	4,036,817	4,036,817

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
Hardware/Paint Store	16.60	8.40	6.90	13.60	67.40	19.00	45	29	26
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511008	0.057223	0.191597	0.152361	0.041328	0.005882	0.015289	0.014281	0.001428	0.002141	0.004713	0.000509	0.002239

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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	310.6009	310.6009	0.0143	2.9500e-003	311.8164
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	334.8998	334.8998	0.0154	3.1900e-003	336.2104
NaturalGas Mitigated	7.5000e-004	6.7800e-003	5.7000e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.3832	7.3832	1.4000e-004	1.4000e-004	7.4282
NaturalGas Unmitigated	8.7000e-004	7.9400e-003	6.6700e-003	5.0000e-005		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	8.6489	8.6489	1.7000e-004	1.6000e-004	8.7016

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					
Hardware/Paint Store	162075	8.7000e-004	7.9400e-003	6.6700e-003	5.0000e-005		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	8.6489	8.6489	1.7000e-004	1.6000e-004	8.7016
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.7000e-004**	**7.9400e-003**	**6.6700e-003**	**5.0000e-005**		**6.0000e-004**	**6.0000e-004**		**6.0000e-004**	**6.0000e-004**	**0.0000**	**8.6489**	**8.6489**	**1.7000e-004**	**1.6000e-004**	**8.7016**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hardware/Paint Store	138357	7.5000e-004	6.7800e-003	5.7000e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.3832	7.3832	1.4000e-004	1.4000e-004	7.4282
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**7.5000e-004**	**6.7800e-003**	**5.7000e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.3832**	**7.3832**	**1.4000e-004**	**1.4000e-004**	**7.4282**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hardware/Paint Store	1.01198e+006	289.5954	0.0133	2.7500e-003	290.7287
Parking Lot	158314	45.3044	2.0800e-003	4.3000e-004	45.4817
Total		**334.8998**	**0.0154**	**3.1800e-003**	**336.2104**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hardware/Paint Store	927069	265.2965	0.0122	2.5200e-003	266.3348
Parking Lot	158314	45.3044	2.0800e-003	4.3000e-004	45.4817
Total		**310.6009**	**0.0143**	**2.9500e-003**	**311.8164**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	0.9554	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0600e-003	2.0600e-003	1.0000e-005	0.0000	2.1900e-003
Unmitigated	1.0142	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0600e-003	2.0600e-003	1.0000e-005	0.0000	2.1900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9358					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0600e-003	2.0600e-003	1.0000e-005	0.0000	2.1900e-003
Total	**1.0142**	**1.0000e-005**	**1.0900e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0600e-003**	**2.0600e-003**	**1.0000e-005**	**0.0000**	**2.1900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0196					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9358					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0600e-003	2.0600e-003	1.0000e-005	0.0000	2.1900e-003
Total	**0.9555**	**1.0000e-005**	**1.0900e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0600e-003**	**2.0600e-003**	**1.0000e-005**	**0.0000**	**2.1900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	29.6586	0.1539	3.8700e-003	34.0897
Unmitigated	35.0905	0.1924	4.8200e-003	40.6246

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hardware/Paint Store	5.85617 / 3.58927	35.0905	0.1924	4.8200e-003	40.6246
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**35.0905**	**0.1924**	**4.8200e-003**	**40.6246**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hardware/Paint Store	4.68494 / 3.37032	29.6586	0.1539	3.8700e-003	34.0897
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**29.6586**	**0.1539**	**3.8700e-003**	**34.0897**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	177.9642	10.5174	0.0000	398.8293
Unmitigated	177.9642	10.5174	0.0000	398.8293

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hardware/Paint Store	876.71	177.9642	10.5174	0.0000	398.8293
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**177.9642**	**10.5174**	**0.0000**	**398.8293**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hardware/Paint Store	876.71	177.9642	10.5174	0.0000	398.8293
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**177.9642**	**10.5174**	**0.0000**	**398.8293**

9.0 Operational Offroad

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

10.0 Vegetation

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APPENDIX B

BIOLOGICAL TECHNICAL REPORT

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Biological Technical Report
Ganahl Lumber Costa Mesa Relocation Project

Prepared For:

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December 2014

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Ganahl Lumber Costa Mesa
Relocation Project

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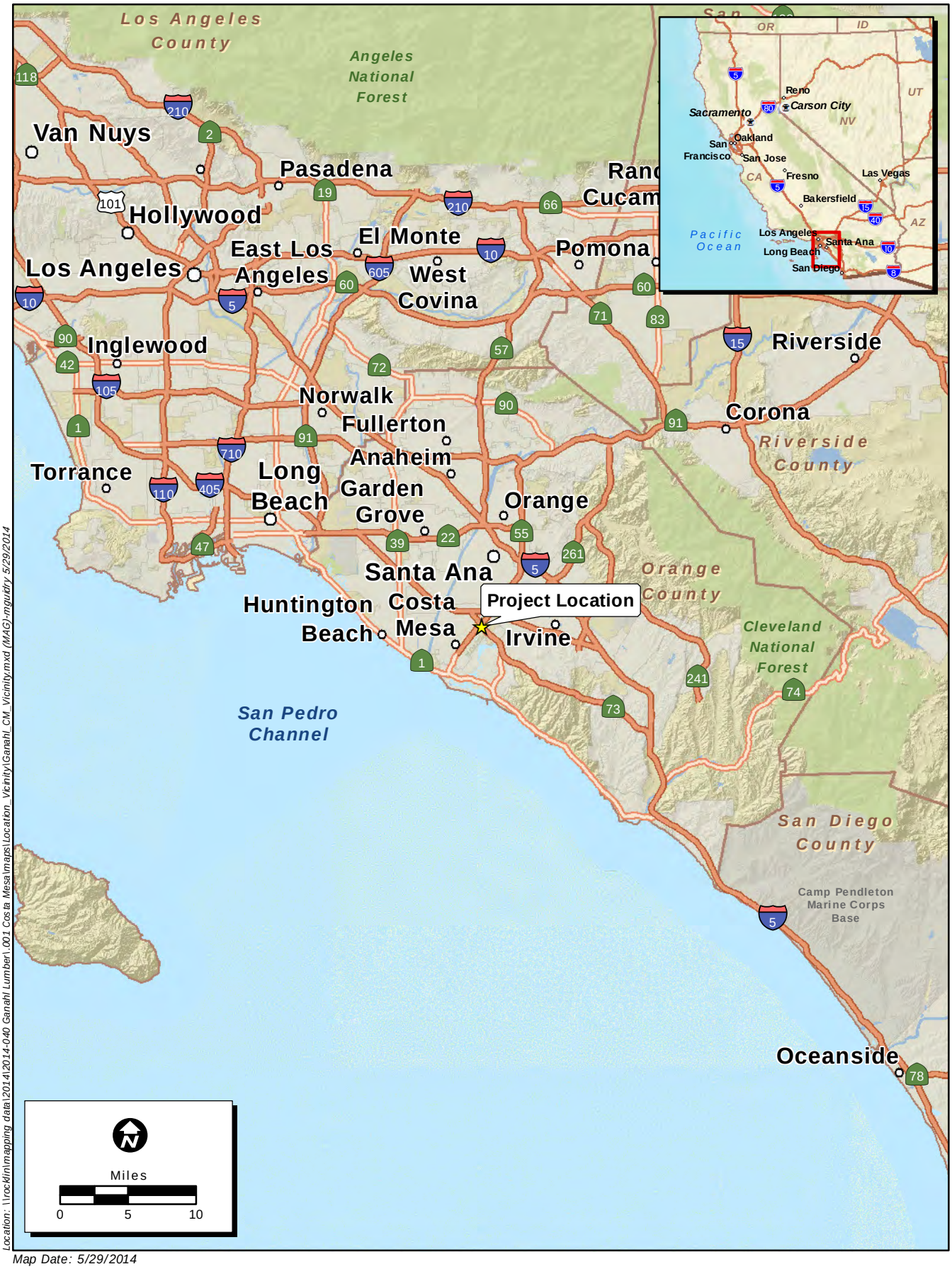
1.0 INTRODUCTION

ECORP Consulting, Inc. (ECORP) was retained by Ganahl Lumber Company to conduct California Environmental Quality Act (CEQA) services for a proposed site (project site) located in the City of Costa Mesa, Orange County, California (Figure 1). A reconnaissance-level biological survey was conducted to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and to determine whether project implementation would impact sensitive biological resources, as required under CEQA. The following report summarizes the results of the reconnaissance survey.

1.1 Project Location

The project site encompasses approximately seven acres and is located immediately northwest of the existing Ganahl lumber yard located on Bristol Avenue near the corner of Red Hill Avenue and State Route 73. The project site is also bound by Bristol Street to the southeast, State Route 55 to the northeast, and State Route 73 to the northwest (Figure 2). Surrounding areas include commercial development to the north, south, east, and west. Some residential development is also present to the north and south of the site. The elevation of the site is approximately 35-feet above mean seal level (msl) and it is located within the U.S. Geological Survey (USGS) Newport Beach 7.5-minute topographical quadrangle.



Location: \\rocklin\mapping data\2014\2014-040 Ganahl Lumber\.001 Costa Mesa\maps\Location_Vicinity\Ganahl_CM_Vicinity.mxd (MAG)-mguidry 5/29/2014

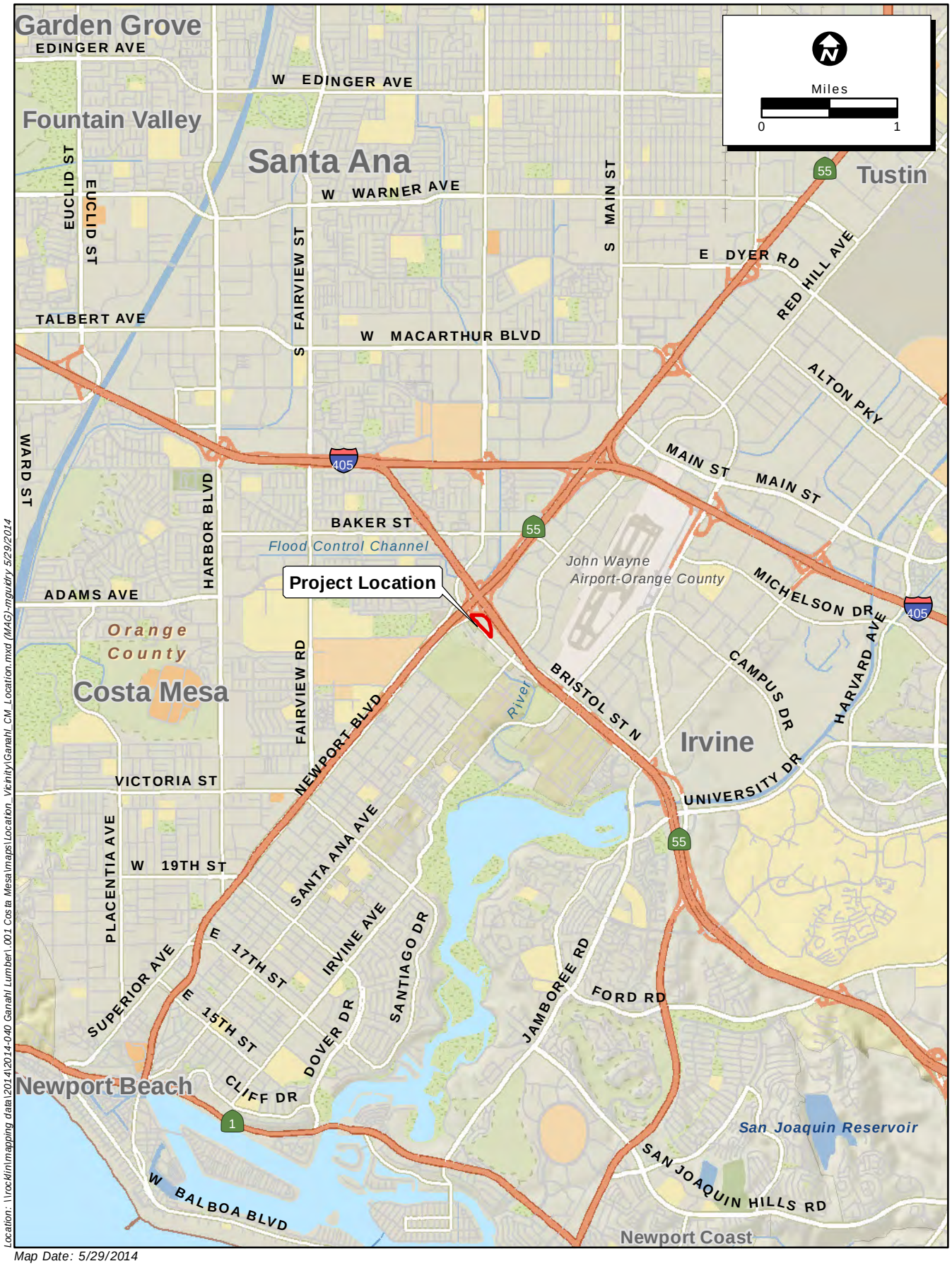
Map Date: 5/29/2014

Service Layer Credits: Sources: USGS, ESRI, TANA, AND

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2014-040 Ganahl Lumber



Location: \\rocklin\mapping data\2014\2014-040 Ganahl Lumber\.001 Costa Mesa\maps\Location_Vicinity\Ganahl_CM_Location.mxd (MAG)-mguidry 5/29/2014

Map Date: 5/29/2014
Source: ESRI

Figure 2. Project Location

2014-040 Ganahl Lumber

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2.0 REGULATORY REQUIREMENTS

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Section 9 of FESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 USC 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of FESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (FGC).

2.1.3 Federal Clean Water Act

The federal Clean Water Act's (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, CESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the FGC prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the FGC as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (Fish and Game Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Sections 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The CESA of 1984 (Fish and Game Code Section 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the FGC.

2.2.4 California Fish and Game Code

Streambed Alteration Agreement

Section 1602 of the FGC requires that a Streambed Alteration Application be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

Migratory Birds

CDFW enforces the protection of non-game native birds in Sections 3503, 3503.5, and 3800 of the FGC. Section 3513 of the FGC prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California non-game native birds' nests and also make it unlawful to take these birds. All raptor species are protected from "take" pursuant to FGC Section 3503.5 and are also protected at the federal level by the Migratory Bird Treaty Act of 1918.

2.2.5 CEQA Significance Criteria

Section 15064.7 of the California Environmental Quality Act (CEQA) Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.0 METHODS

3.1 Literature Search

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature search to determine the special-status species that have been documented in the Newport Beach, Seal Beach, Los Alamitos, Anaheim, Orange, Tustin, and Laguna Beach 7.5-minute topographic quadrangles. This literature search included the California Department of Fish and Wildlife California Natural Diversity Database (CNDDB; CDFW 2014a) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPSEI; CNPS 2014). Additional information was gathered from the following sources:

- *State and federally listed endangered and threatened animals of California* (CDFW 2014b);
- *Special animals list* (CDFW 2011),
- *California Natural Diversity Database Special Vascular Plants, Bryophytes and Lichens List* (CDFW 2014c);
- *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012);
- Various online websites (e.g., CalFlora 2014); and
- *NatureServe Explorer* (NatureServe 2014).

Using this information and observations in the field, a list of special-status plant and animal species that may have the potential to occur within the project site was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- Have been designated as either rare, threatened, or endangered by CDFW or the USFWS, and are protected under either the CESA or FESA;
- Are candidate species being considered or proposed for listing under these same acts;
- Are fully protected by the California Fish and Wildlife Code, Sections 3511, 4700, 5050, or 5515; and/or
- Are of expressed concern to resource and regulatory agencies, or local jurisdictions.

Sensitive species reported for the region in the literature search or for which suitable habitat occurs in the project site were assessed for potential to occur within the area based on the following guidelines:

Present: Species was observed within the project site during a site visit or focused survey.

High: Habitat (including soils and elevation factors) for the species occurs within the project site and a known occurrence has been recorded within 5 miles (mi, 8 kilometers [km]) of the project site.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the project site and a documented observation occurs within the database search, but not within 5 mi (8 km) of the area; or a documented observation occurs within 5 mi (8 km) of the area and marginal or limited amounts of habitat occurs in the project site.

Low: Limited habitat for the species occurs within the project site and a documented observation occurs within the database search, but not within 5 mi (8 km) of the

area; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search.

Presumed Absent: Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the project site.

(Note: Location information on some sensitive species may be of questionable accuracy or unavailable; therefore, for survey purposes, environmental factors associated with species occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence).

Plant nomenclature follows that of The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012). Wildlife nomenclature follows Check-list of North American Birds (AOU 2013), and the Revised Checklist of North American Mammals North of Mexico (Baker et al. 2003).

3.2 Field Survey

The reconnaissance survey consisted of the entire project site so that 100 percent visual coverage of the project site and surrounding vicinity was achieved. The field survey included the following:

- Recording all plant and animal species observed on the project site and in immediately adjacent areas;
- Characterizing plant communities present on the project site;
- Searching for animal sign (e.g., detections of burrows, scat, tracks, vocalizations);
- Taking photographs at the project site; and
- Recording weather data including time, temperature, cloud cover, and wind speed at the beginning and end of the survey.

Plant species not recognized were collected and identified using botanical references (e.g., Baldwin et al. 2012).

During the field survey, the property was checked for the presence of potential areas subject to U.S. Army Corps of Engineer (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act and California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Section 1602 of the State of California Fish and Game Code. A formal USACE delineation was not conducted of the site. The entire property was checked for the presence of Waters of the U.S., including wetlands, and Waters of the State. Waters of the U.S. were identified by the presence of Ordinary High Water Mark (OHWM). Waters of the State were identified by the presence of obvious streambeds and their associated hydrophytic vegetation. Areas considered potentially jurisdictional to either state or federal regulators were mapped in the field using GPS. Area considered to be jurisdictional to the USACE and/or CDFW are also subject to being considered as jurisdictional to the Santa Ana Regional Water Quality Control Board (SARWQCB).

4.0 RESULTS

4.1 Field Survey

ECORP biologists David Carr and Amy Trost conducted the biological reconnaissance field survey on May 23, 2014. ECORP biologists Cara Snellen and Amy Trost conducted a follow-up visit to confirm site conditions on December 15, 2014. Summarized below are the results of the literature review and field surveys, including area characteristics, plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the surveys are summarized in Table 1.

Table 1. Weather Conditions During the Survey

Type of Survey	Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
		start	end	start	end	start	end	start	end
Biological Reconnaissance	5/23/14	1100	1220	80	80	99	75	1-3	1-3
Follow-up Visit	12/15/2014	1430	1500	67	67	10	10	1-3	1-3

4.1.1 Site Characteristics and Land Use

The project site and surrounding vicinity are heavily disturbed and dominated by urban development, roads and freeways, and ornamental plants. The site is dominated by worn, cracked asphalt, cement plots, and gravel. A fire hydrant is present near the center of the project site. An unpaved road runs just outside the northern edge of the project site and the interchange between State Route 55 and State Route 73 borders the site to the north and northeast. Representative site photographs are included in Appendix A.

4.1.2 Soils

Soils types were determined using the Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2013). Soils within the project site consist entirely of Myford sandy loam, 2 to 9 percent slopes. The soils of the Myford Series are deep, moderately well drained soils formed on terraces. Principal vegetation associated with this soil are annual grasses and forbs with some scattered low-growing brush.

4.1.3 Vegetation Communities/Habitats

No native vegetation communities, including any sensitive vegetation communities, were observed on the project site. However, two land cover types, disturbed or developed areas and ornamentals, were observed on the project site. The plant species observed within these cover types consist of non-native or invasive weedy species, and ornamental trees and herbaceous plants. Classification of the land cover types within the project area are described in detail below and those that occur on the project site are displayed in Figure 3.

Disturbed or Developed Areas (5.1 acres)

Disturbed or developed is not a vegetation classification, but rather a land cover type. Areas mapped as this cover type are largely devoid of vegetation due to human development or disturbance and are dominated by open areas or non-native vegetation. Areas of roads, bare dirt, and buildings were also mapped as disturbed/developed.

Ornamentals (1.6 acres)

Like the developed areas, ornamentals are not a vegetation classification, but a land cover type. Areas mapped as this cover type have been landscaped with a combination of non-native trees, including eucalyptus (*Eucalyptus* spp.) and crimson bottlebrush (*Callistemon citrinus*), as well as perennials such as Asiatic lily (*Lilium* sp.). Ornamental landscaping borders the majority of the project site. The ornamental landscaping area along the western/southwestern edge is well-maintained and appears to receive supplemental watering.

4.1.4 Plants

Plant species observed on the project site were characteristic of disturbed urban areas. The dominant tree species was eucalyptus, but crimson bottlebrush and California fan palm (*Washingtonia filifera*) were also present. Much of the floristic diversity observed onsite comes from non-native annual species and include non-native bromes (*Bromus* sp.), black mustard (*Brassica nigra*), and yellow star thistle (*Centaurea solstitialis*). Of the 27 plant species observed on the project site a total of seven species are native and the other 20 are exotic species. A list of all plant species observed and identified during the reconnaissance surveys conducted within the project site is included in Appendix B.

Location: \\rocklin\mapping data\2014\2014-040 Ganahl Lumber\.001 Costa Mesa\maps\vegetation\vegetation\v1\GanahlL_CM_Veg.mxd (MAG)-mguidry 6/2/2014

Map Date: 5/29/2014
Photo Source: NAIP 2012

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Figure 3. Vegetation Communities

2014-040 Ganahl Lumber

4.1.5 Wildlife

The project site provides habitat for species adapted to high levels of disturbance and urban environments. Thirteen wildlife species were observed during the reconnaissance visit including one reptile, 10 birds, and two mammals. Common species observed include western fence lizard (*Sceloporus occidentalis*), house finch (*Haemorhous mexicanus*), and Bottae's pocket gopher (*Thomomys bottae*). A complete list of wildlife species observed or detected during the survey in and adjacent to the project site is found in Appendix C. Other common species expected to occur in and adjacent to the project site include side-blotched lizard (*Uta stansburiana*), common raven (*Corvus corax*), Anna's hummingbird (*Calypte anna*), and California ground squirrel (*Spermophilus beecheyi*).

Two red-tailed hawks (*Buteo jamaicensis*) were observed perching in a large eucalyptus tree during a previous site visit on February 13, 2014. Red-tailed hawks were not observed during the reconnaissance visit.

4.1.6 Potential Waters of the U.S./State

Two features considered potentially jurisdictional as Waters of the U.S. and Waters of the State were identified on the property. The features consist of the Santa Ana Delhi Channel and a roadside drainage ditch. The Santa Ana Delhi Channel is a regional drainage channel that drains an approximately 20 square mile area. The roadside ditch runs along Bristol Road, enters a culvert, and flows directly into the Santa Ana Delhi Channel. These features are subject to potential USACE jurisdiction pursuant to Section 404 of the federal Clean Water Act, potential CDFW jurisdiction pursuant to Section 1602 of the State of California Fish and Game Code, and potential SARWQCB jurisdiction pursuant to Section 401 of the federal Clean Water Act.

Figure 4. Large underground box culverts (Santa Ana Delhi Channel)

The roadside ditch, designated as “Drainage 1” heretofore, consists of an approximately 100-foot long earthen channel that conveys surface flows coming out of a 24-inch corrugated steel pipe (CSP) to an 18-inch reinforced concrete pipe (RCP) and then into the Santa Ana Delhi Channel. Photos of the CSP, ditch, and RCP are provided below (Figures 5 to 7).

Figure 5. CSP just outside of the fence

Figure 6. Drainage 1

Figure 7. RCP conveying flows from Drainage 1 to Santa Ana Delhi Channel

USACE Jurisdiction

Both the Santa Ana Delhi Channel and Drainage 1 are considered to be USACE jurisdictional features. The Santa Ana Delhi Channel is an intermittent stream, while Drainage 1 is an ephemeral stream. These features are depicted on Figure 8 below. The acreages of each USACE feature present on the site are presented below in Table 2.

Table 2. Potential USACE Jurisdictional Features

Waters of the U.S.	**Acreage***	**Square Feet**	**Linear Feet**
Ephemeral Stream			
Drainage 1	<0.01	133	133
Intermittent Stream			
Santa Ana Delhi Channel	0.95	41,397	657
TOTAL	**0.95**	**41,530**	**790**

*Acreages are rounded to the nearest hundredth

The Santa Ana Delhi Channel is a man-made concrete channel that has been in place since before 1940 and probably corresponds to a natural feature. The channel shows as a blue-line stream on USGS topographic maps of the area. Most of its length is a trapezoidal concrete channel with sloped sides and a low-flow v-ditch channel in its center. Near the interchange between State Route 55 and State Route 73, the channel is diverted to an underground series of box culverts approximately 63 feet in width running for a distance of approximately 2,100 feet before continuing in an open channel just south of Bristol Street. As the channel nears Upper Newport Bay, it becomes earthen. Through the project site, the channel is an underground series of box

culverts with a single daylight portion that collects runoff from the surrounding parking lot. This feature is considered to be potentially jurisdictional to the USACE based on the connectivity to the Pacific Ocean, which is a water used in interstate commerce (33 CFR 328.3 (a)).

Drainage 1 is a man-made earthen channel that conveys flows into the Santa Ana Delhi Channel. Indicators of OHWM for the roadside ditch included bed and bank and signs of regular surface flow. Its direct connectivity to the Santa Ana Delhi Channel, which leads to Upper Newport Bay and ultimately the Pacific Ocean, make this feature USACE jurisdictional.

If either of these features may be subject to "fill" or impact due to the proposed project, then ECORP recommends approval of the impact through the regulatory permit process with the USACE prior to project construction.

CDFW Jurisdiction

Both the Santa Ana Delhi Channel and Drainage 1 are considered to be subject to CDFW jurisdiction as streambeds. CDFW jurisdiction encompasses the entirety of USACE jurisdiction for each of these features. If either of these features are impacted by the project, then ECORP recommends acquisition of a Streambed Alteration Agreement with the CDFW, under California Fish and Game Code Section 1600, for those impacts prior to construction. The acreages of each CDFW feature present on the site are presented below in Table 3.

Table 3. Potential CDFW Jurisdictional Features

Waters of the State	Acreage*	Square Feet	Linear Feet
Streambed			
Drainage 1	<0.01	133	133
Santa Ana Delhi Channel	0.95	41,397	657
TOTAL	**0.95**	**41,530**	**790**

*Acreages are rounded to the nearest hundredth

SARWQCB Jurisdiction

Since the two features are considered to be jurisdictional to the USACE and CDFW, they would be jurisdictional to the SARWQCB as well. If the features are impacted, ECORP recommends acquisition of a Water Quality Certification through the SARWQCB in accordance with Section 401 of the federal Clean Water Act.

Location: \\rocklin\mapping data\2014\2014-040 Ganahl Lumber\001 Costa Mesa\maps\wetland_mapping\wetland_delineation\v1\GCM_JD_v1.mxd (M4G)-mguidry 12/22/2014

Map Date: 12/19/2014
Photo Source: Esri

Figure 8. Jurisdictional Delineation

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5.0 SENSITIVE BIOLOGICAL RESOURCES

Special-status plants and wildlife species were evaluated for their potential to occur within the project site based on the results of the literature searches and the site visit. Complete lists of special status plant and wildlife species that were evaluated for their potential to occur in the area are included as Appendices D and E, respectively.

5.1 Special-Status Plants

The literature search documented 37 special-status plant species (five federally and/or state listed) in the project vicinity, all of which were presumed absent from the site. A follow-up visit conducted on December 15, 2014, confirmed site conditions, including lack of habitat, for the special-status plant species. Given the site conditions (historical and present) the general lack of vegetation/cover, soil conditions, special-status plant species that had been previously recorded in nearby locations, such as southern tarplant (*Centromadia parryi* ssp. *australis*), all were determined to be presumed absent. The age of the CNDDB records were also considered when determining potential. A complete list of the 37 special-status plant species, with details regarding blooming periods, habitat requirements, and potential for occurrence designations, is included as Appendix D.

5.2 Special-Status Wildlife

The literature search documented 33 special-status wildlife species (16 federally and/or state-listed species) in the vicinity of the project site. The list of sensitive wildlife includes species that are federally and state listed, which are protected under the California and/or federal Endangered Species Acts, as well as species that are not yet formally listed, but are on the CDFW Species of Special Concern (SSC) watch list due to significant habitat loss or population declines. Three of these wildlife species were determined to have potential to occur on the project site. The remaining 30 species were presumed to be absent from the project site. A complete list of the 33 special-status wildlife species, with details regarding habitat requirements and potential for occurrence designations, is included as Appendix E.

Each species and its occurrence designation are discussed separately below. The area is assumed to provide potential habitat for all of these species. None of the sensitive wildlife species with a potential to occur in the area were observed during the reconnaissance survey.

American badger

American badger (*Taxidea taxus*) is a CDFW SSC. This species is found in open areas of a variety of habitats including shrub, forests, and other herbaceous habitats with friable soils (NatureServe 2014). The project site contains open areas with sparse vegetation with marginally friable soils along the perimeter, within the ornamental landscaping. The literature search identified one American badger approximately 4.5 mi (7 km) from the project site in 1998 (CDFW 2014a). Due to the availability of marginal habitat and the proximity of the previous record, this species was determined to have a moderate potential to occur on the project site. American badger was not observed during the survey.

Western yellow bat

Western yellow bat (*Lasiurus xanthinus*) is a CDFW SSC. This species prefers trees, particularly palms and roosts in dead fronds of fan palms (NatureServe 2014). The project site contains several California fan palms around its perimeter. The literature search identified one western yellow bat approximately 10 mi (16 km) from the project site in 1990 (CDFW 2014a). Due to the availability of suitable roosting habitat and the distance of previous observations, this species was determined to have a moderate potential to occur on the project site. Western yellow bat was not observed during the survey.

White-tailed kite

White-tailed kite (*Elanus leucurus*) is a CDFW Fully Protected species. This species prefers marshes, cultivated fields, woodlands, and savannahs for foraging (NatureServe 2014). The project site contains eucalyptus trees which provide suitable nesting habitat; however, no sign of white-tail kite nests was identified in any of the trees during the survey. Additionally, the site does not support an abundant small mammal population. The literature search identified 12 observations, the closest of which was located approximately 2 mi (3 km) from the project site in 2007 (CDFW 2014a). Due to the lack of suitable foraging habitat and the proximity of previous observations, this species was determined to have a moderate potential to occur on the project site. White-tailed kites were not observed during the survey.

5.3 Raptors and Migratory Birds

All raptor species are protected from "take" pursuant to California Fish and Game Code Section 3503.5. Raptors and migratory birds are protected by the Migratory Bird Treaty Act (USFWS 1918). Trees on the project site are sparse and consist mostly of mature eucalyptus trees. These trees may provide hunting perches and nesting habitat for larger raptors. The project site and surrounding vicinity support meager population of small mammals, reptiles, and songbirds and provide marginal foraging habitat. The State Route 55 and State Route 73 interchange overpass adjacent to the project area supports burrow nesting birds such as swallows and mammals such as bats. Northern rough winged swallows (*Stelgidopteryx serripennis*) were observed nesting in holes in the underside of the overpass. Killdeer (*Charadrius vociferus*), a shorebird that typically nests in gravel bars or gravel in disturbed areas, were observed in the open portion of the project site. The biologists were unable to determine if a nest was nearby but it is likely that killdeer have constructed nests on the site previously. Raptors in the area typically breed between February and August while non-raptor birds protected under the MBTA generally nest between March and August.

5.4 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges, for example. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large

blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. Naturally, the nature of corridor use and wildlife movement patterns varies greatly among species.

Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available. Corridors also offer wildlife unobstructed terrain to forage in and for the dispersal of young individuals. Movement corridors are particularly important to larger terrestrial species, such as mountain lions (*Felis concolor*), coyotes (*Canis latrans*), bobcats (*Lynx rufus*), and mule deer (*Odocoileus hemionus*) due to the protective cover afforded by dense vegetation.

The project site is heavily disturbed and contains very little cover that would only allow for limited movement of smaller, resident populations of wildlife and the entire site is cut off from any large blocks of habitat that would allow the movement of wildlife species. Although the project site is within one mile of the Santa Ana Country Club and within two miles of the Upper Newport Bay Nature Preserve, there is no connective corridor between the project site and these areas.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The project site and surrounding vicinity consists of several parcels of land that are developed or highly disturbed and support non-native vegetation communities and ornamental landscaping. In general, the project site consists of bare ground and patches of asphalt and is dominated by non-native weedy species and ornamental vegetation.

There are two features potentially jurisdictional to the USACE, CDFW and SARWQCB: the Santa Ana Delhi Channel and an associated roadside ditch (Drainage 1). Should these features be impacted by the proposed project, then permitting would be required with all three regulatory agencies.

None of the 37 special status plant or 33 special status wildlife species identified in the literature search were observed on the project site during the survey. Of these, only three of the wildlife species have a low to moderate potential for occurring on the project site: American badger, western yellow bat, and white-tailed kite. No wildlife species were found to have a high potential to occur. No sensitive vegetation communities were identified on the project site.

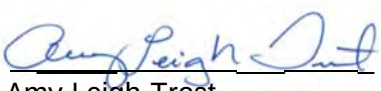
The majority of wildlife detected during the reconnaissance survey includes birds that are commonly found in disturbed and urban areas. In addition, raptor species may utilize the area for foraging and nest in the surrounding trees.

6.2 Recommendations

Any development activities within this project site should be conducted during the non-breeding season for birds (approximately September 1 through February 15). This will avoid violations of the Migratory Bird Treaty Act (MBTA) and CDFW Code Sections 3503, 3503.5 and 3513. If construction activities cannot avoid the bird nesting season, it is recommended that a qualified biologist be required to conduct nesting bird surveys prior of beginning all work. Additionally, follow-up surveys may be required following any period of inactivity, prior to resuming work.

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or the applicant's representative and that I have no financial interest in the project.

DATE:  SIGNED: December 23, 2014

Amy Leigh Trost Assistant Biologist

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Appendix A

Representative Site Photographs

Appendix A
Representative Site Photographs

Figure 1 - Majority of project site distrubed, open lot with eucalyptus trees (*Eucalyptus* sp.) and other ornamentals bordering site.

Figure 2 - Access road bordering northern portion of the project site.

Figure 3 - Ornamental trees including eucalyptus, California fan palm (*Washingtonia filifera*), and crimson bottlebrush (*Callistemon citrinus*) bordering project site.

Figure 4 – California fan palms along eastern edge of project site.

Figure 5 - Ornamental landscaping along Bristol Street.

Appendix B

Plant Compendium

Appendix B
Plant Compendium

Scientific Name	Common Name
VASCULAR PLANTS	
ANGIOSPERMS (DICOTYLEDONS)	
AIZOACEAE	**ICEPLANT FAMILY**
*Carpobrotus edulis**	iceplant
ARECACEAE	**PALM FAMILY**
Washingtonia filifera	California fan palm
ASTERACEAE	**SUNFLOWER FAMILY**
Baccharis salicifolia	mule fat
*Centaurea solstitialis**	yellow star thistle
Conyza Canadensis	horseweed
*Helminthotheca echioides**	bristly oxtongue
Heterotheca grandiflora	telegraph weed
BRASSICACEAE	**MUSTARD FAMILY**
*Brassica nigra**	black mustard
*Raphanus spp.**	radish
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
*Salsola tragus**	Russian thistle
CONVOLVULACEAE	**MORNING GLORY FAMILY**
Calystegia macrostegia	island morning glory
EUPHORBIACEAE	**SPURGE FAMILY**
*Ricinus communis**	castor bean
FABACEAE	**PEA FAMILY**
*Acacia spp**	acacia
Melilotus officinalis *	yellow sweetclover
GERANIACEAE	**GERANIUM FAMILY**
*Erodium cicutarium**	red stemmed filaree
MYRTACEAE	**MYRTLE FAMILY**
*Callistemon citrinus**	crimson bottlebrush
NYCTAGINACEAE	**FOUR O'CLOCK FAMILY**
*Bougainvillea spectabilis**	great bougainvillea

Scientific Name	Common Name
ONAGRACEAE	**EVENING PRIMROSE FAMILY**
Epilobium canum	California fushia
PASSIFLORACEAE	**PASSIONFLOWER FAMILY**
*Passiflora caerulea**	bluecrown passionflower
PLATANACEAE	**PLANE FAMILY**
Platanus racemosa	California sycamore
ZYGOPHYLLACEAE	**CALTROP FAMILY**
*Tribulus terrestris**	puncture vine
ANGIOSPERMS (MONOCOTYLEDONS)	
CYPERACEAE	**SEDGE FAMILY**
*Carex spp**	sedge
MYRTACEAE	**MYRTLE FAMILY**
*Eucalyptus globus**	Eucalyptus
LILIACEAE	**LILY FAMILY**
Lilium spp.*	lily
POACEAE	**GRASS FAMILY**
*Avena spp**	wild oat
*Bromus spp**	brome grass
Distichlis spicata	salt grass
***non-native species**	

Appendix C

Wildlife Compendium

Appendix C
Wildlife Compendium

Scientific Name	Common Name
REPTILES	
PHRYNOSOMATIDAE	**PHRYNOSOMATID LIZARDS**
Sceloporus occidentalis	western fence lizard
BIRDS	
AEGITHALIDAE	**BUSHTITS**
Psaltriparus minimus	bushtit
CHARADRIIDAE	**PLOVERS, LAPWINGS, AND ALLIES**
Charadrius vociferus	killdeer
CORVIDAE	**JAYS, CROWS, AND THEIR ALLIES**
Corvus brachyrhynchos	American crow
COLUMBIDAE	**DOVES AND PIDGEONS**
Zenaida macroura	mourning dove
FRINGILLIDAE	**FINCHES AND THEIR ALLIES**
Haemorhous mexicanus	house finch
HIRUNDINIDAE	**SWALLOWS**
Stelgidopteryx serripennis	northern rough-winged swallow (nesting)
ICTERIDAE	**BLACKBIRDS AND THEIR ALLIES**
Icterus cucullatus	hooded oriole
MIMIDAE	**MOCKINGBIRDS AND THEIR ALLIES**
Mimus polyglottos	northern mockingbird
STURNIDAE	**STARLINGS**
Sturnus vulgaris	European starling
TROCHILIDAE	**HUMMINGBIRDS**
Selasphorus rufus	rufous hummingbird
MAMMALS	
DIDELPHIDAE	**MARSUPIALS**
Didelphis virginiana	opossum (mandible)
GEOMYIDAE	**GOPHERS**
Thomomys bottae	Botta's pocket gopher (burrow)

Appendix D

Potential for Occurrence of Sensitive Plant Species

Appendix D
Potential for Occurrence of Sensitive Plant Species

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Abronia villosa var. aurita chaparral sand-verbena	Fed: Ca: CNPS: BLM:	none none 1B.1 SEN	January-September 75-1600	**Presumed Absent;** Sandy soils in Chaparral, Coastal scrub, Desert dunes. No suitable habitat occurs on the project site.
Aphanisma blitoides aphanisma	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-June 1-305	**Presumed Absent;** Sandy soils in Coastal bluff scrub, Coastal dunes, Coastal scrub. No suitable habitat occurs on the project site.
Astragalus pycnostachyus var. lanosissimus Ventura Marsh milk-vetch	Fed: Ca: CNPS: BLM:	**END** **END** 1B.1 none	June-October 1-35	**Presumed Absent;** Coastal dunes, Coastal scrub, Marshes and swamps. No suitable habitat occurs on the project site.
Atriplex coulteri Coulter's saltbush	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-October 3-460	**Presumed Absent;** Alkaline or clay soils in Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland. No suitable habitat occurs on the project site.
Atriplex pacifica south coast saltscale	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-October 0-140	**Presumed Absent;** Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas. No suitable habitat occurs on the project site.
Atriplex parishii Parish's brittlescale	Fed: Ca: CNPS: BLM:	none none 1B.1 none	June-October 25-1900	**Presumed Absent;** Alkaline soils in Chenopod scrub, Playas, Vernal pools. No suitable habitat occurs on the project site.
Atriplex serenana var. davidsonii Davidson's saltscale	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-October 10-200	**Presumed Absent;** Alkaline, Coastal bluff scrub, Coastal scrub. No suitable habitat occurs on the project site.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Calochortus weedii var. intermedius intermediate mariposa-lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July 105-855	**Presumed Absent;** Rocky, calcareous soils in Chaparral, Coastal scrub, Valley and foothill grassland. No suitable habitat occurs on the project site.
Centromadia parryi ssp. australis southern tarplant	Fed: Ca: CNPS: BLM:	none none 1B.1 none	May-November 0-480	**Presumed Absent;** Marshes and swamps, Valley and foothill grassland, Vernal pools. Species was not observed during a site visits conducted in accordance with protocol guidelines at an appropriate time for identification. Individuals were observed approximately 1.5 miles from the site in 2001.
Chaenactis glabriuscula var. orcuttiana Orcutt's pincushion	Fed: Ca: CNPS: BLM:	none none 1B.1 none	January-August 0-100	**Presumed Absent;** Coastal bluff scrub, Coastal dunes. No suitable habitat occurs on the project site.
Chloropyron maritimum ssp. maritimum salt marsh bird's-beak	Fed: Ca: CNPS: BLM:	**END** **END** 1B.2 none	May-October 0-30	**Presumed Absent;** Coastal dunes, Marshes and swamps. No suitable habitat occurs on the project site.
Chorizanthe parryi var. fernandina San Fernando Valley spineflower	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-July 150-1220	**Presumed Absent;** Coastal scrub, Valley and foothill grassland. No suitable habitat occurs on the project site.
Comarostaphylis diversifolia ssp. diversifolia summer holly	Fed: Ca: CNPS: BLM:	none none 1B.2 SEN	April-June 30-790	**Presumed Absent;** Chaparral, Cismontane woodland. No suitable habitat occurs on the project site.
Dudleya multicaulis many-stemmed dudleya	Fed: Ca: CNPS: BLM:	none none 1B.2 SEN	April-July 15-790	**Presumed Absent;** Often clay soils in Chaparral, Coastal scrub, Valley and foothill grassland. No suitable habitat occurs on the project site.
Dudleya stolonifera Laguna Beach dudleya	Fed: Ca: CNPS: BLM:	**THR** **THR** 1B.1 none	May-July 10-260	**Presumed Absent;** Rocky soils in Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland. No suitable habitat occurs on the project site.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	Fed: Ca: CNPS: BLM:	**END** **END** none none	April-September 91-610	**Presumed Absent;** Sandy or gravelly soils in Chaparral, Coastal scrub. No suitable habitat occurs on the project site.
Eryngium aristulatum var. parishii San Diego button-celery	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-June 20-620	**Presumed Absent;** Mesic soils in Coastal scrub, Valley and foothill grassland, Vernal pools. No suitable habitat occurs on the project site.
Euphorbia misera cliff spurge	Fed: Ca: CNPS: BLM:	none none 2B.2 none	December-October 10-500	**Presumed Absent;** Rocky soils in Coastal bluff scrub, Coastal scrub, Mojavean desert scrub. No suitable habitat occurs on the project site.
Helianthus nuttallii ssp. parishii Los Angeles sunflower	Fed: Ca: CNPS: BLM:	none none 1A none	August-October 10-1675	**Presumed Absent;** Marshes and swamps. No suitable habitat occurs on the project site.
Horkelia cuneata var. puberula mesa horkelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-September 70-810	**Presumed Absent;** Sandy or gravelly soils in Chaparral, Cismontane woodland, Coastal scrub. No suitable habitat occurs on the project site.
Isocoma menziesii var. decumbens decumbent goldenbush	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-November 10-135	**Presumed Absent;** Chaparral, Coastal scrub. No suitable habitat occurs on the project site.
Lasthenia glabrata ssp. coulteri Coulter's goldfields	Fed: Ca: CNPS: BLM:	none none 1B.1 SEN	February-June 1-1220	**Presumed Absent;** Marshes and swamps, Playas, Vernal pools. No suitable habitat occurs on the project site.
Nama stenocarpum mud nama	Fed: Ca: CNPS: BLM:	none none 2B.2 none	January-July 5-500	**Presumed Absent;** Marshes and swamps. No suitable habitat occurs on the project site.
Nasturtium gambelii Gambel's water cress	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-October 5-330	**Presumed Absent;** Marshes and swamps. No suitable habitat occurs on the project site.
Navarretia prostrate prostrate vernal pool navarretia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-July 5-1210	**Presumed Absent;** Mesic soils in Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools. No suitable habitat occurs on the project site.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Nemacaulis denudata var. denudata coast woolly-heads	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-September 0-100	**Presumed Absent;** Coastal dunes. No suitable habitat occurs on the project site.
Orcuttia californica California Orcutt grass	Fed: Ca: CNPS: BLM:	**END** **END** 1B.1 none	April-August 15-660	**Presumed Absent;** Vernal pools. No suitable habitat occurs on the project site.
Pentachaeta aurea ssp. allenii Allen's pentachaeta	Fed: Ca: CNPS: BLM:	none none 1B.1 none	March-June 75-520	**Presumed Absent;** Coastal scrub, Valley and foothill grassland. No suitable habitat occurs on the project site.
Phacelia stellaris Brand's star phacelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	March-June 1-400	**Presumed Absent;** Coastal dunes, Coastal scrub. No suitable habitat occurs on the project site.
Quercus dumosa Nuttall's scrub oak	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-August 15-400	**Presumed Absent;** Sandy or clay loam soils in Closed-cone coniferous forest, Chaparral, Coastal scrub. No suitable habitat occurs on the project site.
Sagittaria sanfordii Sanford's arrowhead	Fed: Ca: CNPS: BLM:	none none 1B.2 SEN	May-October 0-650	**Presumed Absent;** Marshes and swamps. No suitable habitat occurs on the project site.
Senecio aphanactis chaparral ragwort	Fed: Ca: CNPS: BLM:	none none 2B.2 none	January-April 15-800	**Presumed Absent;** Sometimes alkaline soils in Chaparral, Cismontane woodland, Coastal scrub. No suitable habitat occurs on the project site.
Sidalcea neomexicana salt spring checkerbloom	Fed: Ca: CNPS: BLM:	none none 2B.2 none	March-June 15-1530	**Presumed Absent;** Alkaline, mesic soils in Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas. No suitable habitat occurs on the project site.
Suaeda californica California seablite	Fed: Ca: CNPS: BLM:	none none 1B.1 none	July-October 0-15	**Presumed Absent;** Marshes and swamps. No suitable habitat occurs on the project site.

Scientific Name Common Name	**Status**		**Flowering Period Elevation (meters)**	**Potential for Occurrence; Habitat**
Suaeda esteroa estuary seablite	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-January 0-5	**Presumed Absent;** Marshes and swamps. No suitable habitat occurs on the project site.
Symphyotrichum defoliatum San Bernardino Aster	Fed: Ca: CNPS: BLM:	none none 1B.2 SEN	July-November 2-2040	**Presumed Absent;** Meadows, Seeps, Marshes And Swamps, Coastal Scrub, Cismontane Woodland, Lower Montane Coniferous Forest. No suitable habitat occurs on the project site.
Verbesina dissita big-leaved crownbeard	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-July 45-205	**Presumed Absent;** Chaparral, Coastal scrub. No suitable habitat occurs on the project site.

Federal Designations:
(Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS])
END: Federally listed, endangered
THR: Federally listed, threatened
SEN: BLM Sensitive Species

State Designations:
(California Endangered Species Act, California Department of Fish and Wildlife [CDFW])
END: State-listed, endangered
THR: State-listed, threatened

California Rare Plant Ranks (CRPR):
1A: Presumed extirpated in California and rare or extinct elsewhere
1B: Rare, threatened, or endangered in California and elsewhere
2A: Presumed extirpated in California, but more common elsewhere
2B: Rare, threatened, or endangered in California, but more common elsewhere

California Native Plant Society (CNPS) Threat Code:
0.1: Seriously threatened in California
0.2: Moderately threatened in California
0.3: Not very threatened in California

Sources: California Natural Diversity Data Base (CDFW 2014) and California Native Plant Society Electronic Inventory (CNPS 2014) Newport Beach, Seal Beach, Los Alamitos, Anaheim, Orange, Tustin, Laguna Beach 7.5-minute USGS topographic quadrangles.

Appendix E

Potential for Occurrence of Sensitive Wildlife Species

Appendix E
Potential for Occurrence of Sensitive Wildlife Species

Scientific Name Common Name	Status		Habitat	Potential to Occur
INVERTIBRATES				
BRANCHINECTIDAE (fairy shrimp)				
Branchinecta sandiegonesis San Diego fairy shrimp	Fed: Ca:	**END** none	Occurs in vernal pools and other ephemeral wetlands below 701 m elevation.	**Presumed Absent:** No ephemeral wetlands present on the project site.
AMPHIBIANS				
SCAPHIOPODIDAE (spadefoot toads)				
Scaphiopus hammondii western spadefoot	Fed: Ca:	none SSC	Occurs in grassland, scrub, chaparral with nearby vernal pools or other seasonal waters for breeding.	**Presumed Absent:** No suitable habitat present on the project site.
REPTILES				
CHELONIIDAE (sea turtles)				
Chelonia mydas green turtle	Fed: Ca:	**THR** none	Occurs in open ocean and beaches.	**Presumed Absent:** No beaches or open ocean present on the project site.
EMYDIDAE (pond turtles)				
Actinemys marmorata western pond turtle	Fed: Ca:	none SSC	Inhabits rivers, creeks, small lakes, and ponds.	**Presumed Absent:** No open or running water present on the project site.
PHRYNOSOMATIDAE (spiny lizards)				
Phrynosoma blainvillii coast horned lizard	Fed: Ca:	none SSC	Occurs in sandy soils in scrubland, grassland, and chaparral.	**Presumed Absent:** No suitable soils or habitat present on the project site.
TEIIDAE (whiptails)				
Aspidoscelis hyperythra orangethroat whiptail	Fed: Ca:	none SSC	Occurs in open coastal sage scrub habitat with coarse soils as well as chaparral and riparian habitats.	**Presumed Absent:** No coastal sage scrub habitat present on the project site.
VIPERIDAE (vipers)				

Scientific Name Common Name	Status		Habitat	Potential to Occur
Crotalus ruber red-diamond rattlesnake	Fed: Ca:	none SSC	Occurs in rocky outcrops in a variety of habitats including desert scrub, chaparral, dunes, grasslands, and cultivated areas.	**Presumed Absent:** No suitable habitat present on the project site.
FISH				
CATOSTOMIDEAE (suckers)				
Catostomus santaane Santa Ana sucker	Fed: Ca:	**THR** SSC	Occurs in small to medium sized rivers with rocky pools and clear water.	**Presumed Absent:** No open or running water present on the project site.
GOBIIDAE (gobies)				
Eucyclogobius newberryi tidewater goby	Fed: Ca:	**END** SSC	Inhabits coastal lagoons, the uppermost portions of bays, and the lower reaches of streams.	**Presumed Absent:** No open or running water present on the project site.
BIRDS				
ACCIPITRIDAE (kites, hawks and eagles)				
Buteo swainsoni Swainson's hawk	Fed: Ca:	none **THR**	Occurs in riparian areas, savannahs, juniper-sage flats, and agricultural lands with scattered trees with abundant small mammal population.	**Presumed Absent:** No suitable roosting or foraging habitat is present on the project site. One individual was observed approximately 10 miles from the project site in 1997.
Elanus leucurus white-tailed kite	Fed: Ca:	none **FP**	Occurs in savannahs, open woodland, marshes, and cultivated fields.	**Moderate:** Eucalyptus trees provide roosting habitat and project site provides marginal foraging habitat. One individual was observed approximately 2 miles from the project site in 2007.
CHARADRIIDAE (plovers and allies)				
Charadrius alexandrines nivosus western snowy plover	Fed: Ca:	**THR** SSC	Inhabits beaches, mud and salt flats, and sandy or gravelly shores of rivers, lakes, and ponds.	**Presumed Absent:** Project site is too far inland to support this species. No suitable habitat is present on the project site.
CUCULIDAE (cuckoos and roadrunners)				

Scientific Name Common Name	Status		Habitat	Potential to Occur
Coccyzus americanus occidentalis western yellow-billed cuckoo	Fed: Ca:	**CAN** **END**	Occurs in riparian woodland with an abundance of cottonwoods and willows.	**Presumed Absent:** No suitable woodland habitat present on the project site.
EMBERIZIDAE (buntings and allies)				
Ammodramus savannarum grasshopper sparrow	Fed: Ca:	none SSC	Occurs in grasslands, savannah, and old fields.	**Presumed Absent:** No suitable grassland habitat present on the project site.
Passerculus sandwichensis beldingi Belding's savannah sparrow	Fed: Ca:	none **END**	Occurs in salt marshes.	**Presumed Absent:** No suitable salt marsh habitat present on the project site.
HIRUNDINIDAE (swallows)				
Riparia riparia bank swallow	Fed: Ca:	none **THR**	Occurs in open areas typically near flowing water with steep sand, dirt, or gravel banks for burrowing.	**Presumed Absent:** No flowing water or steep banks present on project site.
ICTERIDAE (blackbirds and allies)				
Agelaius tricolor tricolored blackbird	Fed: Ca:	none SSC	Occurs in freshwater thickets and marshes near open water during breeding season. Will use open agricultural land in winter.	**Presumed Absent:** No open water present on project site.
LARIDAE (gulls and skimmers)				
Rynchops niger black skimmer	Fed: Ca:	none SSC	Inhabits open water, sandy beaches, islands, drifts, and shell banks.	**Presumed Absent:** No suitable habitat present on project site.
Sternula antillarum browni California least tern	Fed: Ca:	**END** **END/FP**	Occurs in bays, beaches, estuaries, lakes, rivers, and mudflats.	**Presumed Absent:** No suitable habitat present on project site.
PARULIDAE (mockingbirds and thrashers)				
Icteria virens yellow-breasted chat	Fed: Ca:	none SSC	Occurs in dense forests, thickets, and scrubland often near streams and ponds.	**Presumed Absent:** No suitable habitat and no flowing or open water present on project site.

Scientific Name Common Name	Status		Habitat	Potential to Occur
POLIOPTIDAE (gnatcatchers)				
Polioptila californica californica coastal California gnatcatcher	Fed: Ca:	**THR** SSC	Occurs in coastal sage scrub habitat.	**Presumed Absent:** No coastal sage scrub habitat present on the project site.
RALLIDAE (rails and moorhens)				
Laterallus jamaicensis coturniculus California black rail	Fed: Ca:	none **THR/FP**	Occurs in coastal and freshwater marshes in southern California.	**Presumed Absent:** No marshes present on the project site.
Rallus longirostris levipes light-footed clapper rail	Fed: Ca:	**END** **END/FP**	Occurs in saltmarshes with an abundance of pickleweed.	**Presumed Absent:** No saltmarsh habitat present on the project site.
TROGLODYTIDAE (wrens)				
Campylorhynchus brunneicapillus sandiegensis costal cactus wren	Fed: Ca:	none SSC	Occurs in coastal sage scrub habitat with tall cholla cactus.	**Presumed Absent:** No coastal sage scrub habitat present on the project site.
VIRIONIDAE (vireos)				
Vireo bellii pusillus least Bell's vireo	Fed: Ca:	**END** **END**	Occurs near water in willow-cottonwood forests, thickets, and scrub oak woodland.	**Presumed Absent:** No suitable habitat and now flowing or open water present on the project site.
MAMMALS				
CRICETIDAE (voles, lemmings, and their allies)				
Microtus californicus stephensi south coast marsh vole	Fed: Ca:	none SSC	Occurs in marshes, salt marshes, grasslands, arid uplands, and oak savannah.	**Presumed Absent:** No suitable habitat is present on the project site. Individuals were observed more than 10 miles away as recent as 1988.
HETEROMYIDAE (kangaroo rats and pocket mice)				

Scientific Name Common Name	Status		Habitat	Potential to Occur
Perognathus longimembris pacificus Pacific pocket mouse	Fed: Ca:	**END** none	Occurs in habitats bordering the Pacific ocean including coastal dunes and coastal sage scrub with firm sandy soils.	**Presumed Absent:** Project site is too far inland to support this species. No suitable habitat is present on the project site.
MOLOSSIDAE (free-tailed bats)				
Eumops perotis californicus western mastiff bat	Fed: Ca:	none SSC	Occurs in open habitats including woodlands, coastal scrub, grasslands, chaparral, and rocky canyons with high cliffs and rock walls for roosting.	**Presumed Absent:** No suitable habitat and no rocky surfaces for roosting present on the project site.
Nyctinomops macrotis big free-tailed bat	Fed: Ca:	none SSC	Occurs in river floodplains, desert scrub, and woodlands. Roosts in rocky crevices, buildings, caves, and holes in trees.	**Presumed Absent:** No suitable habitat and no rocky surfaces for roosting present on the project site.
MUSTELIDAE (weasels and otters)				
Taxidea taxus American badger	Fed: Ca:	none SSC	Occurs in open areas of a variety of habitats including shrub, forests, and other herbaceous habitats with friable soils.	**Moderate:** Marginally suitable habitat present on the project site. One individual observed approximately 4.5 miles from the project site in 1998.
PHYLLOSTOMIDAE (leaf-nosed bats)				
Choeronycteris mexicana Mexican long-tongued bat	Fed: Ca:	none SSC	Occurs in dense riparian vegetation. Roosts in caves, rock crevasses, mines, and occasionally buildings.	**Presumed Absent:** No dense vegetation present on the project site.
SORICIDAE (shrews)				
Sorex ornatus salicornicus southern California saltmarsh shrew	Fed: Ca:	none SSC	Inhabits coastal marshes.	**Presumed Absent:** No coastal marsh habitat present on the project site.
VESPERTILLIONIDAE (vesper bats)				
Lasiurus xanthinus western yellow bat	Fed: Ca:	none SSC	Occurs in trees, particularly palms. Roosts in dead fronds of fan palms.	**Moderate:** California fan palms present on the project site. One individual was observed approximately 10 miles from the project site in 1990.

Scientific Name Common Name	**Status**	**Habitat**	**Potential to Occur**
Federal Designations:		**State Designations:**	
(Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS] Bureau of Land Management [BLM], United States Forest Service [FS]) **END:** Federally listed, endangered **THR:** Federally listed, threatened **CAN:** Candidate for federal listing		(California Endangered Species Act, California Department of Fish and Wildlife [CDFW]) **END:** State-listed, endangered **THR:** State-listed, threatened **SSC:** Species of Special Concern **FP:** Fully Protected species	
Sources: California Natural Diversity Data Base (CDFW 2014) Newport Beach, Seal Beach, Los Alamitos, Anaheim, Orange, Tustin, Laguna Beach 7.5-minute USGS topographic quadrangles.			

APPENDIX C

CULTURAL REPORTS

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Cultural Resources Survey
for the Ganahl Lumber Relocation Project
Costa Mesa,
Orange County, California

Prepared For:

GANAHL LUMBER
1220 East Ball Road
Anaheim, California 92805

Prepared By:

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ECORP CONSULTING, INC.
1801 Park Court Place, B-103
Santa Ana, California 92701

July 2014

U.S. Geological Survey 7.5-minute Quadrangle:
Newport Beach, California (1965, photorevised 1981)
Area Surveyed: Approximately 6 acres
Keywords: Cultural Resources Survey, Costa Mesa, Orange County
Cultural Resources Identified:
None

MANAGEMENT SUMMARY

A cultural resources survey was conducted for a 6-acre parcel of land in Costa Mesa, Orange County, where Ganahl Lumber plans to construct a retail lumber facility. The survey was completed June 25, 2013 by ECORP Consulting, Inc. under contract to Ganahl Lumber. The purpose of the investigation was to identify cultural resources that could be affected by the proposed commercial development project, pursuant to regulations implementing the California Environmental Quality Act (CEQA).

To identify previously recorded cultural resources that would be affected by the proposed project, a cultural resources records search was conducted at the South Central Coastal Archaeological Information Center (SCCIC), and a search of the Sacred Lands File of the Native American Heritage Commission was requested. In addition, letters were sent to Native American groups to inform them of the project and to ask for their input.

The records search results indicate that no cultural resources have been previously recorded within the project area. Five historic-period cultural resources have been previously recorded within 0.5-mile of the project area.

Following a review of the records search results, an intensive field survey of the project area was conducted. There are no buildings or structures on the property and no prehistoric or historic archaeological material was observed on the parcel. No known Historical Resources, as defined by CEQA, will be impacted by the proposed Ganahl Lumber commercial development project. Recommendations to follow in the case of unanticipated discoveries are provided.

1.0 INTRODUCTION

A cultural resources investigation was conducted for a 6-acre parcel of land (APN: 427-363-01) at 1100 SE Bristol Street in the City of Costa Mesa, Orange County, California. Ganahl Lumber plans to relocate their existing retail lumber and hardware facilities located on the adjacent property at 1265 SE Bristol Street onto the property at 1100 SE Bristol Street.

The study was completed by ECORP Consulting, Inc. (ECORP) under contract to Ganahl Lumber to identify cultural resources that could be affected by the proposed commercial development project, as required by regulations implementing the California Environmental Quality Act (CEQA). A cultural resources records search, a search of the Sacred Lands File, and a field survey were conducted for the project. Results of these investigations are provided in this report, along with management recommendations.

2.0 LOCATION AND SETTING

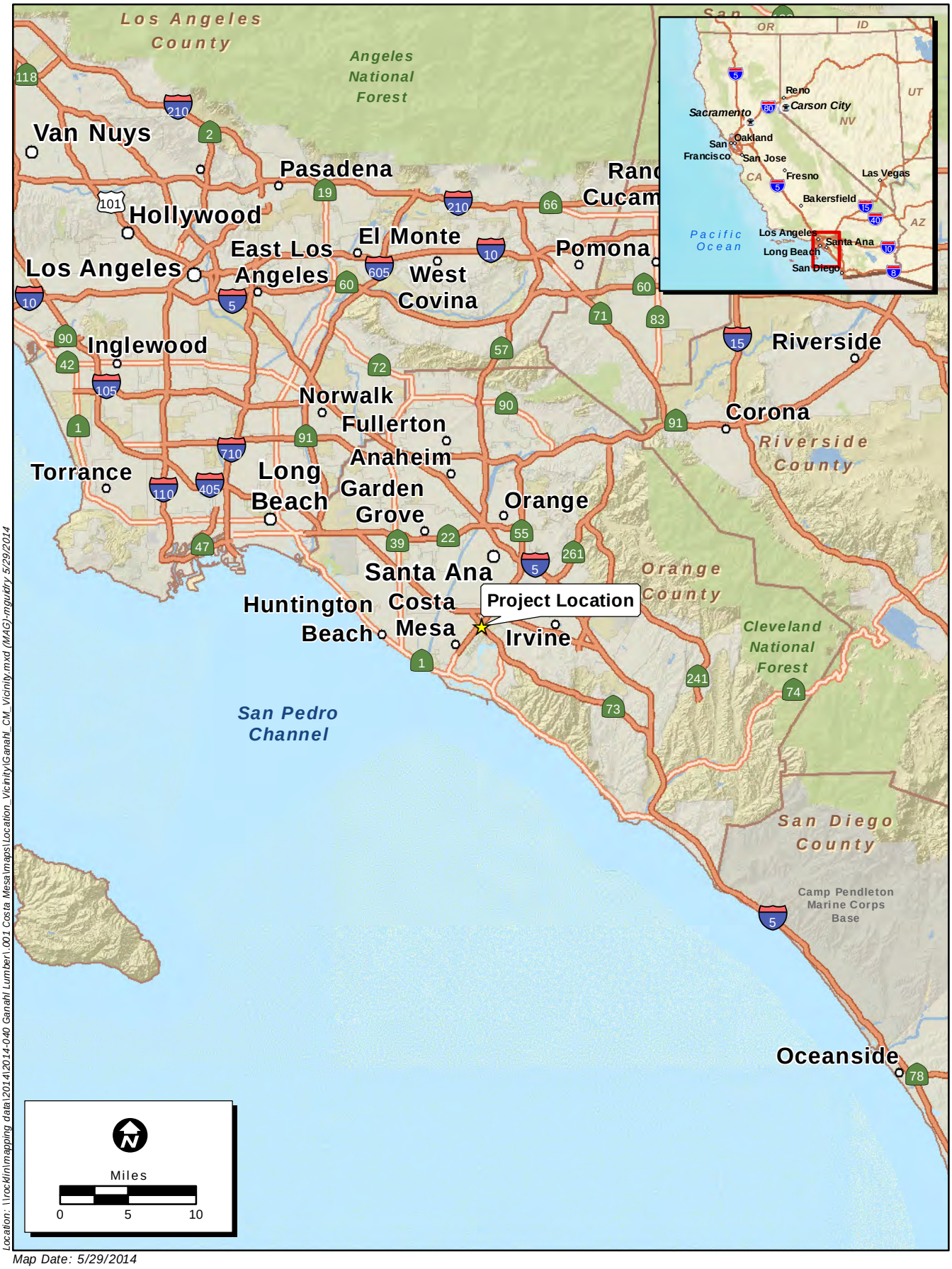
The project property is located in a commercial area of the City of Costa Mesa (Figure 1) at 1100 SE Bristol Street. The project property is on the northeast side of Bristol Street west of Red Hill Avenue and is directly south of the SR 55 and SR 73 freeway interchange. As shown on the U.S. Geological Survey (USGS) 7.5-minute Newport Beach, California topographic quadrangle map (1965, photo-revised 1981), the project area is located in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM (Figure 2). The existing Ganahl Lumber store and yard is directly adjacent to the southeast.

3.0 CULTURAL SETTING

3.1 Southern California Prehistory

It is generally believed that human occupation of southern California dates to at least 12,000 years before present (B.P.). Five cultural periods of prehistoric occupation of California during the Terminal Pleistocene Epoch/Holocene Epoch (12,000 years B.P. to present) are discussed below: the Paleo-Indian Period, the Early Archaic Period, the Archaic or Milling Stone Period, the Intermediate Period, and the Late Prehistoric Period.

Paleo-Indian Period/Terminal Pleistocene (12,000 to 10,000 B.P.). The first inhabitants of southern California were big-game hunters and gatherers exploiting extinct species of Pleistocene megafauna (e.g., mammoth and other Rancholabrean fauna). Local "fluted point" assemblages composed of large spear points or knives are stylistically and technologically similar to the Clovis Paleo-Indian cultural tradition dated to this period elsewhere in North America (Moratto 1984). Archaeological evidence for this period in southern California is limited to a few small temporary camps with fluted points found around late Pleistocene lake margins in the Mojave Desert and around Tulare Lake in the southern San Joaquin Valley. Single points are reported from Ocotillo Wells and Cuyamaca Pass in eastern San Diego County and from the Yuha Desert in Imperial County (Rondeau et al. 2007).



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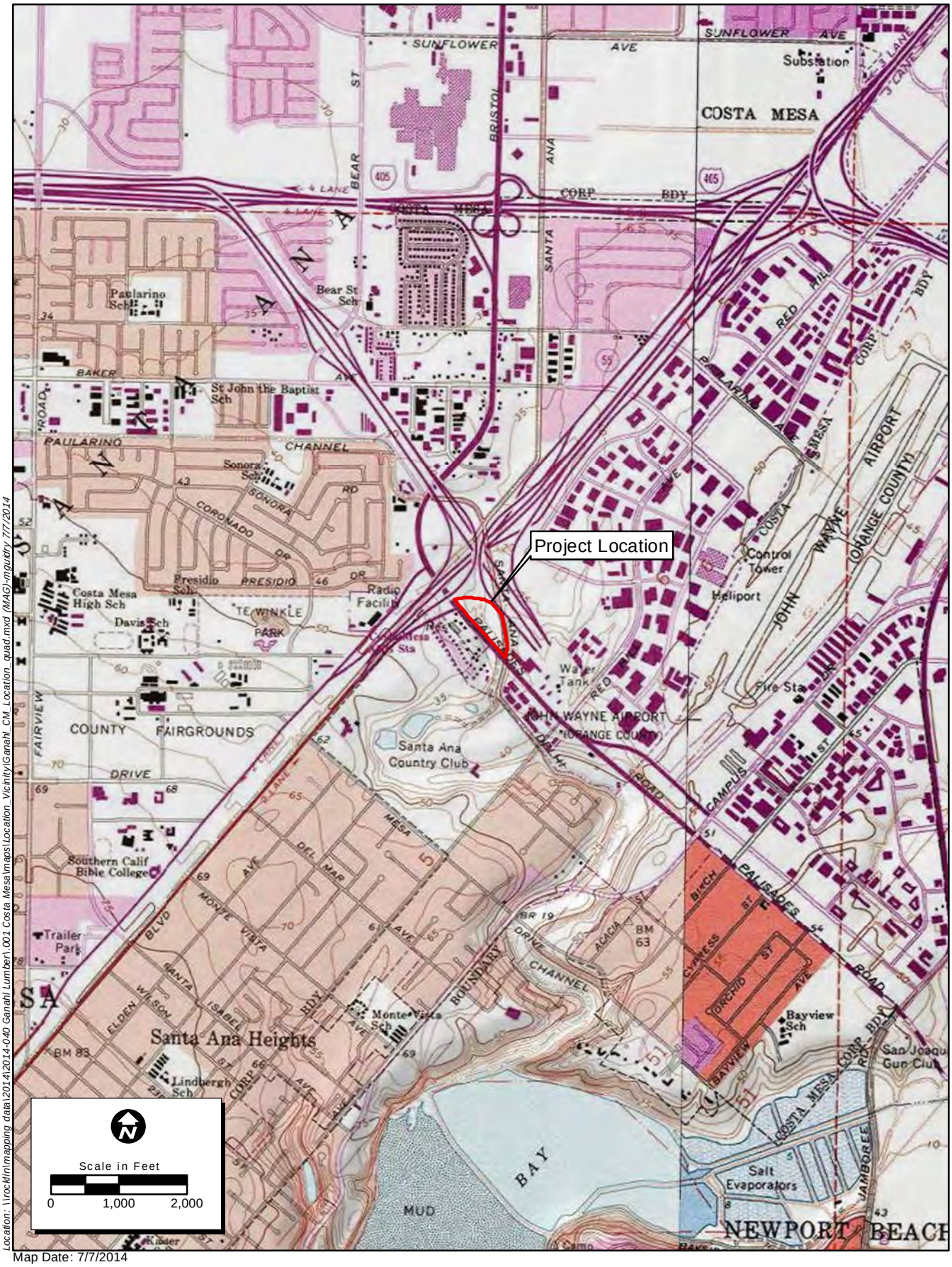
Map Date: 5/29/2014

Service Layer Credits: Sources: USGS, ESRI, TANA, AND

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2014-040 Ganahl Lumber



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Map Date: 7/7/2014
USGS Topographic Quadrangle: Newport Beach (1981), Tustin (1978)

Figure 2. Project Location

2014-040 Ganahl Lumber

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Early Archaic Period/Early Holocene (10,000 to 8,000 B.P.). Approximately 10,000 years ago, at the beginning of the Holocene, warming temperatures and the extinction of many of the megafauna resulted in changing subsistence strategies with an emphasis on hunting smaller game and increasing reliance on plant gathering. Early Holocene sites were, at one time, only represented by a few examples and isolates from the Lake Mojave and San Dieguito Complexes, found along former lakebeds and grasslands of the Mojave desert and in inland San Diego County. More recently, southern California Early Holocene sites have been found along the Santa Barbara Channel (Erlandson 1994), in western Riverside County (Goldberg 2001; Grenda 1997), and along the San Diego County coast (Gallegos 1991; Koerper et al. 1991; Warren 1967).

The San Dieguito Complex was defined based on material found at the Harris site (CA-SDI-149) on the San Dieguito River near Lake Hodges in San Diego County. San Dieguito artifacts include large leaf-shaped points; leaf-shaped knives; large ovoid, domed, and rectangular end and side scrapers; engraving tools; and crescentics (Koerper et al. 1991). The San Dieguito Complex at the Harris site dates to 9,000 to 7,500 B.P. (Gallegos 1991:Figure 3.9). However, sites from this time period in coastal San Diego County have yielded artifacts and subsistence remains characteristic of the succeeding Milling Stone Period, including manos, metates, core-cobble tools, and marine shell (Gallegos 1991; Koerper et al. 1991).

Archaic or Milling Stone Period/Middle Holocene (8,000 to 3,000 B.P.). Residential sites along the coast from this period are shell middens with hearths. The most common artifacts are manos and milling stones (metates) and large core-cobble chopping tools. Other artifacts include hammerstones, large flake tools including scraper-planes and scrapers, worked bone, beads, cogged stones, discoidals, doughnut stones, and stone balls. Projectile points (usually large leaf-shaped points and Elko points) are not plentiful, but faunal remains indicate deer and rabbits were hunted. Sites near bays and estuaries contain abundant shell and fish remains (Masters and Gallegos 1997). Burials were inhumations with associated grinding implements. The Milling Stone Period was originally defined based on sites along the Los Angeles and Ventura County coasts (Wallace 1955). The Milling Stone Period was extended to inland areas when sites with similar artifact inventories (but without shell middens) were investigated near Cucamonga (Salls 1983), in the Prado Basin (Goldberg and Arnold 1988), and in Crowder Canyon near Cajon Pass (Kowta 1969; Basgall and True 1985). Population density was relatively low compared to later periods. The settlement system may have consisted of small bands moving in a seasonal round from the coast to inland areas and back again.

Intermediate Period/Late Holocene (3,000 to 1,350 B.P.). Mortars and pestles were first used during the Intermediate Period, and probably indicate the beginning of acorn exploitation. Use of the acorn, a storable, high-calorie food source, probably allowed greater sedentism. Large projectile points, including Elko points, indicate that hunting was probably accomplished with the *atlatl* or spear thrower. The settlement pattern may have been semi-sedentary with winter residential bases near a permanent water source and use of temporary camps for resource collection during the rest of the year.

In the upper Santa Ana River drainage area, it has been suggested that the Milling Stone Period artifact assemblage (preponderance of manos and metates and core tools and few or no mortars and pestles) continued into the time period designated as Intermediate on the coast (Kowta 1969; Goldberg and Arnold 1988). This may indicate that intensive acorn use began later in inland areas compared to the coast. In western Riverside County the period

corresponding to the Intermediate Period on the coast is the Late Archaic. Mortars and pestles are present in small quantities in some Late Archaic sites and entirely absent in others (Goldberg 2001).

Late Prehistoric Period/Late Holocene (1,350 B.P. to Spanish Contact [A.D. 1769]). The complex hunter-gatherer cultures encountered by the Spanish in southern California developed during the Late Prehistoric Period. People lived in villages of up to 250 inhabitants located near permanent water and a variety of food sources. Each village was typically located at the center of a defended territory from which resources for the group were gathered. Small groups left the village for short periods of time to hunt, fish, and gather plant foods. While away from the village, they established temporary camps and created locations where food and other materials were processed. Archaeologically, such locations are evidenced by manos and metates for seed grinding, bedrock mortars for acorn pulverizing, and lithic scatters indicating manufacturing or maintenance of stone tools (usually made of chert) used in hunting or butchering. Overnight stays in field camps are evidenced by fire-affected rock used for hearths.

The more intensive use of resources and settlement in permanent villages near water sources in inland areas may have been a response to a warmer drier period known as the Medieval Climatic Anomaly (MCA) (1,050 to 600 B.P.). Droughts during the MCA were "severe enough to cause problems for residents of poorly watered areas of Native California" (Jones and Klar 2007:302).

The beginning of the Late Prehistoric Period is marked by the introduction of the bow and arrow, which made deer hunting more efficient. The bow and arrow was also used in wars for territorial defense. One of the most important food resources for inland groups was acorns gathered from oak groves in canyons, drainages, and foothills. Acorn processing was labor intensive, requiring grinding in a mortar and leaching with water to remove tannic acid (Basgall 1987). Many of the mortars are bedrock mortars which are indicators of the Late Prehistoric Period. Acorns provided a storable resource which promoted sedentism. Seeds from sage and grasses, goosefoot, and California buckwheat were collected and ground into meal with manos and metates. Protein was supplied through the meat of deer, rabbits, and other animals, hunted with bow and arrow or trapped using snares, nets, and deadfalls.

Trade among local groups and inland and coastal groups was important as a means of obtaining resources from outside the local group's territory. Items traded over long distances included obsidian from the Obsidian Butte source in Imperial County and from the Coso source in Inyo County, steatite bowls and ornaments from Catalina Island, shell beads and ornaments from the Santa Barbara Channel area, rabbit skins and deer hides from the interior, and dried fish and shellfish from the coast. Acorns, seeds, and other food resources were probably exchanged locally.

3.2 Orange County Prehistory and Ethnohistory

The project area formed part of the territory occupied by the Juaneño Native American group when the Spanish arrived in A.D. 1769. Ethnographic descriptions of the Juaneño are often given in terms of their neighbors to the south, the Luiseño (e.g., White 1963; Bean and Shipek 1978), but also point to a separate ethnic identity (Kroeber 1925; Strong 1929). Perhaps the most important account of Juaneño culture are the observations made by Geronimo Boscana, padre of Mission San Juan Capistrano from 1812 to 1826 (Boscana 1846).

Juaneño settlement and subsistence systems may extend back in time to the beginning of the **Late Prehistoric Period** about A.D. 750. The Juaneño were semi-sedentary hunters and gatherers. One of the most important food resources for inland groups was acorns gathered from oak groves in canyons, drainages, and foothills. Acorns were ground into flour using mortars and pestles. Seeds from sage and grasses, goosefoot, and California buckwheat were collected and ground into meal with manos and metates. Protein was supplied through the meat of deer, rabbits, and other animals, hunted with the bow and arrow or trapped using snares, nets, and deadfalls. Coastal dwellers collected shellfish and used carved shell hooks for fishing in bay/estuary, nearshore, and kelp bed zones. Dried fish and shellfish were probably traded for inland products such as acorns and deer meat.

The Juaneño lived in villages of up to 250 people located near permanent water and a variety of food sources. Each village was typically located at the center of an established territory from which resources for the group were gathered. Small groups left the village for short periods of time to hunt, fish, and gather plant foods. While away from the village, they established temporary camps and created locations where food and other materials were processed. Archaeologically, such locations are evidenced by manos and metates for seed grinding, bedrock mortars for acorn pulverizing, and lithic scatters indicating manufacturing or maintenance of stone tools (usually made of chert) used in hunting or butchering. Overnight stays in field camps are evidenced by fire-affected rock used in hearths. The nearest village to the project area was Genga, located on the east bank of the lower Santa Ana River.

The period from 1,000 B.C. to A.D. 750 is known archaeologically as the **Intermediate Period**. During this period, mortars and pestles appear, indicating the beginning of acorn exploitation. Use of the acorn, a storable, high-calorie food source, probably allowed greater sedentism, especially in inland areas. Large projectile points indicate that the bow and arrow, a hallmark of the Late Prehistoric Period, had not yet been introduced. Hunting was probably accomplished with the *atlatl* or spear thrower. Settlement patterns are not well understood, but the semi-sedentary pattern characteristic of the Late Prehistoric Period may have begun during the Intermediate Period, although lower population densities probably meant less territoriality.

The **Milling Stone Period** (about 6,500 B.C. to 1000 B.C.) represents a long period of time characterized by smaller, more mobile groups compared with later periods. These groups probably operated within a seasonal round of settlement which included both inland and coastal residential bases. They relied on grass and sage seeds to provide calories and carbohydrates. Although relatively fewer projectile points occur during this time, faunal data indicate that the same animals were hunted. Inland Milling Stone Period sites are marked by numerous manos, metates, and hammerstones, while shell middens are more common along the coast. Coarse-grained lithics such as quartz and rhyolite are more common than fine-grained lithics such as chert as preferred materials for making chipped stone tools.

3.3 History

Spanish explorers visited the California coast by ship in 1542 and 1602. Spanish colonization of California began with the Portolá land expedition in 1769. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterrey Bay Area. As a result of this expedition, Spanish missions to convert the native population, *presidios* (forts), and towns were

established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. Mission San Gabriel Archangel was founded in 1771 east of what is now Los Angeles to convert the *Tongva* or Gabrielino. Mision San Fernando, also in *Tongva*lGabrielino territory, was established in 1797. Mission San Juan Capistrano was established in 1776 on San Juan Creek (in what is now southern Orange County) to convert the *Agjachemem* or Juaneño. Mission San Luis Rey was established in 1798 on the San Luis Rey River (in what is now northern San Diego County) to convert the Luiseño (Castillo 1978:100).

Portions of the southern Los Angeles Basin and the lower Santa Ana River area were given as land grants by the Spanish colonial government to retired Spanish soldiers and other Spanish citizens. The Project area was part of the Santiago de Santa Ana grant given by the Spanish governor in 1810 to Jose Antonio Yorba, a retired Spanish soldier, and his son-in-law, Juan Pablo Peralta (OCCGS 1969). When confirmed by the U.S. government in 1883, the Santiago de Santa Ana grant consisted of 82,000 acres (BLM 2012) extending south from Santa Ana Canyon along the east bank of the Santa River to the Pacific Ocean. Jose Antonio Yorba built an adobe house on the land grant on the alluvial plain just west of the hill later occupied by the community of Olive. This adobe house was the center of his cattle ranch and was known as Santa Ana (later Santa Ana Vieja or Old Santa Ana). Yorba lived in this house until his death in 1825 (OCCGS 1969). The ranch headquarters at Santa Ana Vieja was later occupied by two of his sons, Tomas Yorba and Teodocio Yorba, who built their own adobe houses nearby.

Mexico became independent from Spain in 1822 and the Mexican government closed the missions beginning in 1834. Former mission lands were granted to soldiers and other Mexican citizens for use as cattle ranches. Most of the rest of the land on the Santa Ana River plain was granted during the Mexican period.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, the Mexican province of Alta California became a territory of the United States. California became a state in 1850. Most of the Spanish and Mexican land grants were confirmed to their grantees by the U.S. government.

During the period from 1848 to about 1880 the Santiago de Santa Ana grant was divided informally among the Yorba and Peralta heirs who continued to use the land for cattle ranching, vineyards, and other agricultural uses. Upon Teodocio Yorba's death in 1863 the ranch buildings and land at Old Santa Ana were conveyed to his daughter and son-in-law, Desiderio Burruel. The Santiago de Santa Ana grant was legally partitioned among the Yorba and Peralta descendants and other claimants in 1868 (City of Orange 2012). The land grant was divided into over 1,000 parcels of land. Many of the heirs sold their parcels which resulted in much of the rancho passing out of the ownership of the Yorbas and Peralta families. The towns of Orange, Tustin, and Santa Ana were established on some of these parcels in the early 1870s.

South of Santa Ana most of the former rancho land remained agricultural through the first half of the twentieth century. The small communities of Fairview, Newport, and Thurin had developed by 1900 to provide services for the rural households (USGS Santa Ana quad 1901). Thurin was a stop on the Santa Ana & Newport Railroad, built by the McFadden Brothers in 1891 to connect their lumber business in Santa Ana with their Newport Pier. The Santa Ana &

Newport Railroad was purchased by the Southern Pacific Railroad in 1899 (Robertson 1998). The townsite of Harper was laid out along the railroad south of Thurin in 1910 (near what is now 19th Street and Newport Boulevard). It was named for a local farmer who had requested the siding at that location. Harper was re-named as Costa Mesa in 1915. Costa Mesa was incorporated as a city in 1953. It included the previously separate communities of Costa Mesa, Thurin, Fairview, and Newport. During the years after World War II most of the agricultural land in Costa Mesa was developed for residential and commercial use (Friis 1965).

4.0 METHODS

4.1 Records Search Methods

A cultural resources records search was conducted on June 23, 2014 at the South Central Coastal Archaeological Information Center (SCCIC), located at California State University, Fullerton. The purpose of the records search was to determine the extent of previous cultural resources investigations within a 0.5-mile (800-meter) radius of the project area, and whether any previously recorded archaeological sites or other historic resources exist within or near the project area. Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Points of Historical Interest, California Landmarks, and National Historic Landmarks.

4.2 Field Survey Methods

Fieldwork was conducted by an ECORP archaeologist on June 25, 2014 and consisted of an intensive systematic pedestrian survey of the unpaved areas of the project area. Much of the parcel is covered by asphalt. Notes were taken on the environmental setting and disturbances within the project area.

4.3 Native American Coordination Methods

A search of the Sacred Lands File was conducted with the Native American Heritage Commission (NAHC) in Sacramento, California. The search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the project area that could be affected by the proposed project. In addition, the NAHC provided a list of Native American contacts for the project area. Letters were sent to the Native American contacts to inform them of the proposed project and to request their input regarding the identification of potential effects to cultural resources, sacred lands, or other heritage sites within the project area. Copies of correspondence between ECORP, the NAHC, and Native American groups are provided in Appendix A.

5.0 RESULTS

5.1 Records Search Results

Results of the records search conducted at the SCCIC indicate that 19 cultural resources studies have been previously conducted within a 0.5-mile (800-meter) radius of the project area, between 1977 and 2011. Most of the surveys were linear or only covered a few acres. The

project area has not been previously surveyed. Details of all 19 investigations are in Appendix B.

The records search results indicates that five cultural resources have been previously documented within 0.5 mile of the project area. All of these are historic-period buildings located at the Costa Mesa Air National Guard Station. All five buildings have been evaluated as not eligible for the National Register of Historic Places. No other cultural resources have been recorded within the records search radius.

The U.S. Geological Survey (USGS) 30-minute Santa Ana, California topographic quadrangle map of 1901 shows the Southern Pacific Railroad and the Thurin railroad station just west of the project area. The USGS 7.5-minute Newport Beach quad (1965, photo-revised 1981) shows the project property as vacant in 1965 and 1981. The current Ganahl Lumber store on the adjacent property is shown on the 1981 photo-revision. According to DataQuick (2014), the current store was built in 1974.

The Historic Property Data File for Orange County (on file at the SCCIC) lists no properties on Bristol Street in Costa Mesa.

The NAHC reports that a search of the Sacred Lands File failed to indicate the presence of Native American traditional sites or places in or near the project area.

5.2 Native American Coordination Results

Letters were sent to the contacts on the list provided by the NAHC. No responses were received. Any responses received after the submission of the environmental document will be forwarded to the lead agency (City of Costa Mesa). Correspondence between ECORP, the NAHC, and Native American groups can be found in Appendix A.

5.3 Field Survey Results

The project property is mostly paved with asphalt and in some places hard-packed gravel. Most of the site is covered with a thin layer of gravel (Figure 3). Three concrete pads that served as foundations for small buildings are present. The construction superintendent, David Powers, reported that the previous use of the property was as a yard for storage containers. It is likely that this property was graded as part of the construction of SR 73. It may have been graded again prior to paving with asphalt for use as a storage yard. No cultural resources were identified during the field survey of the Ganahl Lumber Costa Mesa property.

6.0 SUMMARY AND RECOMMENDATIONS

No cultural resources were identified as a result of the records search and the field survey completed for the Ganahl Lumber Costa Mesa property. Therefore, no known Historical Resources, as defined by CEQA, will be impacted by the proposed Ganahl Lumber commercial development project.

The archaeological sensitivity of the project area is believed to be low; however, in the event that any archaeological materials are encountered during construction activities, all activities must be suspended in the vicinity of the find until the deposits are recorded and evaluated by a

Figure 3. Ganahl Lumber Costa Mesa Property.

qualified archaeologist. If human remains of any kind are found during construction, the requirements of CEQA Guidelines Section 15064.5(e) and AB 2641 shall be followed. According to these requirements, all construction activities must cease immediately and the Orange County Coroner and a qualified archaeologist must be notified. The Coroner will examine the remains and determine the next appropriate action based on his or her findings. If the coroner determines the remains to be of Native American origin, he or she will notify the NAHC. The NAHC will then identify the most likely descendants (MLD) to be consulted regarding treatment and/or reburial of the remains. If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to them, the Native American human remains and associated grave goods shall be buried with appropriate dignity on the property in a location not subject to further subsurface disturbance.

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9.0 REPORT AND FIELD PERSONNEL

9.1 Report Preparers

Roger D. Mason, Author
1980 Ph.D., Anthropology, University of Texas, Austin
1971 B.A., Anthropology, University of Washington
Years of experience: 30

9.2 Field Personnel

Mark Deering, Archaeologist
M.A., Philosophy, University of California, Irvine
B.A., Philosophy and English Writing, Pennsylvania State University
Years of experience: 15

APPENDIX A

NATIVE AMERICAN CORRESPONDENCE

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

June 20, 2014
(2014-040.001)

Mr. David Singleton
Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

Via E-Mail: ds_nahc@pacbell.net

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Singleton:

I request a review of the Sacred Land File and a list of Native American contacts for the Ganahl Lumber Project, in Costa Mesa, Orange County. The project property is located on Bristol Street northwest of its intersection with Red Hill Avenue and near the intersection of SR-55 and SR-73 in the unsectioned San Joaquin land grant in Township 6 South, Range 9 West, SBBM, as shown on the attached copy of a portion of the USGS Newport Beach Quad. A new Ganahl Lumber store will be built on the property.

Please e-mail the results of this search to me at rmason@ecorpconsulting.com or Fax to (714) 648-0935. If you have any questions regarding this request, please do not hesitate to contact me at (714) 648-0630. Thank you for your assistance with this project.

Sincerely,

ECORP Consulting, Inc.

Roger D. Mason

Roger D. Mason, Ph.D., RPA
Director of Cultural Resources

Attachment

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
Ds_nahc@pacbell.net

June 25, 2014

Dr. Roger D. Mason, Ph.D., RPA, Director of Cultural Resources
ECORP Consulting, Inc.
1801 Park Court Place, B 103
Santa Ana, CA 92701

Sent by FAX to: 714-648-0935
No. of Pages: 4

RE: Sacred Lands File Search and Native American Contacts list for the **"Ganahl Lumber Project;"** located in Costa Mesa, on Bristol Street ; Orange County, California

Dear Dr. Mason:

A record search of the NAHC Sacred Lands Inventory **failed to indicate** the presence of Native American traditional sites/places of the Project site(s) or 'areas of Potential effect' (APEs), submitted to this office. Note also hat the absence of archaeological features, Native American cultural resources does not preclude their existence at the subsurface level.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the Court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

When the project becomes public, please inform the Native American contacts as to the nature of the project (e.g. residential, renewable energy, infrastructure or other appropriate type). Attached is a list of Native American tribes, Native American individuals or organizations that may have knowledge of cultural resources in or near the proposed project area (APE). As part of the consultation process, the NAHC recommends that local government and project developers contact the tribal governments and Native American individuals on the list in order to determine if the proposed action might impact any cultural places or sacred sites. If a response from those listed on the attachment is not received in two weeks of notification, the NAHC recommends that a follow-up telephone call be made to ensure the project information has been received.

California Government Code Sections 65040.12(e) defines 'environmental justice' to provide "fair treatment of people...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies." Also,

Executive Order B-10-11 requires that state agencies "consult with Native American tribes, their elected officials and other representatives of tribal governments in order to provide meaningful input into...the development of legislation, regulations, rules and policies on matter that may affect tribal communities."

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,

Dave Singleton
Program Analyst

Attachments

Native American Contacts
Orange County California
June 25, 2014

Juaneno Band of Mission Indians Acjachemen Nation
David Belardes, Chairperson
32161 Avenida Los Amigos Juaneno
San Juan , CA 92675
chiefdavidbelardes@yahoo.
(949) 493-4933 Home
(949) 293-8522

Juaneno Band of Mission Indians Acjachemen Nation
Teresa Romero, Chairwoman
31411-A La Matanza Street Juaneno
San Juan , CA 92675
(949) 488-3484
(949) 488-3294 Fax
(530) 354-5876 Cell

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
, Gabrielino Tongva
tattnlaw@gmail.com
(310) 570-6567

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
(562) 761-6417 Voice/Fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
P.O. Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 483-3564 Cell
(626) 286-1262 Fax

Juaneno Band of Mission Indians
Adolph 'Bud' Sepulveda, Vice Chairperson
P.O. Box 25828 Juaneno
Santa Ana , CA 92799
bssepul@yahoo.net
(714) 838-3270
(714) 914-1812 Cell

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
sgoad@gabrielino-tongva.com
(951) 845-0443

Gabrielino-Tongva Tribe
Bernie Acuna, Co-Chairperson
P.O. Box 180 Gabrielino
Bonsall , CA 92003
bacuna1@gabrielinotribe.org
(619) 294-6660 Office
(310) 428-5690 Cell
(760) 636-0854 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list s only applicable for contacting locative Americans with regard to cultural resources for the proposed Ganahl Lumber Project; located in the City of Costa Mesa; Orange County, California for which a Sacred Lands file search and Native American Contacts list were requested.

Native American Contacts
Orange County California
June 25, 2014

Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry, Representing Tribal Chairperson
4955 Paseo Segovia Juaneno
Irvine , CA 92612
kaamalam@gmail.com
(949) 293-8522

Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resorces Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net
(909) 262-9351

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
P.O. Box 180 Gabrielino
Bonsall , CA 92003
palmsprings9@yahoo.com
(626) 676-1184 Cell
(760) 636-0854 Fax

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
gabrielenoindians@yahoo.
(626) 926-4131

Gabrielino-Tongva Tribe
Conrad Acuna,
P.O. Box 180 Gabrielino
Bonsall , CA 92003
(760) 636-0854 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list s only applicable for contacting locative Americans with regard to cultural resources for the proposed Ganahl Lumber Project; located in the City of Costa Mesa; Orange County, California for which a Sacred Lands file search and Native American Contacts list were requested.

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

David Belardes, Chairperson
Juaneno Band of Mission Indians Acjachemen Nation
32161 Avenida Los Amigos
San Juan, CA 92675

Email: chiefdavidbelardes@yahoo.com

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Belardes:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

Cultural resources investigations for this project are being performed to identify resources that could be affected by the proposed commercial development project, as required by CEQA. Investigations will include an archaeological records search, a search of the Native American Heritage Commission's Sacred Lands File, and a field survey of the property.

I am requesting information about any sacred lands or other cultural resources that could be affected by the Project that you have knowledge of. If there are specific sacred lands or other cultural resources in or near this location that should be avoided by the proposed project, please contact me in writing at the address below, reply by e-mail to rmason@ecorpconsulting.com, or call me at (714) 648-0630.

Sincerely,

ECORP Consulting, Inc.

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

John Tommy Rosas, Tribal Administrator
Tongva Ancestral Territorial Tribal Nation

Email: tattnlaw@gmail.com

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Rosas:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

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Sincerely,

ECORP Consulting, Inc.

Roger D Mason

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Anthony Morales, Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Email: GTTribalcouncil@aol.com

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Morales:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

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Sincerely,

ECORP Consulting, Inc.

Roger D. Mason

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Sandonne Goad, Chairperson
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Email: sgoad@gabrielino-tongva.com

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Ms. Goad:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

Cultural resources investigations for this project are being performed to identify resources that could be affected by the proposed commercial development project, as required by CEQA. Investigations will include an archaeological records search, a search of the Native American Heritage Commission's Sacred Lands File, and a field survey of the property.

I am requesting information about any sacred lands or other cultural resources that could be affected by the Project that you have knowledge of. If there are specific sacred lands or other cultural resources in or near this location that should be avoided by the proposed project, please contact me in writing at the address below, reply by e-mail to rmason@ecorpconsulting.com, or call me at (714) 648-0630.

Sincerely,

ECORP Consulting, Inc.

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Teresa Romero, Chairwoman
Juaneno Band of Mission Indian Acjachemen Nation
31411-A La Matanza Street
San Juan, CA 92675

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Ms. Romero:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

Cultural resources investigations for this project are being performed to identify resources that could be affected by the proposed commercial development project, as required by CEQA. Investigations will include an archaeological records search, a search of the Native American Heritage Commission's Sacred Lands File, and a field survey of the property.

I am requesting information about any sacred lands or other cultural resources that could be affected by the Project that you have knowledge of. If there are specific sacred lands or other cultural resources in or near this location that should be avoided by the proposed project, please contact me in writing at the address below, reply by e-mail to rmason@ecorpconsulting.com, or call me at (714) 648-0630.

Sincerely,

ECORP Consulting, Inc.

Roger D Mason

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Robert F. Dorame, Tribal Chair/Cultural Resources
Gabrielino Tongva Indians of California Tribal Council
P.O. Box 490
Bellflower, CA 90707

Email: gtongva@verizon.net

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Dorame:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

Cultural resources investigations for this project are being performed to identify resources that could be affected by the proposed commercial development project, as required by CEQA. Investigations will include an archaeological records search, a search of the Native American Heritage Commission's Sacred Lands File, and a field survey of the property.

I am requesting information about any sacred lands or other cultural resources that could be affected by the Project that you have knowledge of. If there are specific sacred lands or other cultural resources in or near this location that should be avoided by the proposed project, please contact me in writing at the address below, reply by e-mail to rmason@ecorpconsulting.com, or call me at (714) 648-0630.

Sincerely,

ECORP Consulting, Inc.

Roger D. Mason

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Adolph "Bud" Sepulveda, Vice Chairperson
Juaneno Band of Mission Indians
P.O. Box 25828
Santa Ana, CA 92799

Email: bssepul@yahoo.net

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Sepulveda:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

Cultural resources investigations for this project are being performed to identify resources that could be affected by the proposed commercial development project, as required by CEQA. Investigations will include an archaeological records search, a search of the Native American Heritage Commission's Sacred Lands File, and a field survey of the property.

I am requesting information about any sacred lands or other cultural resources that could be affected by the Project that you have knowledge of. If there are specific sacred lands or other cultural resources in or near this location that should be avoided by the proposed project, please contact me in writing at the address below, reply by e-mail to rmason@ecorpconsulting.com, or call me at (714) 648-0630.

Sincerely,

ECORP Consulting, Inc.

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Bernie Acuna, Co-Chairperson
Gabrielino-Tongva Tribe
P.O. Box 180
Bonsall, CA 92003

Email: bacuna1@gabrielinotribe.org

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Acuna:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

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Sincerely,

ECORP Consulting, Inc.

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Joyce Perry, Representing Tribal Chairperson
Juaneno Band of Mission Indians Adjachemen Nation
4955 Paseo Segovia
Irvine, CA 92612

Email: kaamalam@gmail.com

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Ms. Perry:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

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Sincerely,

ECORP Consulting, Inc.

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Conrad Acuna
Gabrielino-Tongva Tribe
P.O. Box 180
Bonsall, CA 92003

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Acuna:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

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Roger D Mason

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Andrew Salas, Chairperson
Gabrieleno Band of Mission Indians
P.O. Box 393
Covina, CA 91723

Email: gabrielenoindians@yahoo.com

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Salas:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

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Sincerely,

ECORP Consulting, Inc.

Roger D. Mason

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Conrad Acuna
Gabrielino-Tongva Tribe
P.O. Box 180
Bonsall, CA 92003

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

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ECORP Consulting, Inc.

Roger D Mason

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Sam Dunlap, Cultural Resources Director
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Email: samdunlap@earthlink.net

Subject: Ganahl Lumber Project, Costa Mesa, Orange County

Dear Mr. Dunlap:

ECORP Consulting, Inc., is conducting cultural resources investigations for the Ganahl Lumber Project, Costa Mesa, Orange County. Ganahl Lumber plans to build a new store and lumber yard on the property adjacent to their existing store in Costa Mesa. The property where the new store and lumber yard will be built is located at 1100 Bristol Street in the City of Costa Mesa, Orange County (see enclosed map, a portion of the Newport Beach quad). The property is directly south of the intersection of SR 55 and SR 73) and is in the unsectioned Santiago de Santa Ana land grant in Township 6 South, Range 10 West, SBBM.

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Sincerely,

ECORP Consulting, Inc.

Roger D. Mason, Ph.D., RPA
Project Archaeologist

Enclosure

APPENDIX B

LIST OF REPORTS FROM THE SCCIC

Report List

Ganahl Lumber: Costa Mesa

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00044		1977	Desautels, Roger J.	Archaeological Survey Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange	Scientific Resource Surveys, Inc.	30-000194
OR-00190		1977	Desautels, Roger J.	Archaeological Field Test Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange, California.	Scientific Resource Surveys, Inc.	30-000687
OR-00197		1977	Desautels, Roger J.	Archaeological Survey Report on Approximately 3/4 of an Acre Located on Santa Ana Avenue South of Orchard Drive, Upper Newport Bay Area, County of Orange	Scientific Resource Surveys, Inc.	
OR-00406		1978	Cottrell, Marie and David Jacobs	Archaeological Excavations Conducted at the Bristol Street Site, CA-ORA-687, Locus I and Ii		30-000687
OR-00661		1981	Brock, James P.	Archaeological Survey Report: 2777 Bristol Street, Costa Mesa, California	Archaeological Advisory Group	
OR-00770		1984	Bissell, Ronald M.	Grading Observation at CA-ORA-687, the Bristol-santa Ana Motel Site, Costa Mesa, Orange County, California	RMW Paleo Associates, Inc.	30-000687
OR-01016		1975	Leonard, Nelson N. III	Environmental Impact Evaluation: Route Alternates Between the Michelson Treatment Plant and Plants on the Santa Ana River, Orange County, California	University of California, Riverside	30-000057, 30-000076, 30-000121, 30-000164, 30-000165, 30-000170, 30-000174, 30-000193, 30-000347, 30-000348, 30-000351
OR-01161		1991	Mason, Roger D. and Brant A. Brechbiel	Cultural Resource Survey Report for the Santa Ana - Delhi Channel Improvements Project Facility No. F01	The Keith Companies Archaeological Division	
OR-01197		1992	Brown, Joan C.	Cultural Resources Reconnaissance of Ten Miles of the Santa Ana-delhi Channel Complex, Orange County, California	RMW Paleo Associates, Inc.	
OR-01672			Mason, Roger D.	Cultural Resources Records Search and Literature Reviw Report for a Pacific Bell Mobile Services Telecommunications Facity: Cm 245-11, in the City of Costa Mesa, Ca.	Chambers Group, Inc.	
OR-01704		1998	McLean, Deborah K.	Results of Cultural Resources Monitoring, Autumn Years Project, City of Costa Mesa, Orange County, California	LSA Associates, Inc.	
OR-01729		1975	Martz, Patricia	Archaeology of the Proposed Alignment of the Santa Ana Regional Interceptor, Riverside, San Bernardino, and Orange Counties, California	University of California, Riverside	30-000820

Report List

Ganahl Lumber: Costa Mesa

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-01890		1978	Cottrell, Marie G.	Preliminary Report of Test Level Investigations Conducted at Archaeological Site CA-ORA-687, Bristol Street, Orange County, California	Archaeological Resource Management Corp.	30-000687
OR-01952		1996	Anonymous	Historic Property Survey Report, Route 73 and I-405 Improvements From Birch Street to I-405, From Bear Street to Euclid Street	Caltrans	
OR-02131		2000	Duke, Curt	Cultural Resource Assessment for Pacific Bell Mobile Services Facility Cm 298-02, County of Orange	LSA Associates, Inc.	
OR-02283		2000	Duke, Curt	Cultural Resource Assessment for Modifications to Pacific Bell Wireless Facility Cm 004-23, County of Orange, Ca	LSA Associates, Inc.	
OR-04103		2009	Fulton, Phil	Finding of Effect for the Route 73 Basin Sedimentation Project, Orange County, California, EA 0H4400	LSA	30-000218, 30-000221, 30-000222, 30-000225, 30-000226, 30-000389, 30-000420, 30-000618, 30-000619, 30-001041, 30-001081, 30-001085, 30-001120, 30-001209, 30-001357, 30-001358, 30-001431, 30-001432, 30-001438, 30-001478, 30-001687
OR-04215		2009	Nowakowski, Matt	FINAL, Cultural Resources Survey Costa Mesa Air National Guard Station, Costa Mesa, Orange County, California	Air National Guard Readiness Center	30-000077, 30-000174, 30-000689, 30-177456, 30-177457, 30-177458, 30-177459, 30-177460, 30-179852
OR-04223		2011	Flynn, Chris	Notification of Finding of No Adverse Effect with Standard Conditions for the Bridge Deck Maintenance and Sealing at 30 Locations Throughout Orange County, California	Department of Transportation	

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

July 18, 2014
(2014-040.001)

Patrick Ganahl
Ganahl Lumber
1220 East Ball Road
Anaheim, California 92805

Subject: Ganahl Lumber Costa Mesa Property, Paleontology Assessment

Dear Mr. Ganahl:

A search of the paleontology collection records in the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County was conducted by Dr. Samuel A. McLeod for the Ganahl Lumber Costa Mesa project area (Attachment). The Ganahl Lumber Costa Mesa property is located at 1100 SE Bristol Street in the City of Costa Mesa, Orange County, California. Shallow deposits in the project area consist of marine younger Quaternary Terrace deposits. These deposits typically do not contain significant vertebrate fossils. The marine younger Quaternary Terrace have a low potential to contain fossil resources.

The marine younger Quaternary Terrace deposits overlie older Quaternary deposits in the subsurface which has high potential to contain significant vertebrate fossils. Fossils recovered from these sediments in the project vicinity include fossil sea turtle (Cheloniidae), camel (Camelidae),and mammoth (*Mammuthus* sp.) bones. It is estimated that the older Quaternary deposits begin at a depth of about 10 feet below surface in the Project Area.

No mitigation for paleontological resources is necessary for excavations on the Costa Mesa property that do not extend more than 10 feet below surface. If excavations extend below 10 feet, a qualified paleontologist should determine if the older Quaternary deposits are present. If so, the paleontologist should establish a monitoring program to recover any significant fossils that may be encountered.

Sincerely,

ECORP Consulting, Inc.

Roger D Mason

Roger D. Mason, Ph.D., RPA
Director of Cultural Resources

Attachment

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325
Fax: (213) 746-7431
e-mail: smcleod@nhm.org

7 July 2014

ECORP Consulting, Inc.
1801 Park Court Place
Building B, Suite 103
Santa Ana, CA 92701

Attn: Roger D. Mason, Ph.D., Director of Cultural Resources

re: Paleontological resources for the proposed Ganahl Lumber Project, Project # 2014-040.001, in the City of Costa Mesa, Orange County, project area

Dear Dr. Mason:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Ganahl Lumber Project, Project # 2014-040.001, in the City of Costa Mesa, Orange County, project area as outlined on the portion of the Newport Beach USGS topographic quadrangle map that you sent to me via e-mail on 20 June 2014. We have no vertebrate fossil localities that lie directly within the boundaries of the proposed project area, but we do have localities nearby from sedimentary deposits similar to those that occur at depth in the proposed project area.

According to the geologic mapping, in the entire proposed project area there are surface exposures of marine younger Quaternary Terrace deposits, although our vertebrate fossil localities in this area almost always contain terrestrial fossil vertebrates. These deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they are usually underlain by older Quaternary deposits that frequently do contain significant vertebrate fossils. Our closest vertebrate fossil locality from these deposits is LACM 4219, southwest of the proposed project area in a roadcut for the Newport Freeway near Santa Isabel Avenue, that produced fossil sea turtle, Cheloniidae, and camel, Camelidae, bones in coarse poorly sorted friable sands about 30 feet below the grade of Newport Boulevard. Our next closest vertebrate

fossil locality is LACM 1339, directly west of the proposed project area along Adams Avenue near the top of the mesa bluffs east of the Santa Ana River. Fossil mammoth, *Mammuthus*, and camel, Camelidae, bones were recovered from locality LACM 1339 in sand approximately 15 feet below the top of the mesa that is overlain by shell bearing silts and sands. We further have a large number of localities from the marine and terrestrial Late Pleistocene terraces deposits on the east side of Upper Newport Bay. Those localities have produced an extensive composite fauna.

Surface grading or very shallow excavations in the nominally marine younger Quaternary Alluvium exposed in the entire proposed project area probably will not uncover significant vertebrate fossil remains. Deeper excavations that extend down into older Quaternary deposits, however, may well encounter significant fossil vertebrate specimens. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

LSA

LSA ASSOCIATES, INC.
20 EXECUTIVE PARK, SUITE 200
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FORT COLLINS
FRESNO
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO
SOUTH SAN FRANCISCO

November 24, 2014

Katy Sanchez
Native American Heritage Commission
1550 Harbor Blvd., Suite 100
Sacramento, CA 95691

Subject: Sacred Lands File Search for the Ganahl Lumber Project, City of Costa Mesa, Orange County, California

Dear Ms. Sanchez:

Attached please find a portion of one United States Geological Survey (USGS) 7.5-minute topographic quadrangle map. Plotted on the map is the location of the proposed Ganahl Lumber project, in the City of Costa Mesa, Orange County, California. Specifically, the project is situated in Township 6 South, Range 10 West, of the *Newport Beach, California,* USGS topographic quadrangle map, Irvine Ranch Section 6, and the unsectioned Santiago de Santa Ana land grant (San Bernardino Baseline and Meridian). A map showing the project area is attached.

There will be ground disturbance associated with this project. LSA Associates, Inc. (LSA) is requesting a Sacred Lands File search for the project area. Please notify LSA of any Native American cultural resources that might be impacted.

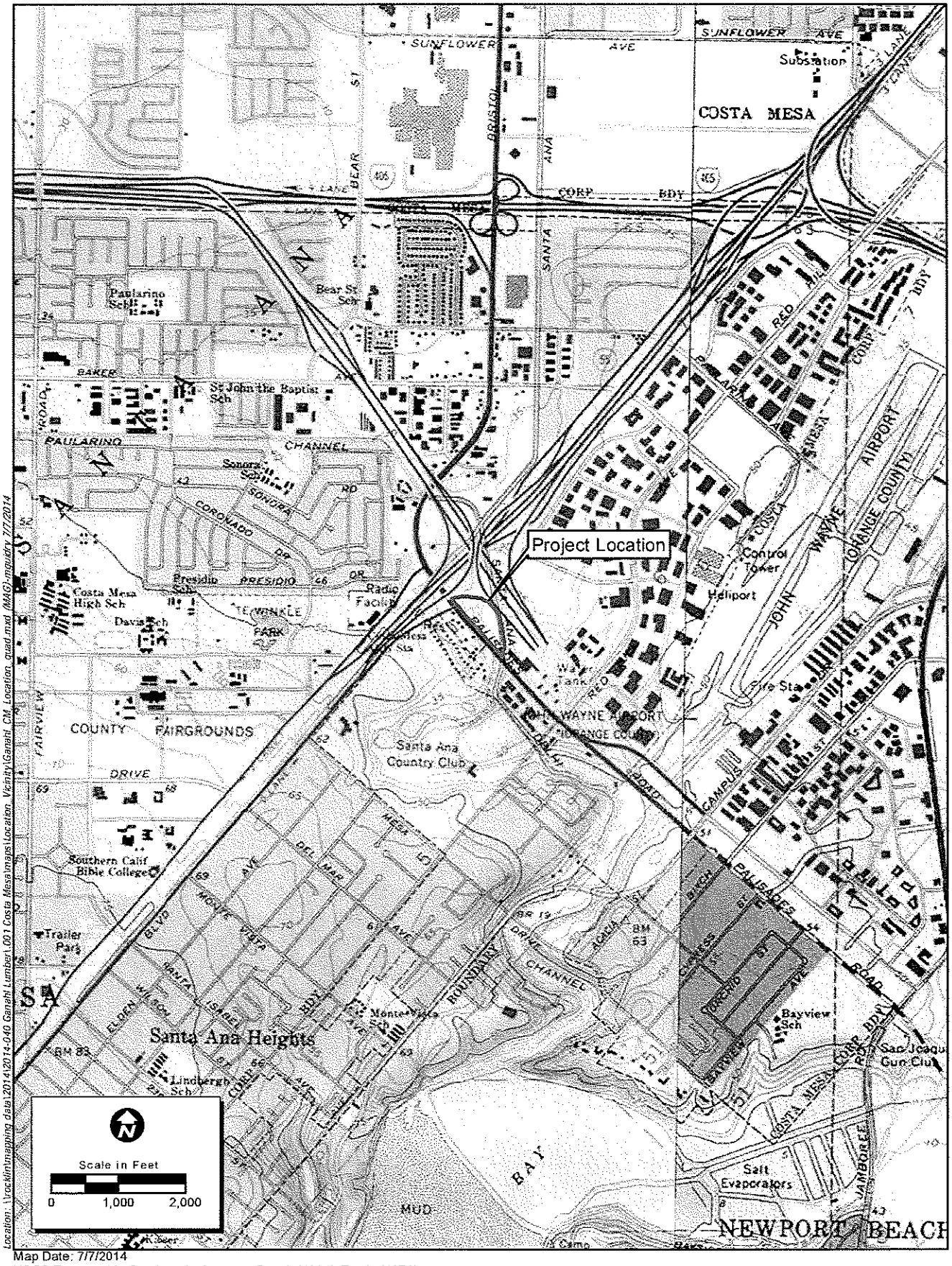
Thank you very much for your assistance. If you have any questions or comments, please contact me a 949-553-0666, or you may email me at terri.fulton@lsa-assoc.com.

Best Regards,

LSA ASSOCIATES, INC

Terri Fulton
Archaeologist/Senior Cultural Resources Manager
Native American Tribal Liaison

Attachments: USGS map



location: \\rocklin\mapping data\2014\2014-040 Ganahl Lumber_001 Costa Mesa\maps\Location_Vicinity\Ganahl_CM_Location_quad.mxd (MAG)-mguidry 7/7/2014

Map Date: 7/7/2014
USGS Topographic Quadrangle: Newport Beach (1981), Tustin (1978)

Figure 2. Project Location

2014-040 Ganahl Lumber

ECORP Consulting, Inc.

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

December 11, 2014

Terri Fulton
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, CA

Sent by Fax: (949) 553-8076
Number of Pages: 2

Re: Ganahl Lumber Project, City of Costa Mesa, Orange County.

Dear Ms. Fulton,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Government Program Analyst

Native American Contacts
Orange County
December 10, 2014

Juaneno Band of Mission Indians Aciachemen
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chiefdavidbelardes@yahoo.
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(949) 293-8522

Juaneno Band of Mission Indians
Anita Espinoza
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neta777@sbcglobal.net
(505) 310-5850 Cell

Juaneno Band of Mission Indians Acjachemen
Teresa Romero, Chairwoman
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San Juan Capistrano CA 92675
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(530) 354-5876 Cell

Juaneno Band of Mission Indians Acjachemen Nation
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Juaneno Band of Mission Indians
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(714) 914-1812 Cell

Juaneño Band of Mission Indians
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sonia.johnston@sbcglobal.
(714) 323-8312
(714) 998-0721

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Ganahl Lumber Project, City of Costa Mesa, Orange County.

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December 15, 2014

Juaneño Band of Mission Indians
Anita Espinoza
639 Holten Road
Talent, Oregon 97540

Email: neta777@sbcglobal.net

Subject: Ganahl Lumber Project, City of Costa Mesa, Orange County, California

Dear Ms. Espinoza:

On behalf of the City of Costa Mesa (City), LSA Associates, Inc., would like to notify you of the Ganahl Lumber Project, which is located in the City, in Orange County, California. Ganahl Lumber plans to build a new store and lumber yard on the vacant property that is adjacent to their existing store and lumber yard. The address of the parcel on which the new store and lumber yard will be built is 1100 Bristol Street. The property is directly south of the intersection of SR 55 and SR 73, and is depicted on the *Newport Beach, California*, United States Geological Survey (USGS) topographic quadrangle map, in the unsectioned Santiago de Santa Ana land grant, Township 6 South, Range 10 West (San Bernardino Baseline and Meridian). A map showing the project location is attached.

A cultural resources investigation for this project was performed by ECORP Consulting, Inc., in July 2014 to identify resources that could be affected, as required by the California Environmental Quality Act (CEQA). Investigations included an archaeological records search, a search of the Native American Heritage Commission's Sacred Lands File, and a field survey of the property. No cultural resources were identified by the investigation.

I am writing to notify you of the project, and also to request information about any sacred lands or other cultural resources that could be affected that you may have knowledge of. If there are specific sacred lands or other cultural resources in or near this location that should be avoided by the proposed project, please contact me in writing at the address above, reply by email to terri.fulton@lsa-assoc.com, or call me at (949) 553-0666. Thank you for your participation in this process.

Respectfully,

LSA ASSOCIATES, INC.

Terri Fulton
Archaeologist/Senior Cultural Resources Manager
Native American Tribal Liaison

Attachment: Project Location Map

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APPENDIX D

GEOTECHNICAL REPORT

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June 13, 2014
Project 6848-04

Ganahl Construction
6586 Beach Boulevard
Buena Park, California 90621

Attention: Mr. Patrick Ganahl

Subject: **GEOTECHNICAL INVESTIGATION REPORT**
Proposed Ganahl Lumber Facility
1100 Bristol Street
Costa Mesa, California

Gentlemen:

1. INTRODUCTION

a) In accordance with your request and authorization, we have conducted a geotechnical investigation on the above referenced property. The results of the investigation are presented in this report.

b) The purpose of the investigation was to obtain soil and geologic data, and to provide preliminary design parameters and recommendations pertaining to the geotechnical aspects of the proposed development.

c) We have conducted percolation testing to evaluate the feasibility of utilizing an on-site drainage infiltration system.

d) We have reviewed the site plan showing the site conditions and the location of the new improvements. A copy of the plan was modified and used as the *Geologic Map, Figure B-1*, in Appendix B.

e) We have reviewed the geologic maps and reports of the area. The maps and reports are listed in *References, Appendix A*.

2. IMPROVEMENTS

a) The conceptual plan provided shows a single-story retail store with an attached will-call storage building, loading dock, a separate building for milling and a number of outside lumber storage sheds. The structures are to be supported by conventional spread footings with slab-on-grade floors.

b) The remaining area will be utilized for parking and access.

c) The location and details regarding the proposed infiltration system have not been established.

d) Detailed structural and grading plans are not available at present.

3. SCOPE OF SERVICES

The scope of our services included:

a) Review of available pertinent reports, maps and data regarding the site;

b) Field exploration consisting of sixteen (16) hollow-stem auger borings, excavated to depths ranging from 7 to 51.5 feet below the existing ground surface;

c) Logging of the borings by our Project Geologist;

d) Obtaining in-situ and bulk samples for classification and laboratory testing;

e) Percolation testing;

f) Laboratory testing of selected samples considered representative of site conditions;

g) Geotechnical analysis of field and laboratory data;

h) Seismicity and seismic hazards assessment;

i) Preparation of a report presenting our findings, conclusions and recommendations.

4. FIELD INVESTIGATION

Details of the field exploration, including the Logs of Borings, are presented in *Appendix B, Field Exploration.* The boring locations are shown on the *Geologic Map, Figure B-1, in Appendix B.*

5. LABORATORY TESTING

Description of the laboratory tests and the results are presented in *Appendix C.*

6. PERCOLATION TESTING

The details and results of our percolation testing are presented in *Percolation Test Results, Appendix D.*

7. SITE DESCRIPTION

7.1 Location

a) The site is located at 1100 Bristol Street, in Costa Mesa, California.

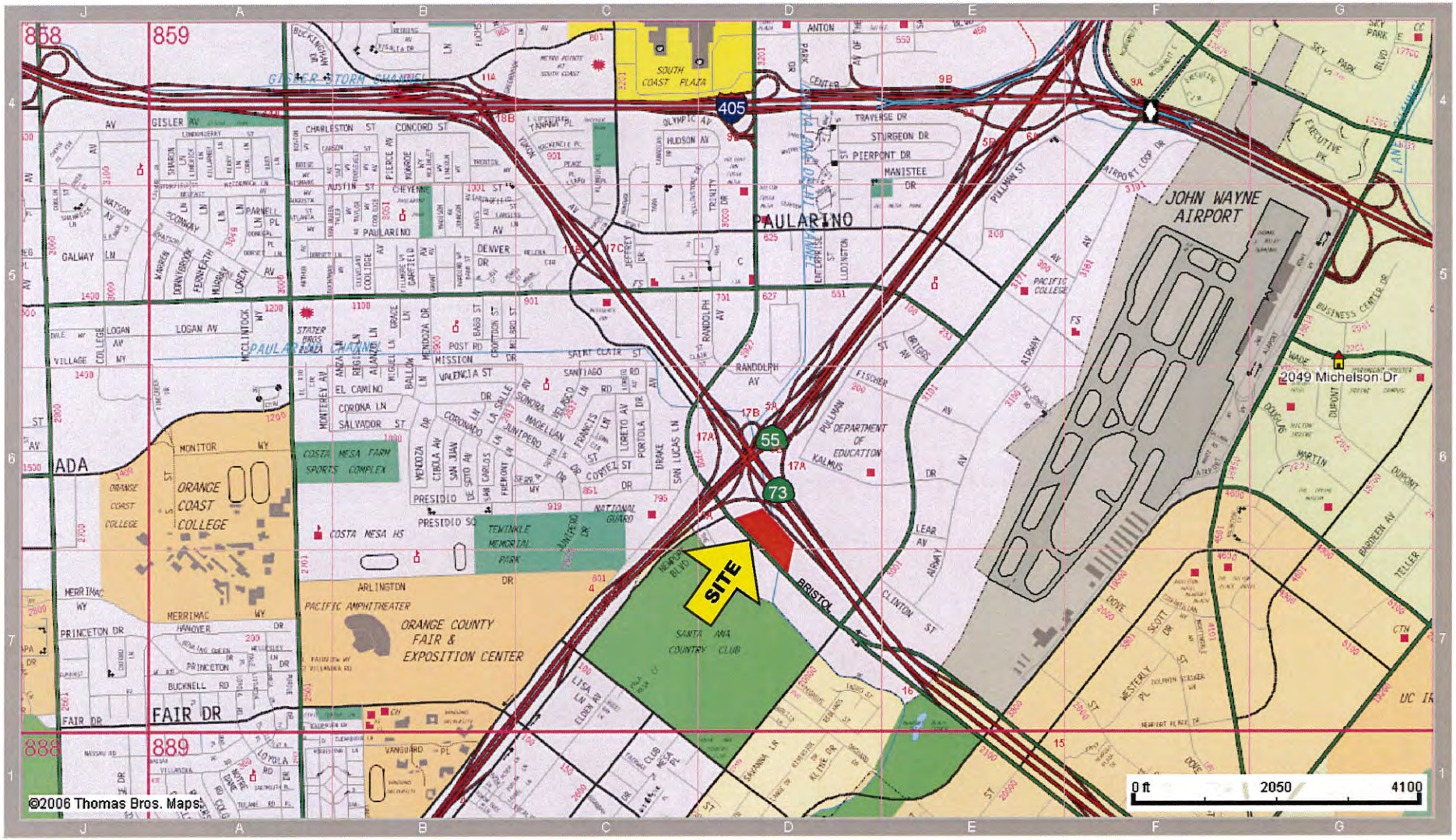
b) The approximate site location is shown on the *Location Map, Figure 1.*

7.2 Surficial Conditions

a) The project site is a trapezoidally shaped, 5.9+ acre flat site, located on the northeast side of Bristol Street. A 7±-foot-high slope is situated along the northeast side of the property.

b) A County Flood Control access road is situated along the north side of the property. The existing Ganahl Lumber facility is situated to the southeast. An easement for the Santa Ana Delhi Channel is located on the east side of the site. A triple-box concrete drainage culvert is located within the easement. The outside dimensions of the box are approximately 62 feet wide by 16 feet deep. The plans show a fill cover ranging from 4 to 6 feet. Additional fill may have been added in later years.

LOCATION MAP



G. A. Nicoll & Associates, Inc. EARTH SCIENCE CONSULTANTS	GANAHL Construction Corporation New Costa Mesa Facility 1100 S.E. Bristol Street, Costa Mesa, CA		
	6848-04	June 2014	Fig. 1

c) Several abandoned concrete slabs are situated near the entrance to the property. A fire hydrant is located in about the center of the site. A water line connects to the hydrant from the street.

d) A block wall is present along the Bristol Street property line and at the northwest corner of the site. Chain-link fencing is situated along the County Flood Control easement road. The maintenance access opening for the Santa Ana Delhi box culvert is located offsite near the northerly corner of the property.

e) The above mean sea level (amsl) elevations range from approximately 33.5 to 36 feet. The southeast half of the site drains via sheet flow toward the south corner of the site to a filter-fabric covered catch basin. The northwest half drains via sheet flow toward the low area long the northwest side of the site.

f) The site is mostly devoid of vegetation, with the exception of some scattered weeds, and some trees and scrubs on the slope along the northern side of the property.

g) The site conditions are shown on the *Geologic Map, Figure B-1 in Appendix B*.

8. GEOLOGY

8.1 General Conditions

a) The project site is underlain by fill that overlies alluvium and late Pleistocene age terrace deposits. The Geologic Map of Orange County, *Reference 8,* indicates that the site is within the marine terrace deposits (Qtm)) that underlie the Newport Mesa. The alluvial deposits are generally of minimal thickness.

b) The old Delhi Drainage Ditch was located on the property. The approximate location is shown on *Figure B-1* and in older photographs (5/30/1953) and a 1935 USGS topographic map for the Newport Beach Quadrangle.

c) The ditch was replaced by the realigned Santa Ana Delhi unlined channel some time prior to December 1992. The channel was replaced by the 3-box, concrete drainage channel at the project site.

d) The deeper fills at the site are located in the area of the old Delhi Drainage Ditch and along the sides of the current 3-box channel. A relatively thin layer of alluvium was found in Boring B-10 beneath the fill placed in the area of the old Delhi Drainage Ditch.

8.2 Project Site Geology

8.2.1 General Conditions

a) At the project site 6 to 25+ feet of fill covers mostly Pleistocene-age terrace deposits, with the deepest fill having been found along the sides of the 3-box channel.

b) Fill found in the area of the old Delhi Drainage Ditch ranged in thickness from approximately 11 to 19 feet. 2.5± feet of alluvium was found beneath the fill in the old ditch area in Boring B-10.

c) The fill thickness in the remaining areas of the site ranged from approximately 6 to 11 feet.

d) The fill thickness beneath the proposed retail store was found to range from approximately 6 to 19 feet, with the thickest fill in the west corner of the building *(see B-3)* and the thinnest section in the northeast corner *(see B-4)*.

8.2.2 Fill (FILL)*

a) Fill materials encountered in the borings consisted predominantly of thick layers of firm to very stiff, moist to saturated Sandy CLAY, and medium dense to dense, moist to saturated Silty and Clayey SAND. A 12±-inch layer of Silty to Sandy CLAY with Gravel is present at the surface.

b) An estimated 6 to 10 feet of moist to very moist, dense and stiff, Silty SAND with Gravel, Silty SAND and Sandy CLAY overlies the 3-Box Channel.

*See the Key on the Geologic Map, Figure B-1, for identification of symbols

8.2.3 Alluvium (Qal)*

The thin layer of alluvium found in Boring B-10, at 14 to 16.5 feet, consisted of dark greenish-gray, very moist to saturated, soft, Silty CLAY with black carbon stringers and very decayed roots.

8.2.4 Terrace Deposits (Qt)*

a) The terrace deposits encountered consisted of medium thick to thick layers of slightly moist to wet, medium dense to dense, mostly fine- to coarse-grained SAND, very moist to saturated, stiff, greenish-brown to greenish-gray Silty and Sandy CLAY, and thin to medium thick layers of yellowish- to light greenish-brown, moist to very moist, stiff Sandy and Clayey SILT.

b) A thick, wet, dense layer of fine- to coarse-grained SAND at 28 to 44 feet overlies a dark greenish-gray, soft to stiff, saturated Silty CLAY, to the maximum depth drilled of 51.5 feet.

c) Some layers of shells and shell fragments were found in the deep Silty CLAY deposits.

d) Descriptions of the materials encountered are found in the *Logs of Borings, in Appendix B.*

*See the Key on the Geologic Map, Figure B-1, for identification of symbols

9. GROUND WATER

a) Ground water was encountered in several borings and stabilized at depths ranging from 23.5 to 24.5 feet below the existing ground surface and 10.7 to 12 feet above mean sea level (amsl), adjusted for variations in the ground surface elevations.

b) The shallowest amsl level of 12 feet was found in Boring B-i3 in the westerly portion of the site. This may represent a perched ground water condition overlying the less permeable Silty CLAY layer found at 43 to 44 feet.

c) A County of Orange boring, B-7, drilled in December 1992 for the Santa Ana Delhi Channel, shows a stabilized ground water level at 27 feet, or 7.8 feet amsl.

d) A review of Seismic Hazard Zone Report for the Anaheim and Newport Beach Quadrangles, SHZR-03 *(Appendix A, Reference 4)*, shows a historically highest ground water level in the general area of the site at 30 feet of the ground surface.

e) The level for the principal groundwater aquifer beneath the site is approximately -50 feet below mean sea level.

10. SEISMICITY

10.1 General

a) Seismic risk in Southern California is a well-recognized factor, and is directly related to geologic fault proximity to active or potentially active fault zones, and on the type of geologic structures. In relative terms, seismic damage is generally less intense in consolidated formations, *i.e.* bedrock, than in unconsolidated materials, such as alluvium.

b) In Southern California, most of the seismic damage to man-made structures results from ground shaking, and to a lesser degree from liquefaction and ground rupture caused by earthquakes along active fault zones. In general, the greater the magnitude of the earthquake, the greater the potential damage.

c) Seismic hazards at this site are attributed to ground shaking as a result of an earthquake epicentered on an active nearby fault.

Ground rupture is not expected to occur on the property as a consequence of fault movement during an earthquake event on active faults.

10.2 Site Seismicity

10.2.1 Design E.Q. Fault

a) The site is not located within a currently established Alquist-Priolo Earthquake Fault Zone. The closest approach of known active faults to the site is the San Joaquin Hills Thrust Fault, which lies 1.9 miles or 3.0 km to the southeast of the site. The magnitude of a credible earthquake on that fault is on the order of 6.3.

b) For a maximum credible earthquake of 6.3 generated along the San Joaquin Hills Thrust, a peak acceleration of 0.813g is estimated for the site (Blake, 2004, Ref. 1). The following seismic factors from the 2013 Uniform Building Code are considered applicable.

10.3 Site Details and Seismic Parameters

The following site details and seismic parameters, utilizing the 2010 ASCE 7-10 design code document, are listed below.

a) Geographic Location: Latitude 33.670558°
Longitude -117.885632°

b) Site Classification: D

c) Site Occupancy Category: II

d) Spectral Response Accelerations: $S_s = 1.589g$ $S_1 = 0.584g$

e) Site Coefficients: $F_a = 1.0$ $F_v = 1.5$

f) Spectral Response Accelerations:
$SM_s = 1.589g$ (0.2 sec. period)
$SM_1 = 0.876g$ (1.0 sec. period)

g) Design Spectral Response Accelerations:
$SD_s = 1.060g$ (0.2 sec. period)
$SD_1 = 0.584g$ (1.0 sec. period)

h) The final selection of design coefficients and method of design should be made by the structural engineer based on appropriate design guidelines and ordinances, desired structural response, and structural performance objectives.

11. GEOLOGIC HAZARDS ASSESSMENT

This section generally follows the guidelines prepared by the California Division of Mines and Geology and most of the conclusions are presented on a subjective scale.

11.1 Seismic Hazards

11.1.1 Ground Surface Rupture

The property is not located within an Alquist-Priolo Earthquake Fault zone for active faults. Therefore, ground rupture along a fault plane is not expected at the site since no known active faults are present.

11.1.2 Seismic Ground Shaking

a) Slight to intense ground shaking is possible at the site if an earthquake occurs on a segment of an active fault in the Southern California region.

b) Buildings should be designed to resist seismic loads.

c) Ground shaking is not expected to be any more intense than that expected at the nearby residences.

11.2 Secondary Seismic Hazards

11.2.1 Liquefaction

The subject site is located within the liquefaction potential zone as shown on the State of California Seismic Hazard Zone Map, for the Newport Beach Quadrangle. As shown on Boring Logs B-3 and B-9 (Appendix B), the Terrace Material layers are present below the depth of historic high groundwater table (23.5 bgs). Terrace Materials consist of silty clay and dense sand existing. Based on the results of our investigation,

potential for liquefaction below the proposed building and storage is very low. It should be noted that as stated in the 1998 NCEER (ASCE Journal of Geotechnical and Geoenvironmental Engineering, April 2001), liquefaction potential pertains to *"Holocene or fluvial sediments."*

11.2.2 Seismically-Induced Landslides and Lateral Spreading

The potential for lateral spreading is very low, and is not located within an area designated as having a potential for earthquake-induced landsliding.

11.2.3 Seismically-Induced Settlement

a) Strong seismic shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Some loose, soft fill and native soil deposits are more susceptible to this phenomenon than others. Artificial fills, if not adequately compacted, may also experience seismically-induced settlement.

b) Since the entire soft/loose existing fill will be removed below the proposed building and storage structure and recompacted, and since the underlying Terrace Deposits consist of silty clay and dense sand, the potential for seismically-induced settlement is considered very low below the proposed structures. The maximum seismically induced settlement is anticipated to be less than ½ inch.

11.2.4 Flooding Attributable to Dam/Levee Failure

Flooding resulting from a failure of dam or levee failure will not occur.

11.2.5 Seiches and Tsunamis

The site is not located in an area that would be impacted by seiches and tsunamis.

11.2.6 Compressible Soils/Hydroconsolidation

Based on consolidation tests performed on selected fill samples and considering the moisture content of soil layers above the groundwater table, the collapse potential of fill soils is very

low. In addition, all fill soils below the proposed structures will be removed and replaced as compacted fill. Furthermore, Terrace Deposits are dense and stiff. Accordingly, the potential for excessive settlement due to compressibility or hydroconsolidation of these soils is considered very low.

11.3 Expansive Soil

a) From observation and laboratory testing and our experience with similar type materials, the Silty and Clayey SANDS are considered to have a medium expansion potential.

b) Future import materials (if any) should be sampled and tested prior to delivery. Additionally, expansion tests should be conducted on the near surface materials at the completion of rough grading.

11.4 Flooding, Erosion and Sedimentation

a) The planned development is not located within a 100- to 500-year flood zone.

b) Since the site has gentle grades and the future improvements and grades will improve surface water drainage, erosion and sedimentation is unlikely to occur.

11.5 Loss of Mineral Resources

Since no known economic mineral resources are present on the site, the loss of mineral resources as a consequence of development does not apply.

12. CONCLUSIONS AND RECOMMENDATIONS

12.1 General

a) It is our opinion that the site will be suitable for proposed development, from the geotechnical aspect, assuming that our recommendations are implemented.

b) We are of the opinion that the proposed structure can be supported on shallow spread footings founded in compacted fills.

c) We consider that the anticipated grading will not adversely affect, nor be adversely affected by, adjoining property, with due precautions being taken.

d) The design recommendations in the report should be reviewed during the grading phase when soil conditions in the excavations become exposed.

e) The final grading plans and foundation plans/design loads should be reviewed by the Geotechnical Engineer. Additional recommendations may be required at that time.

12.2 Grading

12.2.1 Processing of On-Site Soils

a) The upper existing fill soils below the proposed structures (within the northern portion of the site) are not documented engineered fills and are not considered adequate to support the building loads. Therefore, these materials should be removed and replaced as compacted fills. Horizontal extent of removals should extend beyond the structure to a point where a 1:1 line projected from outside edge of the footing intersects the underlying Terrace Deposit, or at least 5 feet beyond the building foundations, whichever is larger.

b) The existing fill soils below the areas of the proposed parking lot and sheds should be overexcavated and replaced by compacted fills to a depth of 3 feet below the existing grades, or 3 feet below the design grade; whichever is deeper.

c) Temporary excavation to a depth of 10 feet may be performed at a slope ratio of 1:1 (H:V) and when the overexcavation depth exceeds 10 feet, it should be performed at a slope ratio of 1.5:1 (H:V).

d) Wherever the new fill is to be placed, the upper 6 to 8 inches of the subgrade should, after overexcavation, first be scarified and reworked.

e) Any loosening of reworked or native material, consequent to the passage of construction traffic, weathering, etc., should be recompacted prior to further construction.

f) The depths of overexcavation should be reviewed by the Geotechnical Engineer during the actual construction. Any surface or subsurface obstructions, or questionable material encountered during grading should be brought immediately to the attention of the Geotechnical Engineer for proper exposure, removal or processing as directed.

g) No underground obstructions or facilities should remain in any structural areas. Depressions and/or cavities created as a result of the removal of obstructions should be backfilled properly with suitable material, and compacted.

h) Cavities created by the removal of tanks, root bowls, etc. should be graded so that the side slopes are no steeper than 1.5:1 (H:V) prior to placement of backfill.

i) Any soil loosened during the removal of backfill that remains in abandoned utility line trenches or from removal of tree bowls, should be removed and recompacted.

12.2.2 Material Selection

a) After the site has been stripped of any debris, vegetation and organic soils, excavated on-site soils are considered satisfactory for reuse in the construction of on-site fills, provided the organic content does not exceed 3 percent by volume.

b) If crushed concrete and asphalt, or rocks are to be placed in the fill, they should not exceed 6 inches, and not exceed 20 percent of the volume of the fill.

12.2.3 Compaction Requirements

a) Reworking and compaction shall include moisture-conditioning/drying as needed to bring the soils to slightly above the optimum moisture content. All reworked soils and structural fills should be densified to achieve at least 90 percent relative compaction with reference to the laboratory compaction standard. The optimum moisture content and

maximum dry density are determined in the laboratory in accordance with the current ASTM Test Designation D1557 (Reference: Appendix C).

b) Fill should be compacted in lifts not exceeding 8 inches in loose conditions.

12.2.4 Excavating Conditions

Excavation of on-site materials may be accomplished with standard earthmoving or trenching equipment. No hard rock was encountered which would require blasting.

12.2.5 Shrinkage/Subsidence

a) For preliminary earthwork computations, an average shrinking factor of 5% is estimated for the general fill.

b) Subsidence may be assumed at ¾-inch.

12.2.6 Expansion Potential

a) Based on our visual observations and test results, the expansivity of the Silty and Sandy CLAY is considered to be medium. Any imported material, or doubtful material exposed during grading, should be evaluated for its expansive properties.

b) In any event, since there may be changes in the soil type between our borings, subgrade soils should be tested for their expansion potential during the concluding stages of grading.

12.2.7 Sulphate Content

Appropriate recommendations will be provided after completion on ongoing laboratory tests.

12.2.8 Utility Trenching/Retaining Wall Excavations

a) The walls of temporary construction trenches should stand nearly vertical, with only minor sloughing, provided the total depth does not exceed about 4 feet. Shoring of

excavation walls or flattening of slopes may be required, if greater depths are necessary.

b) Trenches should be located so as not to impair the bearing capacity or to cause settlement under foundations. As a guide, trenches should be clear of a 45-degree plane extending outward and downward from the edge of foundations.

c) Existing onsite soils may be utilized for trenching backfill provided they are free of organic materials. Very moist to saturated soils may need drying prior to backfilling.

d) All work associated with trench shoring must conform to the state and federal safety codes.

12.2.9 Surface Drainage Provisions

Positive surface gradients should be provided adjacent to the buildings to direct surface water run-off away from structural foundations and to suitable discharge facilities.

12.2.10 Grading Control

a) All grading and earthwork should be performed under the observation of a Geotechnical Engineer in order to achieve proper subgrade preparation, selection of satisfactory materials, and placement and compaction of all structural fill. Sufficient notification prior to stripping and earthwork construction is essential to make certain that the work will be adequately observed and tested.

b) A pre-grading meeting should be held on site to discuss the details for the rough and fine grading.

12.3 Slabs-on-Grade

a) Concrete floor slabs may be founded on the compacted fill soils. The subgrade should be proof-rolled just prior to construction to provide a firm, unyielding surface, especially if the surface has been loosened by the passage of construction traffic.

b) It is recommended that the interior slab-on-grade should be underlain by 2 inches of SAND with a 10-mil plastic vapor barrier beneath. Floor slabs should be at least 4 inches thick.

c) It is recommended that #3 rebars at 18 inches on center each way, or equivalent be provided as minimum reinforcement on slabs-on-grade. Joints should be provided.

d) The plastic barrier can be placed on the subgrade. The subgrade surface should be smooth and free of rocks or other protrusions.

12.4 Foundations

The proposed structure, of the type anticipated, can be founded on shallow continuous footings.

12.4.1 Allowable Bearing Capacities

a) Continuous Footings: An allowable soil bearing capacity of 1,500 pounds per square foot may be utilized for design of continuous footings founded at a minimum depth of 12 inches below the lowest adjacent final grade. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width, to a maximum value of 2,500 pounds per square foot. The recommended allowable bearing value includes both dead and live loads, and may be increased by one-third for short duration wind and seismic forces.

b) Pad Footings: An allowable soil bearing capacity of 1,500 pounds per square foot may be utilized for design of isolated 24-inch-square footings founded at a minimum depth of 12 inches below the lowest adjacent final grade for pad footings that are not a part of the slab system and are used for support of such features as roof overhang, second-story decks, patio covers, etc. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width, to a maximum value of 2,500 pounds per square foot. The adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings. Exterior isolated pad footings may need to be connected to adjacent pad

and/or continuous footings via tie beams at the discretion of the project structural engineer.

c) The minimum footing dimensions and reinforcement recommended herein may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2013 CBC) by the structural engineer responsible for foundation design based on his/her calculations, engineering experience and judgment.

12.4.2 Lateral Resistance

A passive earth pressure of 250 pounds per square foot per foot of depth, to a maximum value of 2,500pounds per square foot, may be used to determine lateral bearing resistance for footings. In addition, a coefficient of friction of 0.30 times the dead load forces may be used between concrete and the supporting soils to determine lateral sliding resistance. The above values may be increased by one-third when designing for transient wind or seismic forces. It should be noted that the above values are based on the condition where footings are cast in direct contact with compacted fill or competent native soils. In cases where the footing sides are formed, all backfill placed against the footings upon removal of forms should be compacted to at least 90 percent of the applicable maximum dry density.

12.4.3 Footings

a) Exterior continuous footings supporting one- and two-story structures should be founded at a minimum depth of 12 inches below the lowest adjacent final grade, respectively. Interior continuous footings may be founded at a minimum depth of 10 inches below the top of the adjacent finish floor slabs.

b) All continuous footings should have minimum widths of 12 and 15 inches for one- and two-story construction, respectively. All continuous footings should be reinforced with a minimum of two No. 4 bars, one top and one bottom.

c) A minimum 12-inch-wide grade beam founded at the same depth as adjacent footings should be provided across garage entrances or similar openings (such as large doors or bay

windows). The grade beam should be reinforced with a similar manner as provided above.

d) Interior isolated pad footings, if required, should be a minimum of 24 inches square and founded at a minimum depth of 12 inches below the bottoms of the adjacent floor slabs. Pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings.

e) Exterior isolated pad footings intended for support of roof overhangs such as second-story decks, patio covers and similar construction should be a minimum of 24 inches square and founded at a minimum depth of 18 inches below the lowest adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings. Exterior isolated pad footings may need to be connected to adjacent pad and/or continuous footings via tie beams at the discretion of the project structural engineer.

f) The minimum footing dimensions and reinforcement recommended herein may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2013 CBC) by the structural engineer responsible for foundation design based on his/her calculations, engineering experience and judgment.

(Notes:

- In the event that footings are founded in structural fills consisting of imported materials, the allowable bearing capacities will depend on the type of these materials, and should be re-evaluated.

- Planter areas should not be sited adjacent to walls.

- Footing excavations should be observed by the Geotechnical Engineer prior to placement of steel.

- It should be ensured that the embedment depths do not become reduced or adversely affected by erosion, softening, planting, digging, etc.)

12.4.4 Settlements

Total and differential settlements under the footings are expected to be within tolerable limits; typically less than 1-inch over a 40-foot span.

12.5 Footings for Free-Standing Walls

a) Footings for masonry block walls may be designed in accordance with the bearing and lateral resistance values provided previously for building footings. However, as a minimum, the wall footings should be embedded at a minimum depth of 12 inches below the lowest adjacent final grade. The footings should also be reinforced with a minimum of two No. 4 bars, one on top and one on the bottom.

b) In order to reduce the potential for unsightly cracking related to the possible effects of differential settlement and/or expansion, construction joints should also be provided in the block walls at each corner and at horizontal intervals of approximately 20 to 25 feet. The separations should be provided in the blocks and not extend through the footings. The footings should be poured monolithically with continuous rebars to serve as effective "grade beams" below the walls.

12.6 Corossivity

Results of the laboratory tests indicate that near-surface soils contain water soluble sulfate content of less than 0.10 percent. Accordingly, a negligible exposure to sulfate could be expected for concrete placed in contact with the onsite soils. Type II cement or equivalent may therefore be used for concrete.

12.7 Pavement Section Design

a) The table on the following page provides a preliminary pavement design based upon an estimated R-Value of 15 for the proposed pavement areas. The assumed values of Traffic Index for type of traffic listed in the following table should be reviewed and approved by the project civil engineer. Final pavement design should be based on R-Value testing of the subgrade soils near the conclusion of rough grading.

Type of Traffic	Traffic Index	Asphaltic Concrete (in)	Base Material (in)
Automobile Parking Stalls	4.0	3.5	4.0
Light Vehicle Drive Circulation Areas	5.5	5.0	6.0
Heavy Truck Access Areas	7.0	7.0	8.0

b) All concrete slabs to be utilized for pavement shall be a minimum of six inches in thickness and placed on approved subgrade soils. In addition, the above recommendations are based upon estimated traffic loads. The actual traffic loadings should be reviewed when available and the sections adjusted as necessary. Positive drainage toward an approved outlet should be provided for all pavement areas.

c) Approved base material shall be used, consisting of a Class II aggregate or equivalent and should be compacted to a minimum of 95% relative compaction. All pavement materials shall conform to the requirements set forth by the City of Torrance. The base material and asphaltic concrete should be tested prior to delivery to the site and during placement to determine conformance with the project specifications.

13. LIMITATIONS

a) Soils over an area show variations in geological structure, type, strength and other properties from what can be observed, sampled and tested from specimens extracted from necessarily limited exploratory excavations. Therefore, there are natural limitations inherent in making geologic and soil engineering studies and analyses. Our findings, interpretations, analyses and recommendations are based on observation, and our professional experience; and the projections we make are professional judgments conforming to the usual standards of the profession. No other warranty is herein expressed or implied.

b) In the event that during construction, conditions are exposed which are significantly different from those described in this report, they should be brought to the attention of the Geotechnical Engineer.

The opportunity to be of service is sincerely appreciated. If you have any questions or if we can be of further assistance, please call.

Very truly yours,

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STATE OF CALIFORNIA

GAN/AG/GDH:cs

Enclosures:

Location Map	-	Figure 1
References	-	Appendix A
Field Exploration	-	Appendix B
Geologic Map		Figure B-1
Geologic Cross Sections		Figure B-2
Unified Soils Classification System		Figure B-3
Logs of Borings		Figures B-4 to B-19
Laboratory Testing Program	-	Appendix C
Grain-Size Distribution Chart		Figures C-1 to C-7
Consolidation Tests		Figures C-8 & C-9
Direct Shear Test		Figure C-10
Expansion Index of Soils		Figures C-11 to C-13
Atterberg Limits		Figures C-14 to C-16
Corrosive Series		Figure C-17
Percolation Study		Appendix D
Boring/Percolation Test Location Map		Figure D-1
Logs of Borings		Figures D-2 & D-3
Percolation Test Results		Figure D-4

APPENDIX A

References

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10. Orange County Water District, June 2012, Ground Water Elevation Contours, for the Principal Aquifer.

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APPENDIX B

Field Exploration

a) The site was explored utilizing a CME-75 Hollow-Stem Auger drill rig to excavate 16 borings to depths ranging from 7 to 51.5 feet below the existing ground surface. The locations of the borings are shown on the *Geologic Map, Figure B-1.*

b) Profiles of the geologic conditions are shown in the *Geologic Cross Sections A-A' and B-B', in Figure B-2.*

c) The soils encountered in the borings were logged and sampled by our Project Geologist. The soils were visually classified in accordance with the Unified Soil Classification System described in *Figure B-3.* The Logs of Borings are presented in *Figures B-4* through *B-19.* The logs, as presented, are based on the field logs, modified as required from the results of the laboratory tests. Driven ring and bulk samples were obtained from the excavations for laboratory inspection and testing. The depths at which the samples were obtained are indicated on the logs. The number of blows to drive a 12-inch sample is shown on the logs.

d) Standard Penetration Tests (SPT) were taken at various levels and the "N" values and bulk samples were obtained.

e) Unconfined strength tests were conducted at various depths in the cohesive soils using a Soil Test Pocket Penetrator, Model CL-700. The test results are shown on the logs.

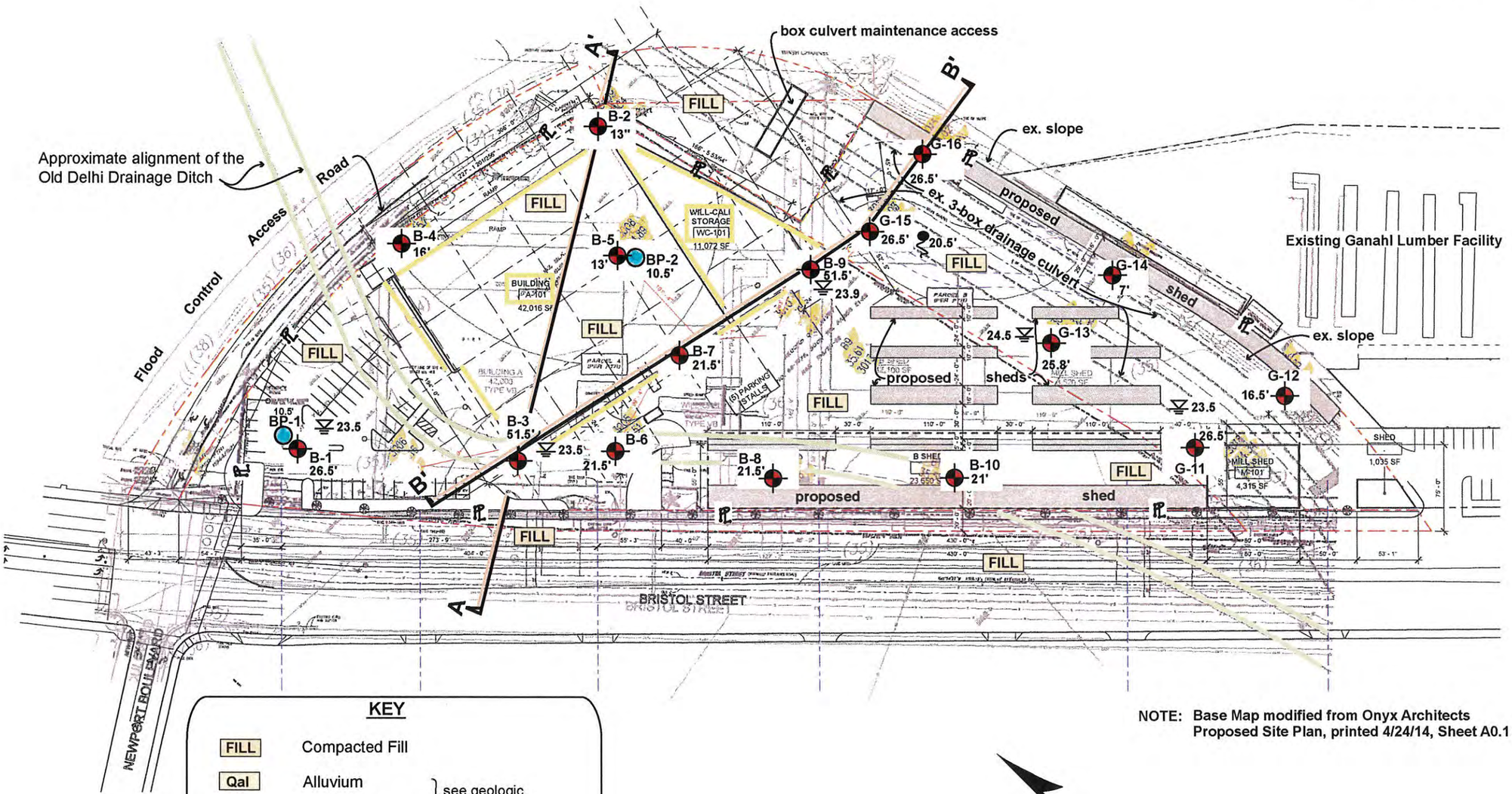
f) Some caving occurred within sandy layers below the ground water level when the augers were pulled, as indicated in the Boring logs.

g) Ground water was encountered and stabilized at 23.5 to 26.5 feet below the ground surface.

h) All borings were backfilled and tamped. The deeper borings were backfilled with grout.

i) The boring logs and details for our percolation study are presented in *Appendix D.*

GEOLOGIC MAP



KEY

FILL	Compacted Fill
Qal	Alluvium
Qt	Terrace Deposits
	(see geologic cross sections)
B — B'	Geologic Cross Section
23.5'	Ground Water Level, showing depth in boring
20.5'	Seepage, showing depth in boring
B-9 51.5' / G-16 26.5'	Location of Geotechnical Borings, showing total depths
BP-2 10.5'	Location of Percolation Test Boring, showing total depth

NOTE: Base Map modified from Onyx Architects Proposed Site Plan, printed 4/24/14, Sheet A0.1

N

100 0 100 200
scale feet

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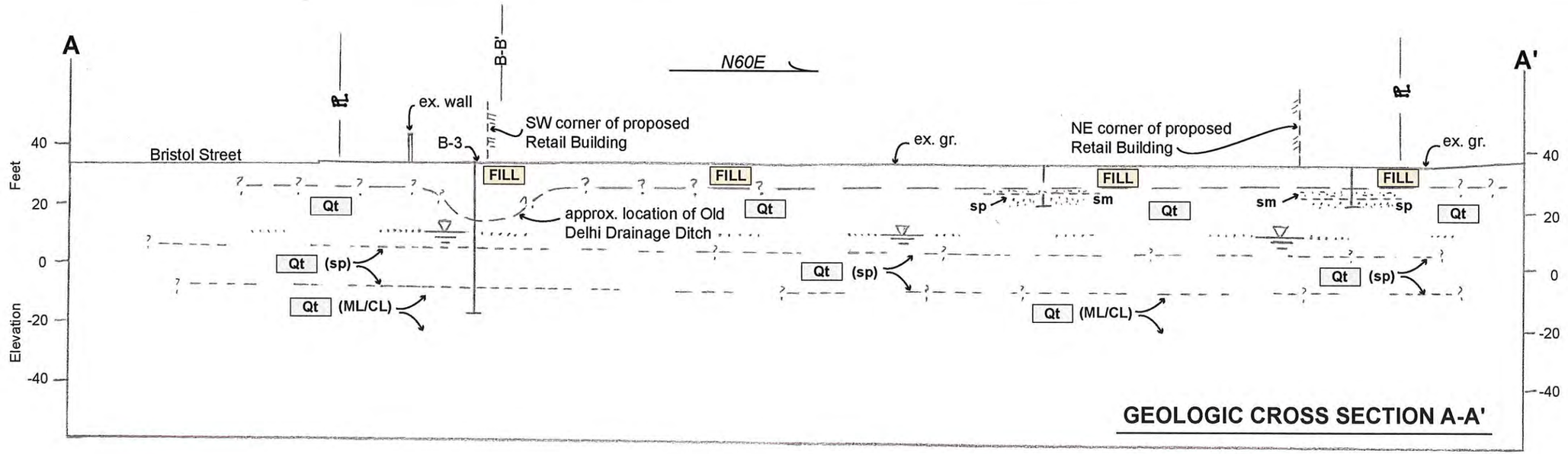
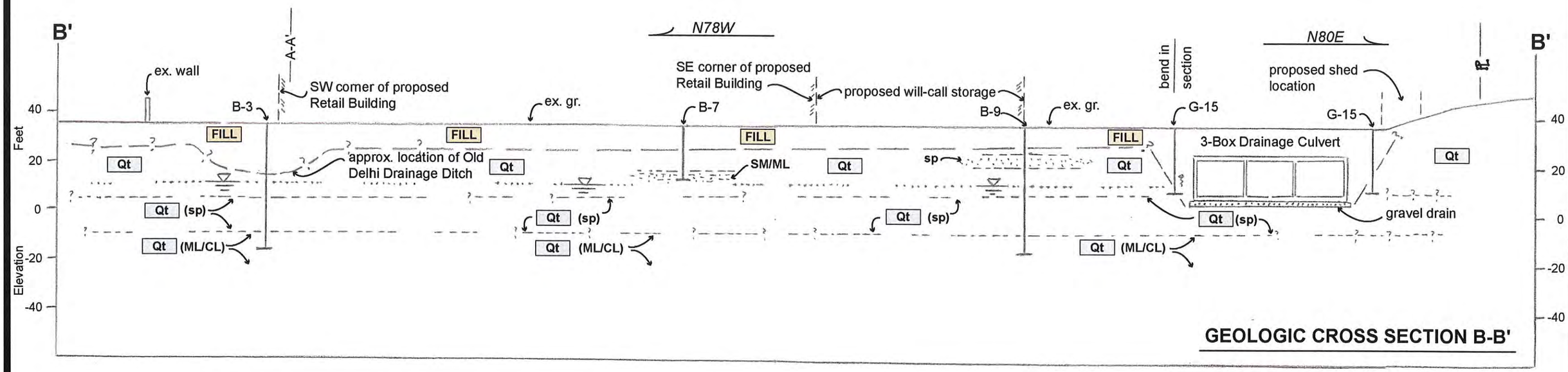
6848-04	June 2014	Fig. B-1



GEOLOGIC CROSS SECTION A-A'



GEOLOGIC CROSS SECTION B-B'

NOTE:
1) See the Key on the Geologic Map, Figure B-1 for identification of symbols
2) Dimensions of the 3-Box Culvert are based on the Structural Plans and not on any As-Built Plans. The box dimensions and fill cover are considered approximate

40 0 40 80
scale feet

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6848-04	June 2014	Fig. B-2

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS		DESCRIPTIONS
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size.)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size.)	CLEAN GRAVELS (Little or no fines)		GW	Well graded gravels, gravel-sand mixtures, little or no fines.
				GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amount of fines)		GM	Silty gravels, gravel-sand-silt mixtures.
				GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size.)	CLEAN SANDS (Little or no fines)		SW	Well graded sands, gravelly sands, little or no fines.
				SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)		SM	Silty sands, sand-silt mixtures.
				SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size.)	SILTS AND CLAYS (Liquid limit LESS than 50)			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
				OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
				CH	Inorganic clays of high plasticity, fat clays.
				OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS				Pt	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

PARTICLE SIZE LIMITS

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

No. 200 No. 40 No. 10 No.4 ¾ in. 3 in. 12 in.

U.S. STANDARD SIEVE SIZE

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Ganahl Construction Corp., New Costa Mesa Facility, 1100 S.E. Bristol St., Costa Mesa, CA

Date: June 2014

Project No.: 6848-04 | Figure No.: B-3

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34 feet	B-1

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: dark grayish-brown, moist FILL
		22	12.3	119.6					Sandy CLAY/Clayey SAND: dark to medium yellowish-brown, very moist, firm @ 2.5 feet, more sandy, stiff (4T/ft²), dense
		31	20.9	109.7		5		CL/ SC	@ 5 feet, firm (2.25 T/ft²) @ 5.5 feet, more sandy and less moisture @ 6 feet, very moist to saturated layer FILL
		29	10.5	124.1		10		SM	Silty SAND with Gravel: fine- to coarse-grained, light greenish-brown, very moist, dense @ 10 feet, dense
S P	S P	36 23	3.9	103.5		15			@ 15 feet, very fine- to fine-grained, light yellowish-brown, slightly moist to moist, medium dense to dense, silty @ 16 feet, medium dense TERRACE DEPOSITS
S P	S P	17				20		ML	Sandy SILT: greenish-brown, very moist, stiff TERRACE DEPOSITS
S P	S P	41				25		SP	SAND: fine- to coarse-grained, light yellowish-brown, wet, dense, few pea gravels TERRACE DEPOSITS
									Bottom of Boring at 26.5 feet. NOTE: 1) Ground water stabilized at 23.5 feet 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-4

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.05 feet	B-2

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								CL	Silty SAND: dark brown, dry to moist, some concrete debris, loose FILL
								ML	Sandy SILT: light yellowish-brown, moist FILL
		21	11.6	127.2		5		CL	Sandy CLAY with Silt: dark yellowish-brown, moist, very stiff to hard (4.5 + T/ft²) @ 4 feet, some pale white Sandy SILT FILL
S	S	76	10.1	133.5		10		SM	Silty SAND: very light yellowish-brown, fine-grained, slightly moist, very silty, dense @ 6.5 feet, slightly cemented, slightly clayey
P	P	22						SM/SP	@ 10 feet, medium dense, slightly moist, some firm to coarse SAND and Sandy SILT layers TERRACE DEPOSITS
		38	1.1	104.9				SP	SAND: fine- to coarse-grained, dry to slightly moist, dense, few pea gravels TERRACE DEPOSITS
						15			Bottom of Boring at 13 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped
						20			
						25			

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Project No.:	Figure No.:
6848-04	B-5

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.5 feet	B-3

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
		9	14.1	111.5				CL	Sandy CLAY with Silt: dark brown, very moist, soft to firm, some gravel FILL
		8	24.5	97.8		5		CL	Sandy CLAY with Silt: light yellowish-brown, very moist to saturated, firm to stiff (2.5-3.0 T/ft²)
		5	17.7	109.4					@ 7 feet, soft, more sandy, very moist, some gray clay inclusions FILL
		11	13.1	116.0		10		SM	Silty SAND with Clay: fine- to medium-grained, very moist to saturated, medium dense
		22	19.2	95.9		15		CL CL	@ 15 feet, dense, some pea gravel, coarser, clayey, very moist, some very stiff (4.0T/ft²), Silty CLAY layers FILL
		28	16.9	108.9		20		ML	Sandy SILT: light greenish-brown, stiff to very stiff (3.5-4.0 T/ft²), some Clayey SILT layers TERRACE DEPOSITS
S	P S P	17	17.2					SM	Silty SAND: fine-grained, light yellow-brown, some orange oxide staining, very moist to saturated, medium dense, very silty @ 24 feet, wet
		23	23.6	95.6		25			@ 25 to 26 feet, fine- to medium-grained with Gravelly SAND layers, wet TERRACE DEPOSITS
S	P S P	9	24.3					CL	Silty CLAY with Sand; light greenish-gray, stiff, (2.5 T/ft²), very moist to saturated; the sand is fine grained

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Project No.:	Figure No.:
6848-04	B-6.1

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.5 feet	B-3

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
S P	S P	76+	21.1 13.3	105.1					SAND: fine-grained, light greenish-gray, dense to very dense, saturated @ 30 feet, Slightly silty, mostly medium-grained (poorly graded)
S P	S P	43				35		SP	@ 35 feet, fine- to coarse-grained, dense, wet
S P	S P	23	20.7			40			@ 40 feet, fine- to medium-grained (poorly graded) medium dense, some orange oxide staining, wet, slightly silty
									TERRACE DEPOSITS
S P	S P	11	33.7			45		CL	Silty CLAY: medium to dark greenish-gray, soft (.5-1.0 T/ft²) at 45 feet, some shell fragments; some fine sand
S P	S P	5	35.7			50			@ 50 feet, numerous shells and shell fragments, soft to firm, saturated
									MARINE TERRACE DEPOSITS
						55			Bottom of boring at 51.5 feet. NOTE: 1) Ground water stabilized at 23.5 feet 2) Some caving when augers pulled 3) Boring backfilled with grade

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Project No.:	Figure No.:
6848-04	B-6.2

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	33.65 feet	B-4

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
	■	8	15.1	110.2				SC/ CL	Clayey SAND with Silt/Sandy CLAY: fine- to coarse-grained, brown, very moist, soft to firm (1.5 T/45²), some gravel, some greenish-brown Silty CLAY layers FILL
	■	18	13.5	113.7		5		CL	Sandy CLAY with Silt: grayish-brown, firm (1.5 T/ft²), moist to very moist @ 5 feet, more sandy (fine to coarse SAND), yellowish-brown, firm to stiff (3.0 T/45²), very moist
	■	11	14.3	118.0				CL/ SC	@ 7 feet, some fine gravel, more sandy, greenish-brown
	■	42	2.9	126.0		10			@ 10 feet, more sandy FILL
								SP	SAND: fine- to coarse-grained, light yellowish-brown, dry to slightly moist, dense, some fine gravel TERRACE DEPOSITS
	■	17	22.8	87.2		15		ML	Sandy SILT: light greenish-brown, very moist, very stiff, (4.5 T/ft²) TERRACE DEPOSITS
						20			Bottom of Boring at 16 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped
						25			

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Project No.:	Figure No.:
6848-04	B-7

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34.89 feet	B-5
Date Drilled: 5/19/2014 GDH	This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.		

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
						0		SM	Silty SAND with Gravel: fine- to coarse-grained, dark grayish-brown, slightly moist to moist
									@ 3 feet, coarse gravel — FILL
		24	16.1	103.8					Sandy CLAY: greenish-gray, moist, very stiff (4.5 T/ft²), some pale greenish-gray carbonate
		14	20.9	104.3		5		CL	@ 5 feet, very moist, stiff (3.0 T/ft²), light gray carbonate inclusions
									@ 7 feet, some coarse SAND pockets — FILL
		35	21.2	97.6					SAND: fine- to coarse-grained, light greenish-gray to light yellowish-brown, slightly moist to dry, dense
						10		SP	@ 12 feet, dry to slightly moist
		35	1.3	111.0					TERRACE DEPOSITS
						15			Bottom of Boring at 13 feet. NOTE: 1) No ground water encountered 2) Caving below 10 feet 3) Boring backfilled and tamped
						20			
						25			

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Project No.:	Figure No.:
6848-04	B-8

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.52 feet	B-6

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									ASPHALT/BASE: 2" AC over 6" base rock PAVEMENT
									Sandy CLAY with Silt to Clayey SAND:: brown, very moist, firm
		13	16.5	110.5					@ 3 feet, firm to stiff (2.5 T/ft²), more sandy, dark greenish-brown and yellowish-brown
		21	13.4	111.6		5			@ 5 feet, light yellowish-brown, very moist, stiff @ 5.5 feet, firm yellow-brown Silty SAND layer
		16	20.6	108.0				CL/	@ 7 feet, light yellowish-brown, very moist, firm, some isolated pebbles, mottled, medium dense
								SC	@ 7.5 feet, layer of brown, moist, dense Silty SAND
						10			
		16	16.9	98.3					@ 12 feet, less clayey, mixture of stiff Clayey SILT and Sandy CLAY
S P	S P	4							@ 12.8 to 13.5 feet, layer of fine to coarse SAND
									@ 13.5 feet, dark brown, Clayey SAND: dense, very moist
		28	15.6	117.4		15		SC	@ 15 feet, very moist, dense
S P	S P	28							@ 15.5 feet, dense FILL
								ML	Sandy SILT: light yellowish-brown, very moist, very stiff (3.5 T/ft²) TERRACE DEPOSITS
S P	S P	35				20		SP	SAND: fine- to medium-grained, light yellowish-brown, slightly moist, dense, some thin, coarse SAND layers @ 21 feet, 1-inch layer Sandy SILT TERRACE DEPOSITS
						25			Bottom of Boring at 21.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-9

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.8 feet	B-7
Date Drilled: 5/20/2014 GDH	This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.		

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									Sandy CLAY with Silt: dark brown, very moist, firm, some Clayey Sand layers
									@ 2.5 feet, becomes very dark greenish-brown and more Sand, very stiff to hard (4.5 + T/ft²)
		29	10.6	123.8					@ 3.5 feet, dark brown, slightly moist, Silty SAND layers
						5			
		12	28.3	91.0				CL/	@ 5 feet, less SAND, still mostly greenish-brown, very stiff, (3.5.T/ft²) very moist
								SC	@ 7 feet, dark yellowish-brown, more sand, very stiff, moist to very moist
		27	16.8	109.3					
									@ 10 feet, Clayey SAND: very moist, dense
						10			
		26	16.2	128.6					FILL
S P	S P	17							Sandy CLAY with Silt/ Clayey SAND: greenish-brown, very moist, very stiff, some coarse sand partings
								CL/	
								SC	@ 15 feet, more SAND, very stiff
S P	S P	23				15			
									TERRACE DEPOSITS
									SAND and Sandy SILT: fine SAND, light yellowish-brown, medium dense; Sandy SILT is firm/medium dense
								SP/	
S P	S P	17				20		ML	
									TERRACE DEPOSITS
									Bottom of Boring at 21.5 feet.
									NOTE:
									1) No ground water encountered
									2) No caving
						25			3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-10

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.79 feet	B-8

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									Sandy CLAY with Silt: dark brown, very moist, some grayish-brown mottling
		18	11.2	121.7					@ 2 feet, more SAND, fine to coarse, very moist, very stiff (4.0 T/ft²)
						5		CL	
		8	25.1	99.9					@ 5 feet, greenish-gray to green-brown, more moisture, firm to stiff (3.0 T/ft²)
		10	18.3	110.2					@ 7 feet, greenish-brown with brown mottling, firm to stiff (1.5 to 2.75 T/ft²), very moist
									@ 10 feet, greenish-brown, stiff (3.0 T/ft²)
									@ 10.5 feet, greenish-brown, fine to coarse Clayey SAND
		27	18.1	110.4		10		SC	FILL
S P	S P	18						SP	SAND: fine- to coarse-grained, light yellowish- to greenish-brown, slightly moist, medium dense, some SILT and thin Gravelly SAND layers
									TERRACE DEPOSITS
S P	S P	15				15		ML	Sandy SILT: light greenish-brown, moist, stiff (3.0 T/ft²), some light gray carbonate
									TERRACE DEPOSITS
S P	S P	27				20		SP/ ML	SAND: fine-grained and fine- to medium-grained, light yellowish- to greenish-brown, slightly moist, with some greenish-brown, moist, Sandy SILT layers
									TERRACE DEPOSITS
						25			Bottom of Boring at 21.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-11

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36 feet	B-9

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SC	Clayey SAND with Gravel: dark grayish-brown, slightly moist FILL
		21	13.4	114.0				CL	Sandy CLAY with Silt: dark grayish-brown, moist, very stiff (4.5 + T/ft²)
		21	21.4	101.4		5			@ 4 feet, more moisture FILL
		9	18.7	108.7				CL	Silty CLAY with Sand: light greenish-gray, moist to very moist, very stiff to hard (4.5 + T/ft²), pale green carbonate @ 7 feet, sandy FILL
								ML	Sandy SILT with Clay: greenish-gray, very moist, stiff (4.0 T/ft²)
		22	15.1	113.9		10		CL	@ 10 feet, Sandy Clay layer TERRACE DEPOSITS
		42	2.9	105.3		15		SP	SAND: fine- to coarse-grained, slightly moist, light yellowish-brown, medium dense to dense, some fine gravel @ 15 feet, dry to slightly moist, medium dense TERRACE DEPOSITS
S P	S P	9							
		24	18.3	109.9		20		ML	Clayey SILT: yellowish-brown, moist to very moist, very stiff to hard (4.5 T/ft²), some medium gray mottling @ 20 feet, more clayey, some SAND, very moist, very stiff TERRACE DEPOSITS
S P	S P	15							Sandy CLAY with Silt: medium greenish-gray and yellowish-brown, very moist, very stiff (4.25 T/ft²), some light gray carbonate
							▼		@ 23.9 feet, ground water stabilized
S P	S P	12				25		CL	@ 25 to 26.5 feet, few peaty stringers, very stiff, very moist TERRACE DEPOSITS
								SP	SAND: fine- to medium-grained, yellowish-brown, wet, dense, slightly silty

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Project No.:	Figure No.:
6848-04	B-12.1

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36 feet	B-9

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
S P	S P	33							@ 30 feet, fine-grained, wet, dense
S P	S P	64				35		SP	@ 35 feet, thin CLAY layer @ 35 to 36.5 feet, medium greenish-brown, wet, very dense, fine SAND with Silt
S P	S P	78				40			@ 40 feet, fine-grained, lots of fine biotite, slightly silty, wet, very dense
									TERRACE DEPOSITS
S P	S P	8				45		CL	Silty CLAY: dark greenish-gray, very moist to saturated, firm to stiff (2.5 T/ft²) @ 46 to 51.5 feet, layer of shells and shell fragments
S P	S P	4				50			@ 50 feet, soft, numerous shell fragments, saturated
									TERRACE DEPOSITS
						55			Bottom of boring at 51.5 feet. NOTE: 1) Ground water stabilized at 23.9 feet 2) Some caving in sandy layers 3) Boring backfilled with grout and tamped

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Project No.:	Figure No.:
6848-04	B-12.2

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.55 feet	B-10
Date Drilled: 5/20/2014 GDH	This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.		

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									SANDY CLAY with SILT: dark brown, very moist, some gravel in upper 12 inches
		23	11.3	118.5					@ 3 feet, very stiff (3.75 T/ft²), moist
									@ 3.5 feet, dark brown, less SAND
						5			
		19	11.5	127.2				CL	@ 6 feet, very stiff (3.75-4.5 T/ft²), moist, mix brown and greenish-brown
		22	15.4	113.9		10			@ 10 feet, mostly dark brown Silty CLAY with Sand, very stiff (4.5 T/ft²), very moist with greenish-brown Silty CLAY
									FILL
		5	21.5	100.7		15		CL/ CH	Silty CLAY: very dark greenish-gray, with some dark gray carbon stringers, soft, very moist to saturated, odorous (2.25 T/ft²), some very decayed roots
S	P S P	12							ALLUVIUM
								ML	Sandy SILT: light yellowish-brown, moist, stiff (2.75 T/ft²)
									TERRACE DEPOSITS
		80	8.1	111.7		20		SP	SAND: fine- to medium-grained, light yellowish-brown, slightly moist, dense to very dense TERRACE DEPOSITS
									Bottom of Boring at 21 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped
						25			

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Project No.:	Figure No.:
6848-04	B-13

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34.34 feet	G-11

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: dark grayish-brown, slightly moist
									FILL
									Sandy CLAY with Silt: dark brown, very moist, firm to stiff (4.25 T/ft²) at 5 feet
		25	10.6	120.1		5		CL	@ 5.5 feet, layer of Silty SAND
									FILL
									Silty SAND with Clay: yellowish-brown, very moist, medium dense to dense, some scattered gravel
		28	7.9	107.5		10			
S	P S P	14				15		SM	@ 15 feet, more clayey and very moist, some gravel, medium dense
		39	10.0	118.4					@ 17 feet, less clayey, moist to very moist, dense
S	P S P	23				20			@ 20 feet, more silty, very moist, medium dense, some gravel
									@ 25 feet, sandy layer, wet, loose FILL
									SAND: fine to coarse, wet, loose, greenish-brown
									@ 26 feet, very dark grayish-brown, soft, Sandy SILT
S	P S P	5				25		SP	ALLUVIUM
									Bottom of Boring at 26.5 feet.
									NOTE:
									1) Ground water stabilized at 23.6 feet
									2) No caving
									3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-14

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	39.5 feet	G-12

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND: fine- to coarse-grained, yellowish-brown, slightly moist to moist FILL
		58	8.1	124.3		5		SC	Clayey SAND: dark brown, fine- to coarse-grained, moist, dense, some isolated, round gravel FILL
		94	7.4	119.1		10		SM	Silty SAND with Clay: yellowsih-brown, moist, dense
		35	i6.1	120.1					@ 10 feet, very moist, dense FILL
S	P S P	35				15		SM	Silty SAND: yellowish-brown, slightly moist, dense
								SP	@ 16 feet, fine, light yellowish-brown SAND TERRACE DEPOSITS
						20			Bottom of Boring at 16.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped 4) Boring 14 feet SW for survey stake
						25			

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Project No.:	Figure No.:
6848-04	B-15

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.35 feet	G-13

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: fine- to coarse-grained, dark grayish-brown FILL
		31	9.1	126.2		5		CL	Sandy CLAY: yellowish- to greenish-brown, very moist, very stiff to hard (4.5 + T/ft²), some Clayey SAND layers, some gravel FILL
		58	6.9	121.7		10			Silty SAND with Clay: fine- to coarse-grained, greenish- to yellowish-brown, moist, dense, some gravel
		30							@ 12.5 feet, layer of stiff, moist, Sandy CLAY
S	S	26				15		SM	
		7				20			@ 20 feet, very moist, light yellowish-brown, moderately dense, Silty
									@ 22 feet, Clayey SAND: very moist, medium dense
									@ 25 feet, fine, wet SAND
	S	3				25		SP	@ 25.8 feet, refusal on something hard, possible footing? FILL
									Bottom of Boring at 25.8 feet. NOTE: 1) Ground water stabilized at 24.5 feet 2) No caving 3) Boring backfilled and tamped ** No Recovery

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Project No.:	Figure No.:
6848-04	B-16

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.22 feet	G-14
Date Drilled: 5/20/2014 GDH	This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.		

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND: fine- to coarse-grained, yellowish-brown, slightly moist to moist, dense at 2 feet FILL
		28	12.7	114.1				CL	Sandy CLAY with Silt: dark greenish-brown, moist, stiff (2.75-3.0 T/ft²) FILL
		31	9.8	111.9		5		SM	Silty SAND: fine- to coarse-grained, yellowish-brown, moist, dense, some gravel @ 7 feet, refusal on hard object FILL
						10			Bottom of Boring at 7 feet. NOTE: 1) No ground encountered 2) No caving 3) Boring backfilled and tamped
						15			
						20			
						25			

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Project No.:	Figure No.:
6848-04	B-17

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36.03 feet	G-15

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									Silty SAND with Gravel: fine- to coarse-grained, slightly moist to moist, very dark grayish-brown
		36	11.2	121.8					@ 2 feet, greenish-brown, no gravel, moist, dense
									@ 3 feet, piece of coarse gravel in sample
		28	9.8	117.9		5		SM	@ 5.5 feet, less SILT, dense, moist
									@ 7 feet, dark greenish-brown, moist, dense, thin SAND layer at 7.5
		27	9.0	127.0					FILL
		25	11.4	122.9		10			Clayey SAND: fine- to coarse-grained, greenish-brown, very moist, dense
S	P S P	2				15		SC	@ 15 feet, Clayey SAND: loose, very moist
S	P S P	3				20		SM	@ 20 feet, wet, loose Silty SAND: slight seepage
									FILL
		NO RECOVERY						ML	Sandy SILT: greenish-brown, stiff, very moist
S	P S P	3				25			@ 25 feet, loose/soft, no sample recovery
									FILL?
									Bottom of Boring at 26.5 feet. NOTE: 1) Slight seepage at 20.5 feet 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-18

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36.02 feet	G-16
Date Drilled: 5/20/2014 GDH	This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.		

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									Silty SAND: fine- to coarse-grained, dark yellowish-brown, moist
		31	9.2	126.0					@ 2 feet, slightly clayey, some pea gravel, dense, moist
		40	6.9	120.7		5			@ 5 feet, no CLAY, some isolated coarse gravels, moist, dense
								SM	
		48	6.6	117.9		10			@ 10 feet, dark brown, moist, dense
									@ 10.5 feet, light yellowish-brown, slightly moist SAND, slightly silty,
S P	S P	12				15			@ 15 feet, Silty SAND with Clay: moist, medium dense
									FILL
									Clayey SILT/Silty CLAY: light yellowish- to greenish-brown, very moist, stiff to very stiff (4.0 T/ft²), orange mottling
		18	6.6	117.9		20		ML/ CL	
S P	S P	15				25			@ 25 feet, very stiff, greenish-brown, moist
									TERRACE DEPOSITS
									Bottom of Boring at 26.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-19

APPENDIX C

Laboratory Testing Program

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of those obtained in the field were tested as described below.

a) Moisture-Density

Moisture-density information usually provides a gross indication of soil consistency. Local variations at the time of the investigation can be delineated, and a correlation obtained between soils found on this site and nearby sites. The dry unit weights and field moisture contents were determined in the laboratory for selected samples. The results are shown on the Logs of *Borings*.

b) Compaction

Representative soil samples were tested in the laboratory to determine the maximum dry density and optimum moisture content, using the ASTM D1557 compaction test method. Generally, this test procedure requires 25 blows of a 10-pound hammer falling a height of 18 inches on each of five layers, in a 1/30 cubic foot cylinder. The results of the tests are presented below:

Boring No.	Sample Depth (ft.)	Soil Description	Optimum Moisture Content (%)	Maximum Dry Density (lb/ft^3)
B-3	1 to 4	Clayey SAND	8.0	131.0
B-6	3 to 5	Sandy CLAYS	9.0	131.5
B-9	3 to 5	Sandy CLAY	11.0	120.0
G-11	3 to 6	Clayey SAND	8.5	128.5
G-12	3 to 7	Clayey SAND	8.5	132.5

c) Sieve Analysis

As part of the engineering classification of the on-site coarse-grained soil, samples representative of the major soil types were used to determine their distribution of particle size. Basically, a sieve analysis is conduced by passing the soil through a number of different sized sieves and measuring the amount of soil retained on each sieve. A grain-size distribution curve is plotted relating percent of soil passing each sieve (calculated from the amount retained) and the grain size as shown on the enclosed *Grain Size Distribution Charts, Figure C-1 through C-7*

d) Consolidation

The apparatus used for the consolidation test is designed to receive the brass ring of soil as it comes from the field. Loads were applied to the test specimen in several increments, and the resulting deformations were recorded at selected time intervals for a specified load. Porous stones were placed in contact with the top and bottom of the specimen to permit the ready addition or release of water. Sample was tested at the field and increased moisture contents and the results are presented in the consolidation test sheets, *Figures C-8 and C-9.*

e) Direct Shear

Direct shear tests were made on undisturbed and remolded ring soil samples obtained from the field. The soil samples were submerged in the water overnight before shearing at a constant rate of 0.032 in./min. on the next day as quick unconsolidated test. The results are shown in the *Direct Shear Test Diagram, Figure C-10.*

f) Expansion Index (ASTM D4829)

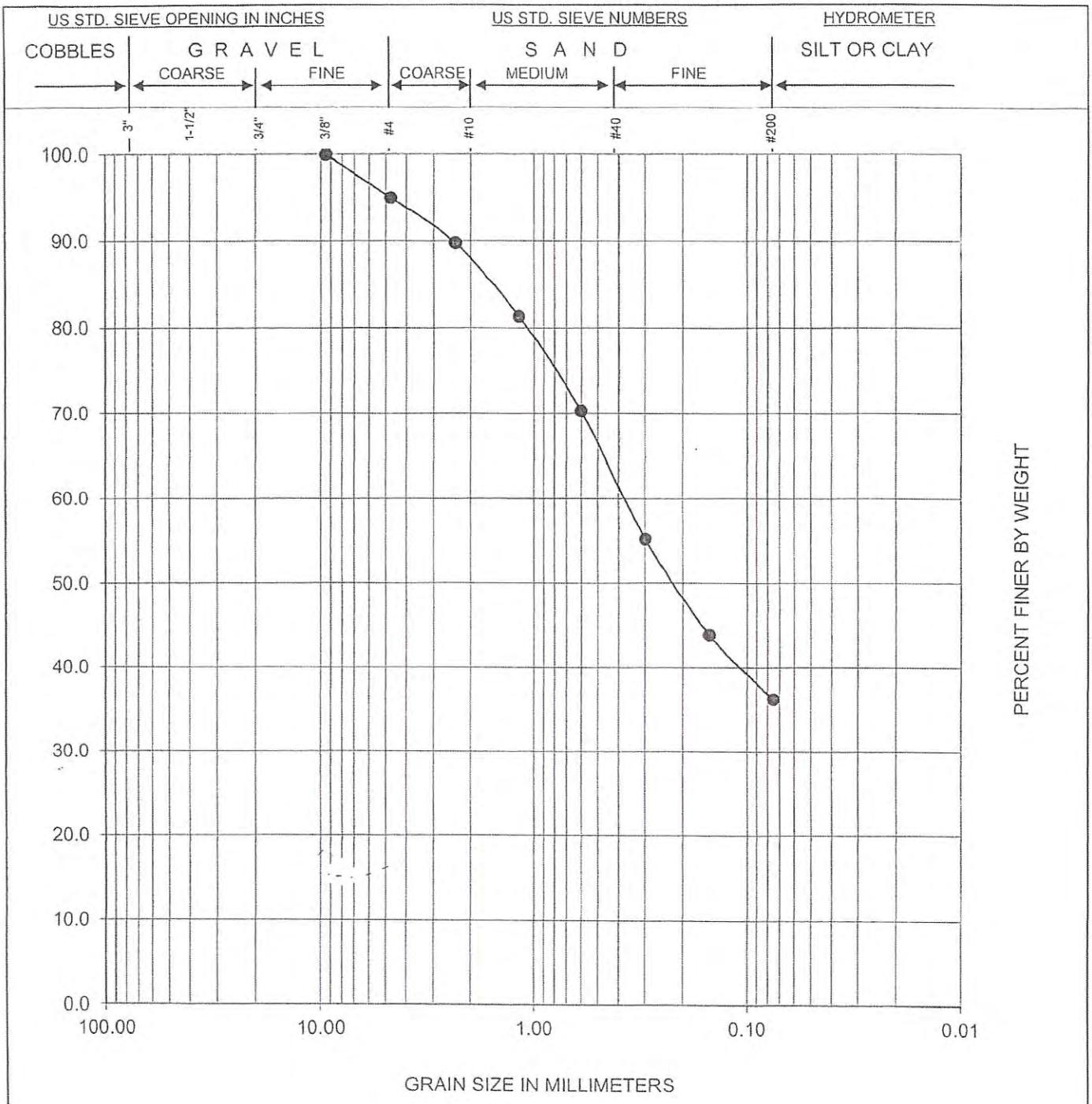
The sample was tested in accordance with ASTM D04829 Test Method. The laboratory expansion test results are shown in *Figures C-11 through C-13.*

g) Atterberg Limits (ASTM D4318)

The results of the Atterberg Limits tests are presented in *Figures C-1*4 through 16.

h) Corrosion Series

A representative soil sample was tested for pH, soluble sulfates, soluble chlorides and minimum resistivity. The results of the tests are shown in *Figure C-17.*



Project No. : 6848-04

Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	1' - 4'	SC	BROWN CLAYEY SAND		-	-	-

GRAIN SIZE CURVE

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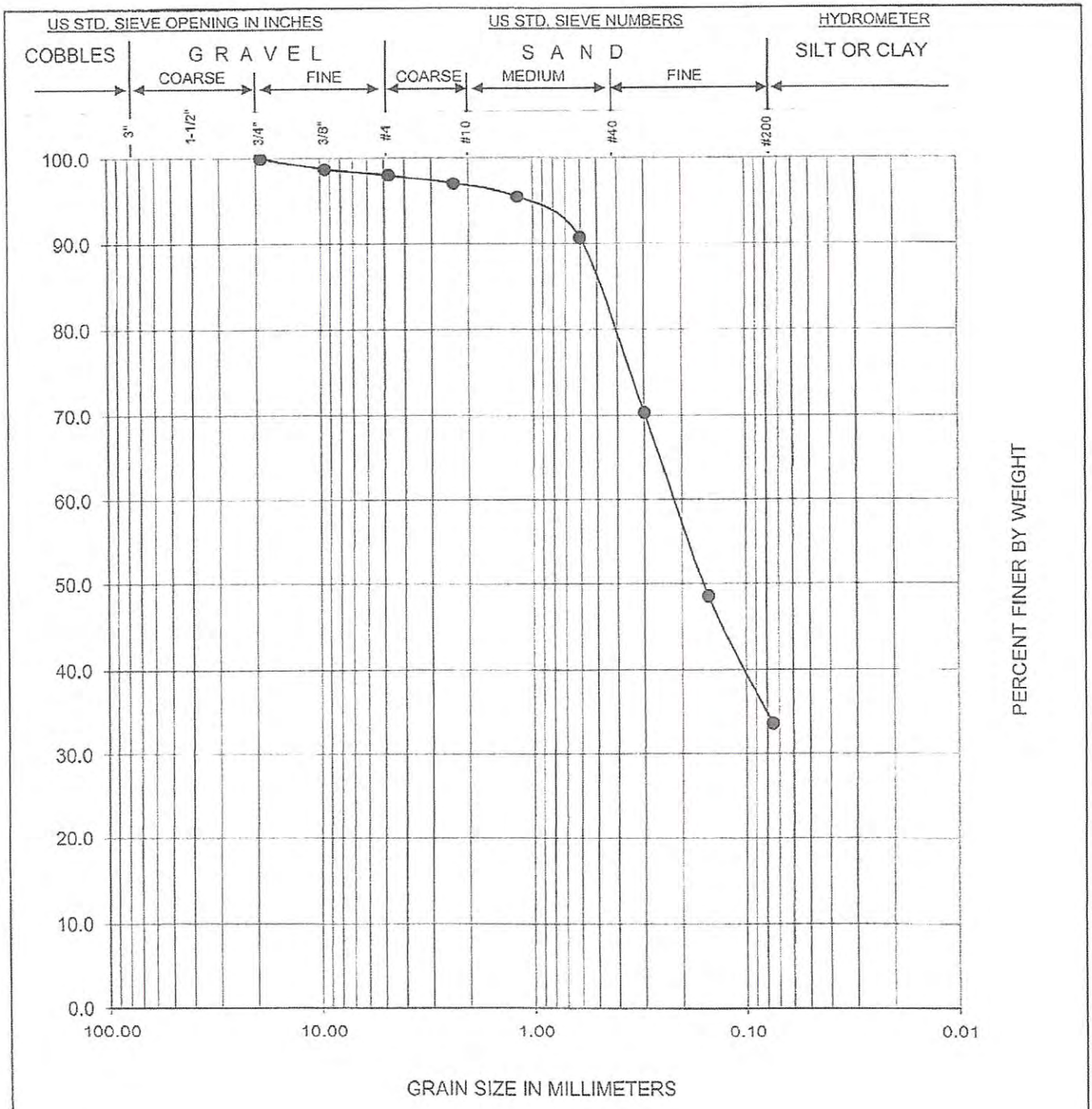
Fig. C-1



Project No. : 6848-04 Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	21'-22.5'	SM	BROWN SILTY SAND		-	-	-

GRAIN SIZE CURVE

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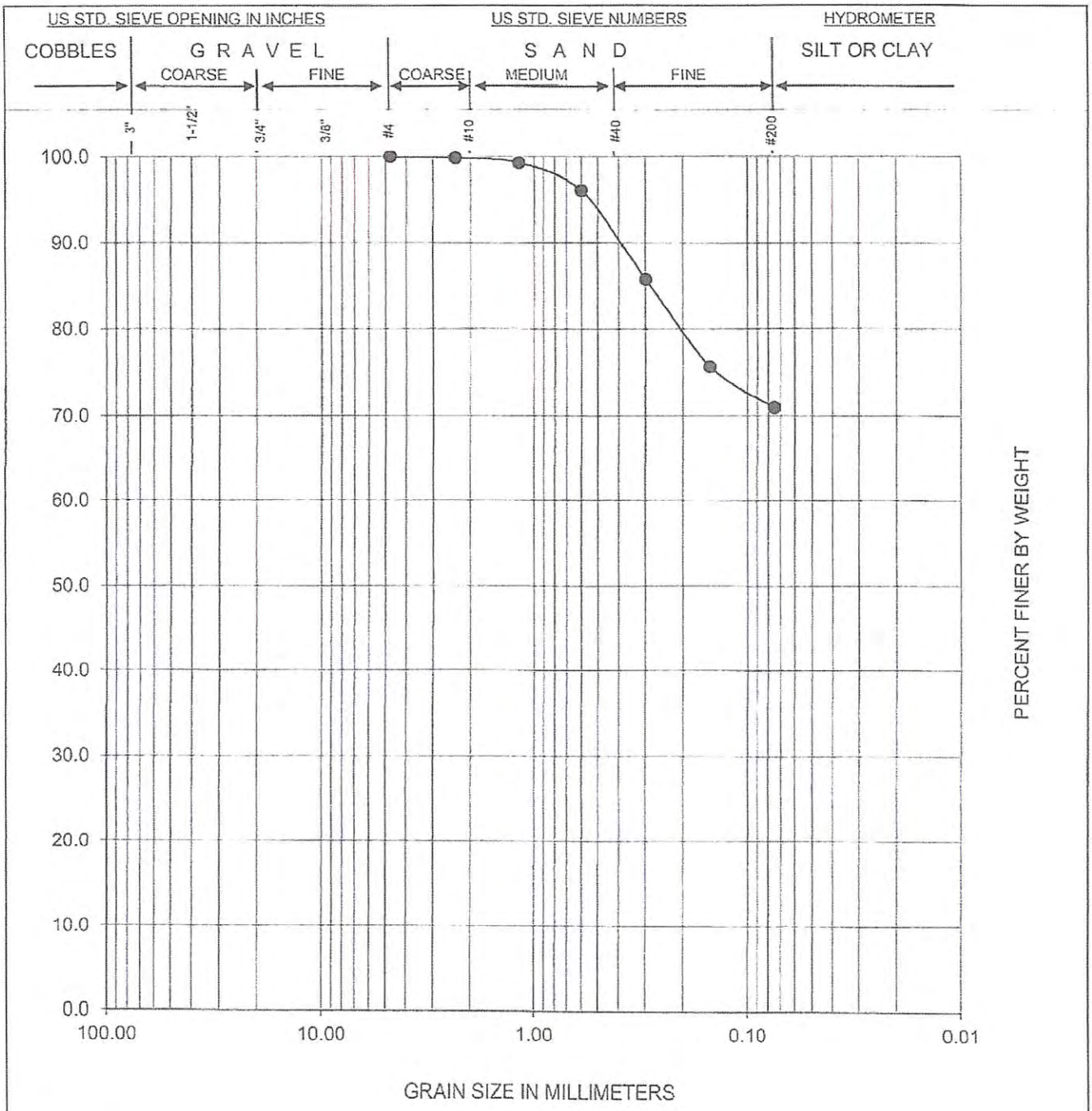
Fig. C-2



Project No. : 6848-04

Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	26'-27.5'	CL	GRAYISH BROWN SANDY CLAY		45	17	27

GRAIN SIZE CURVE

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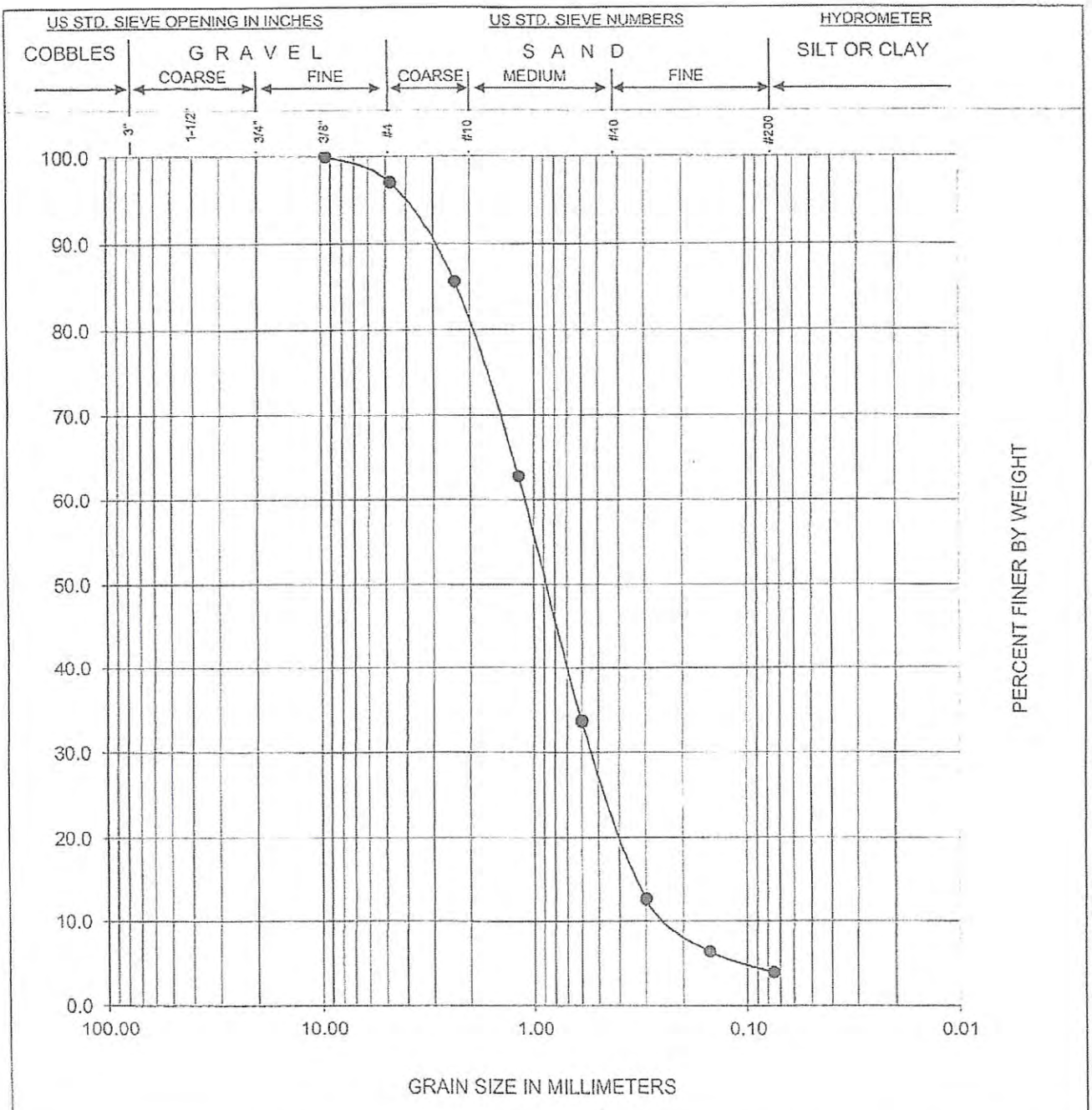
Fig. C-3



Project No. : 6848-04 Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	31'-32.5'	SP	BROWN POORLY GRADED SAND		-	-	-

GRAIN SIZE CURVE

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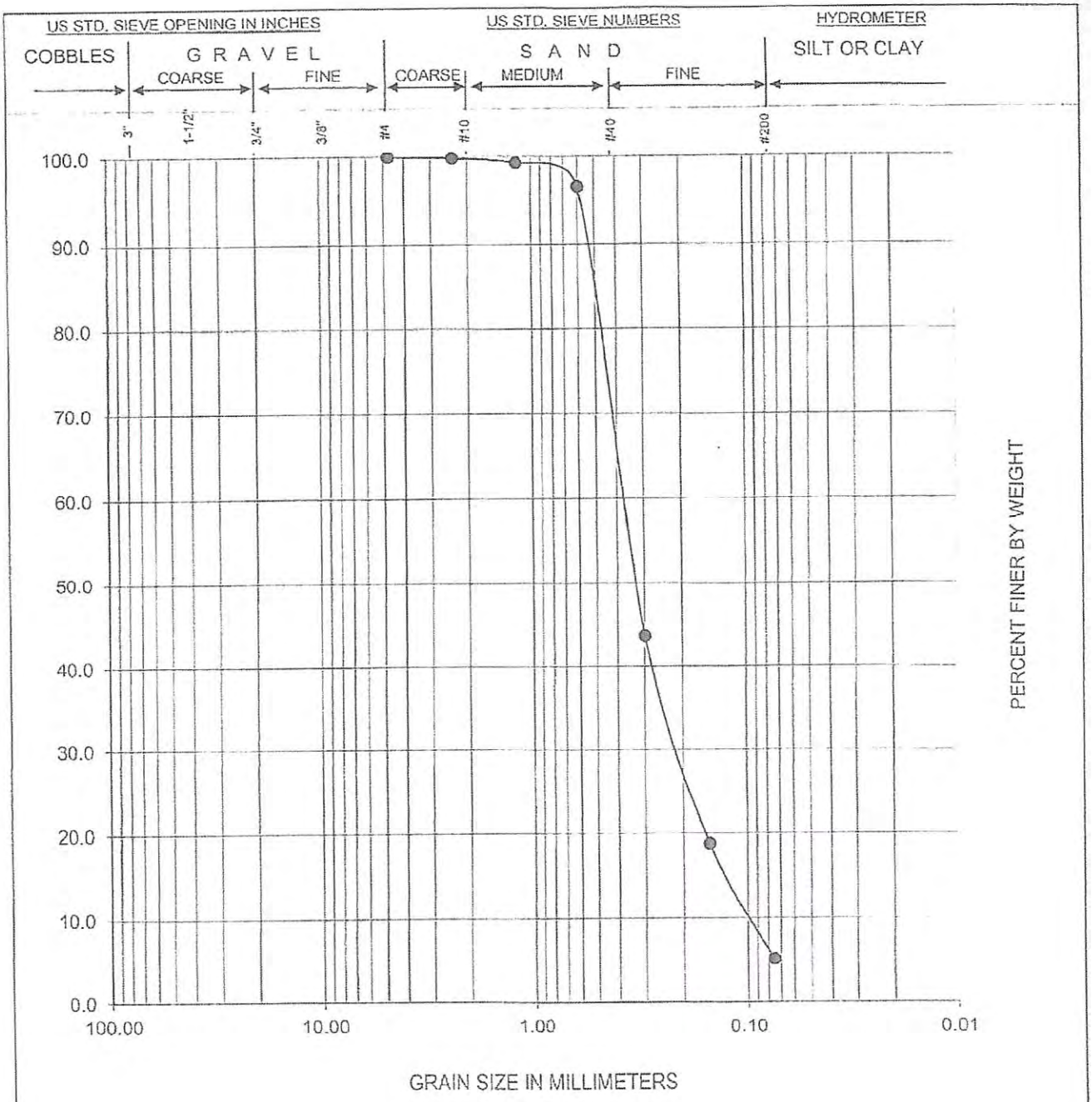
Fig. C-4



Project No. : 6848-04

Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	40'-41.5'	SP-SM	LT. BROWN POORLY GRADED SAND WITH SILT		-	-	-

GRAIN SIZE CURVE

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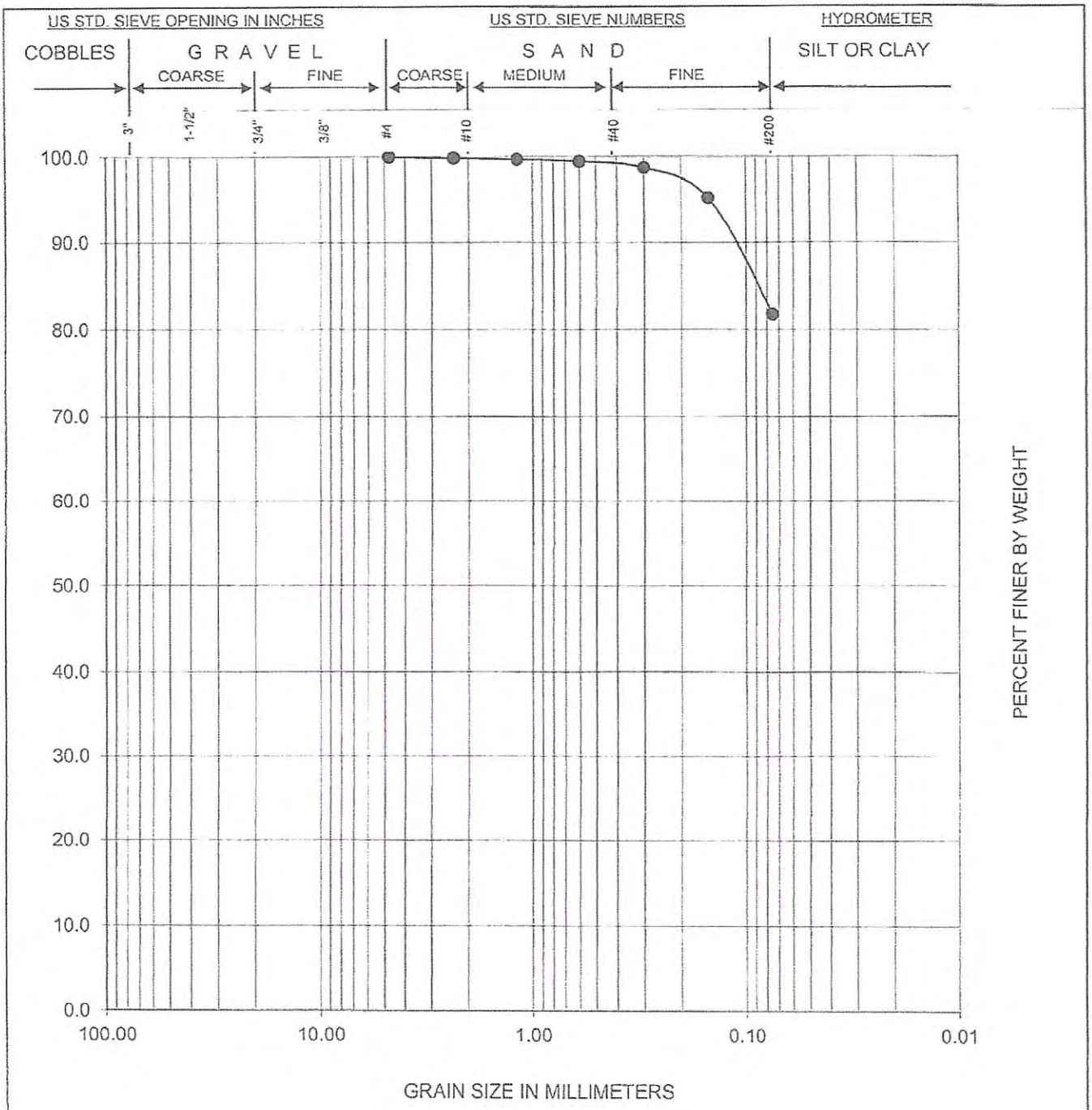
Fig. C-5



Project No. : **6848-04**

Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	45'-46.5'	CL	GRAYISH BROWN SANDY CLAY		-	-	-

GRAIN SIZE CURVE

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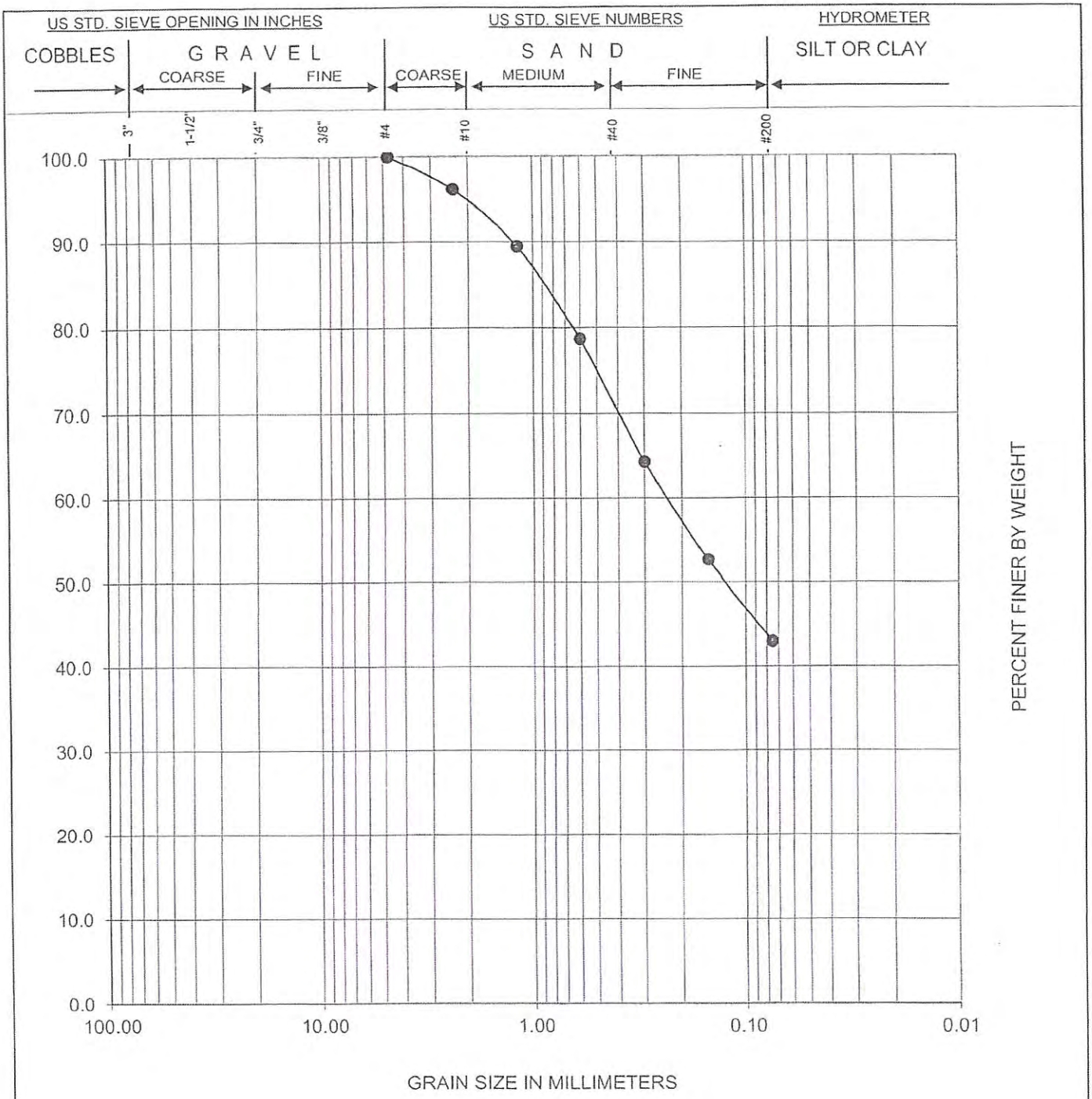
Fig. C-6



Project No. : 6848-04 Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
G-11	-	3' - 6'	SC	BROWN CLAYEY SAND		-	-	-

GRAIN SIZE CURVE

G. A. Nicoll & Associates, Inc.
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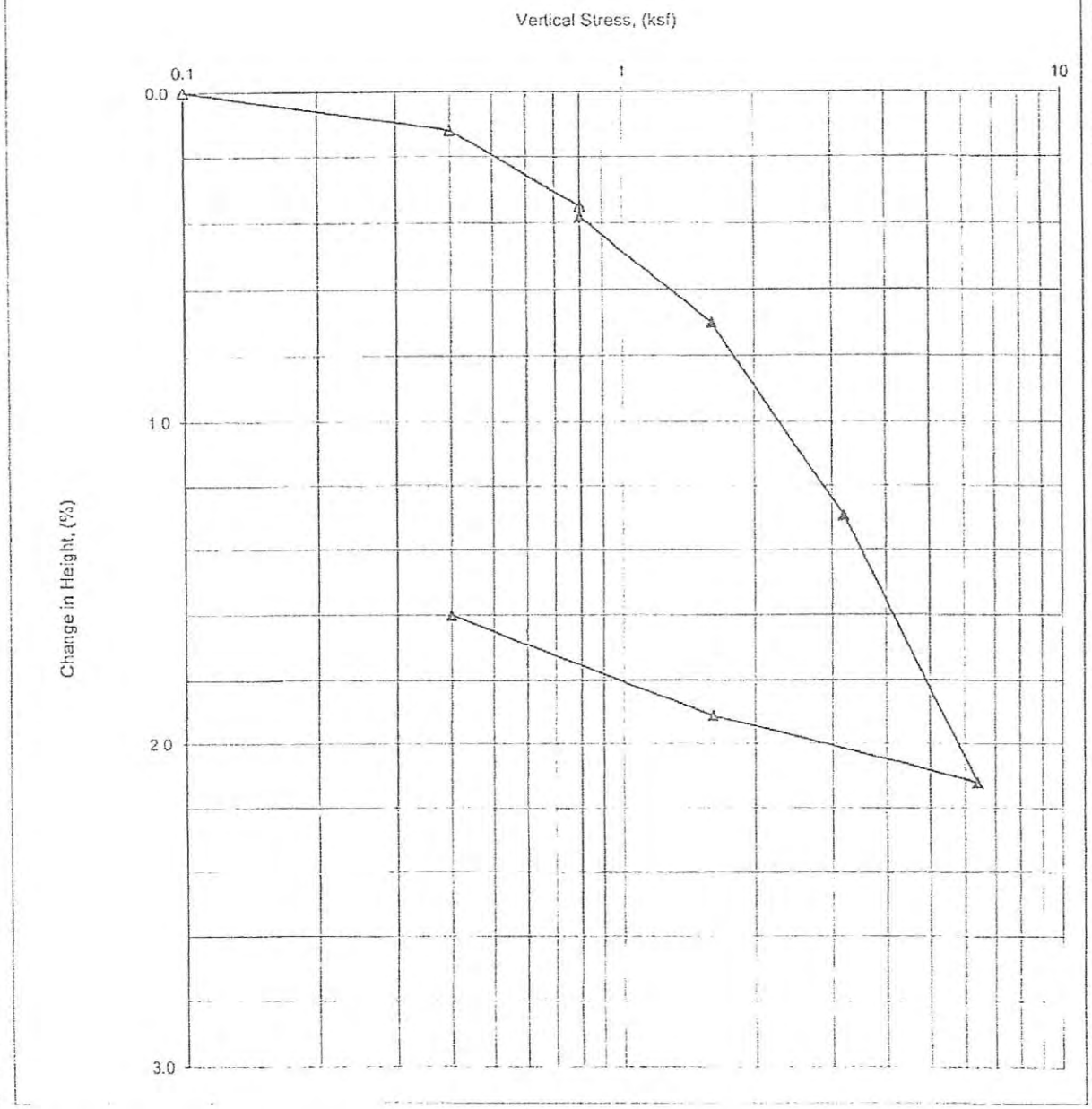
Fig. C-7



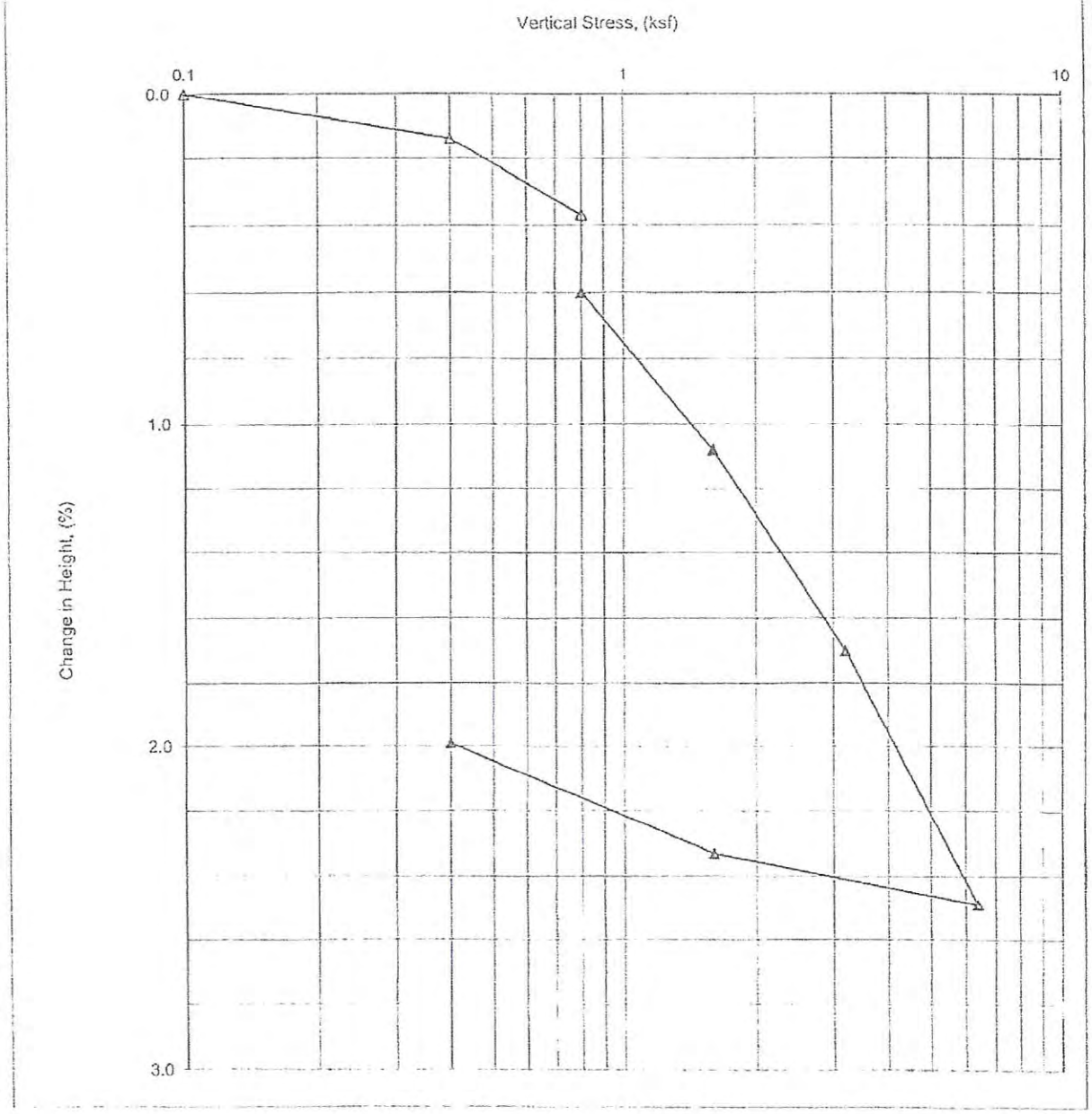
Boring No. : B-3 Sample No / Depth : 10' Liquid Limit -

Sample Descriptions / Classificaton : BROWN SILTY TO CLAYEY SAND (SM/SC) Plastic Limit -

Sp Gravity : 2.68 (Assumed) Compression Index, C_c 0.028 Swell Index, C_s 0.004

Specimen Height (inches)		Moisture Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
Initial	1.0000	13.5	117.7	85.9	0.421
Final	0.9840	14.7	119.6	99.2	0.398

Consolidation Test (ASTM D2435)	G. A. Nicoll & Associates, Inc. EARTH SCIENCE CONSULTANTS	Fig. C-8
GANAHL - COSTA MESA	Project No. 6848-04	Date: 6/03/2014



Boring No : G-11 Sample No / Depth : 17' Liquid Limit -

Sample Descriptions / Classification : LT BROWN SILTY SAND (SM) Plastic Limit -

Sp. Gravity : 2.68 (Assumed) Compression Index, C_c 0.026 Swell Index, C_s 0.004

	Specimen Height (inches)	Moisture Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
Initial	1.0000	10.7	119.3	71.5	0.402
Final	0.9801	13.9	121.6	99.7	0.375

Consolidation Test
(ASTM D2435)

G. A. Nicoll & Associates, Inc.
EARTH SCIENCE CONSULTANTS

Fig. C-9

GANAHL - COSTA MESA

Project No. 6848-04

Date: 6/03/2014

Project Name : GANAHL - COSTA MESA

Project No. G. A. NICOLL 6848-04

Boring / Sample No : B-3 Depth : ____ (ft.)

Tested By : RMC Date: 9-Jun-14

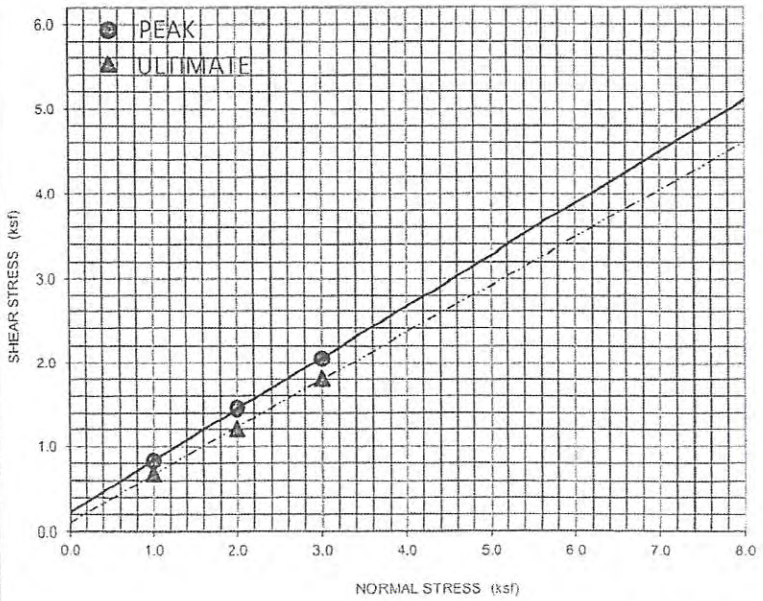
Sample Descriptions / Classification : Brown Clayey Sand (SC)

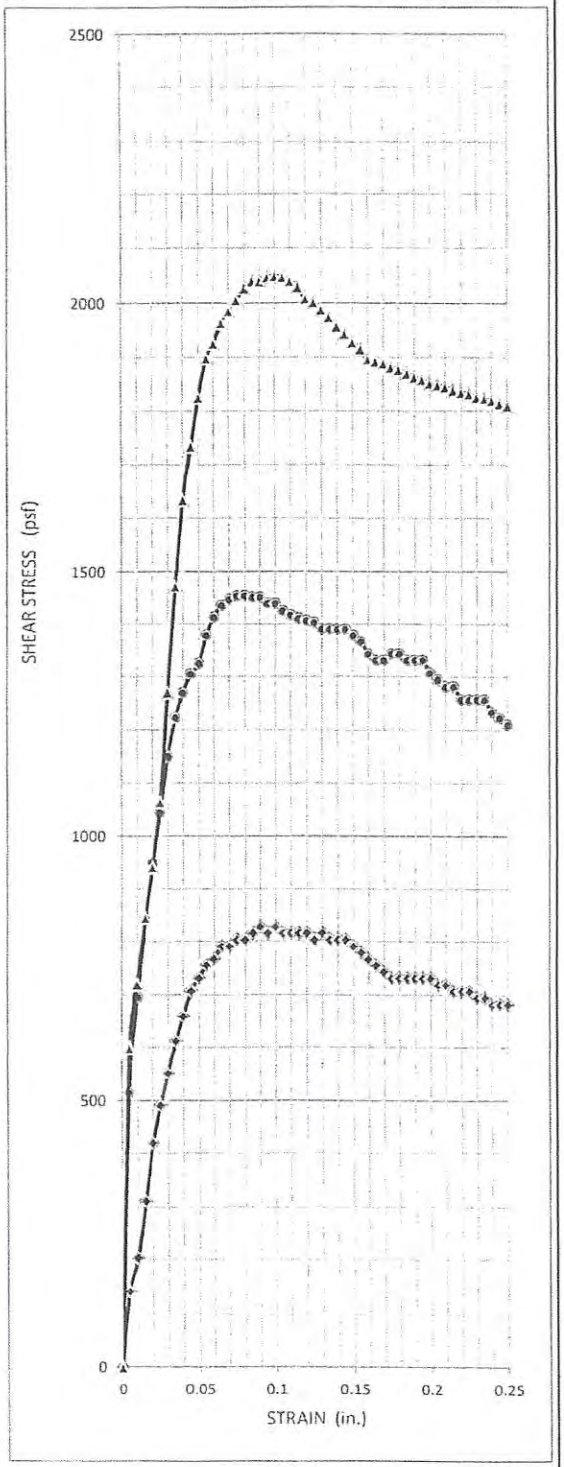
Sampled By : ____ Date: ____

Applied Normal Load (ksf)	1.0		2.0		3.0	
Shear Stress,Peak (ksf)	0.828		1.455		2.050	
Shear Stress,Ultimate(ksf)	0.684		1.212		1.810	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Wt. of Soil + Ring,(g)	198.1	208.2	196.2	206.5	191.4	201.6
Dry Wt. of Soil + Ring,(g)		186.8		184.9		180.1
Weight of Water, (g)		21.4		21.6		21.5
Weight of Ring, (g)		45.4		43.7		39.0
Weight of Dry Soil (g)		141.4		141.2		141.1
Moisture Content, (%)	8.0	15.1	8.0	15.3	8.0	15.2
Wet Density (pcf)	127.43	135.9	127.3	135.9	127.2	135.7
Dry Density (pcf)	-	118.0	-	117.9	-	117.8
Specific Gravity, G_s (assumed)	2.68					
Specimen Thickness, (in.)	1.00					
Degree of Saturation, (%)	51.4	97.2	51.2	97.9	51.0	97.1
Void Ratio	-	0.417	-	0.419	-	0.420

Lateral Displacement, d_h (in.)		0.25
Displacement Rate, d_r (in./min)		0.02
Elapsed Time of Test, t_e (min.)		12.50
Specimen	Undisturbed	-
	Remolded	90% RC @ OMC
	Reconstituted	-

SHEAR STRESS	PEAK	ULTIMATE
Cohesion,c (psf)	300	100
Friction Angle, ϕ	31	29





Remarks : ____

DIRECT SHEAR TEST

(ASTM D3080)

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Fig. C-10

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER : G. A. NICOLL #6848-04

TRACT NUMBER : _____

TESTED BY : RMC DATE : 2-Jun-14

LOT NUMBER : _____

SAMPLED BY: _____ DATE : _____

SAMPLE NO. : _____ LOCATION : B-3 @ 1' - 4'

SOIL DESCRIPTIONS / CLASSIFICATION : BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3
WET WT. OF SOIL + RING	(g)	615.2		
WEIGHT OF RING	(g)	200.46		
WET WEIGHT OF SOIL	(g)	414.74		
FACTOR		0.303		
INITIAL WET UNIT WEIGHT	(pcf)	125.7		
DRY DENSITY	(pcf)	115.6		
% SATURATION (Assumed Sp.Gr. = 2.70)		51.3		
MOISTURE DETERMINATION				
WET WEIGHT OF SOIL	(g)	127.51		
DRY WEIGHT OF SOIL	(g)	117.31		
MOISTURE CONTENT	(%)	8.7		

RACK NO. : 1

SURCHARGE : 144 psf

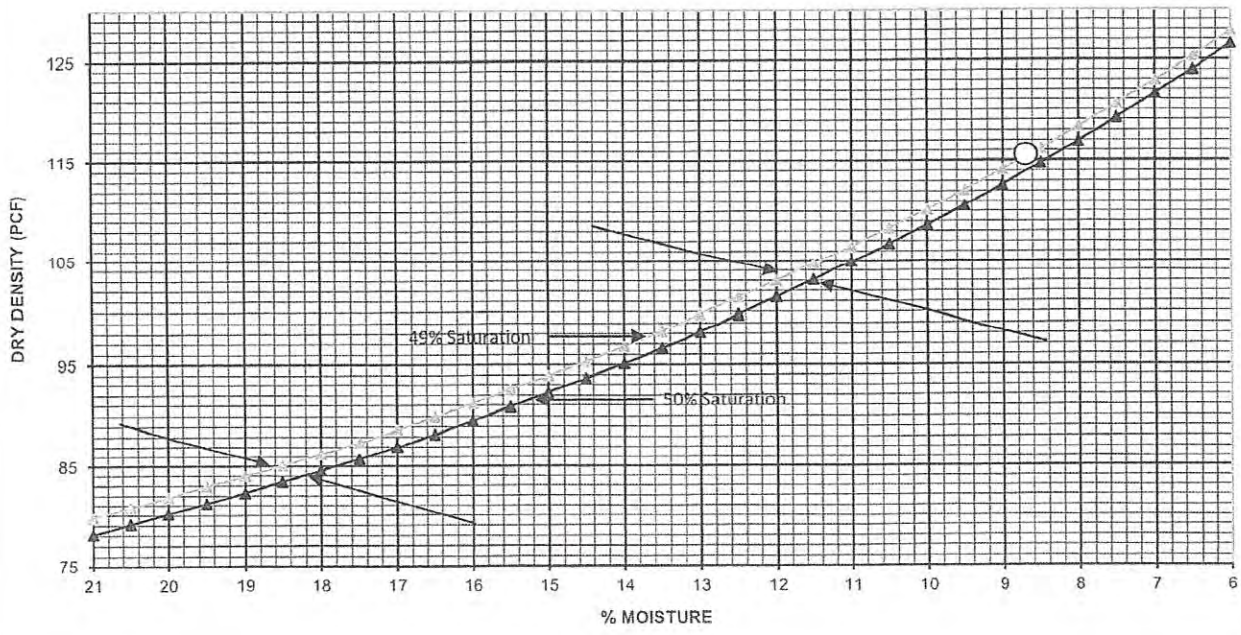
DATE	TIME	DIAL READINGS (In.)
2-Jun	12:50	0.125
10-May	11:31	0.151
	2:35	0.151
% RETAINED ON #4 SIEVE		-

EXPANSION INDEX : 26

REMARKS : _____

SOLUBLE SULFATE (SO_4) : - ppm

SATURATION CURVE



EXPANSION INDEX OF SOILS

(ASTM D 4829-11)

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Fig. C-11

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER G. A. NICOLL 6848-04

TRACT NUMBER : _____

TESTED BY : RMC DATE : 6-Jun-14

LOT NUMBER : _____

SAMPLED BY: _____ DATE : _____

SAMPLE NO. : _____ LOCATION : B-6 @ 3' - 6'

SOIL DESCRIPTIONS / CLASSIFICATION : LT. BROWN SANDY CLAY TO CLAYEY SAND (CL/SC)

TRIAL NUMBER		1	2	3
WET WT. OF SOIL + RING	(g)	610.71		
WEIGHT OF RING	(g)	198.52		
WET WEIGHT OF SOIL	(g)	412.19		
FACTOR		0.303		
INITIAL WET UNIT WEIGHT	(pcf)	124.9		
DRY DENSITY	(pcf)	115.1		
% SATURATION (Assumed Sp.Gr. = 2.70)		49.488		
MOISTURE DETERMINATION				
WET WEIGHT OF SOIL	(g)	186.54		
DRY WEIGHT OF SOIL	(g)	171.93		
MOISTURE CONTENT	(%)	8.5		

RACK NO. : 1

SURCHARGE : 144 psf

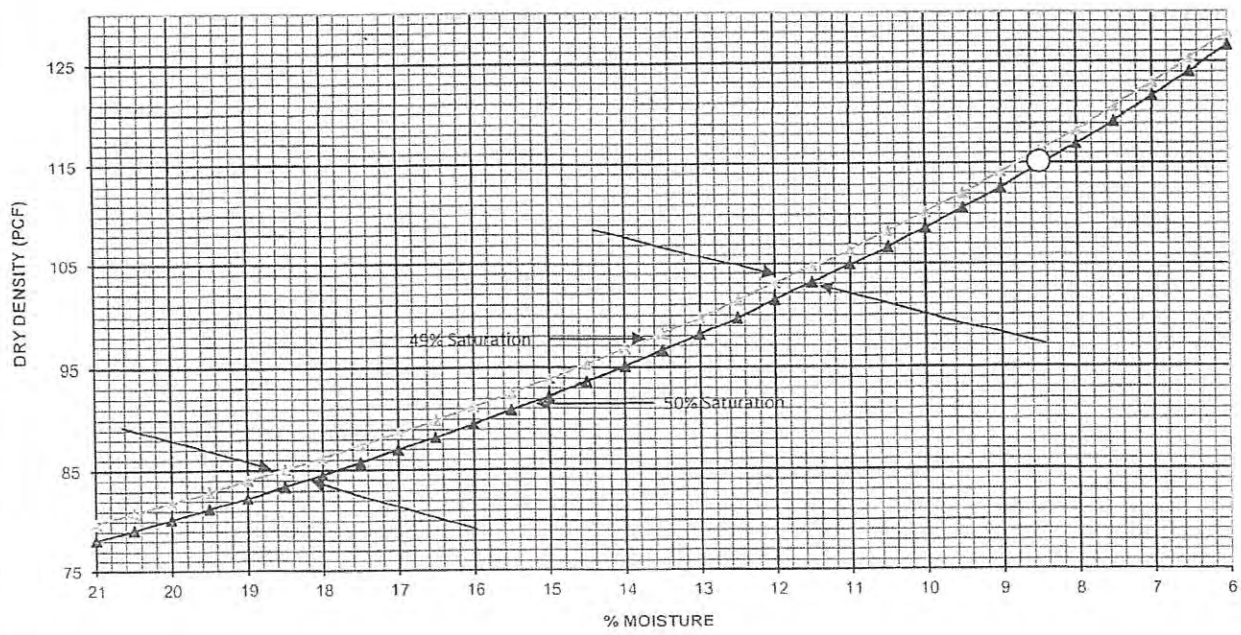
DATE	TIME	DIAL READINGS (in.)
6-Jun	12:32	0.163
9-Jun	7:02	0.214
% RETAINED ON #4 SIEVE		-

EXPANSION INDEX : 51

REMARKS : _____

SOLUBLE SULFATE (SO_4) : - ppm

SATURATION CURVE



EXPANSION INDEX OF SOILS

(ASTM D 4829-11)

G. A. Nicoll & Associates, Inc.
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Fig. C-12

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER : G. A. NICOLL #6848-04

TRACT NUMBER : _____

TESTED BY : RMC DATE : 5-Jun-14

LOT NUMBER : _____

SAMPLED BY: _____ DATE : _____

SAMPLE NO. : _____ LOCATION : G-11 @ 3' - 6'

SOIL DESCRIPTIONS / CLASSIFICATION : LT. BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3
WET WT. OF SOIL + RING	(g)	595.85	616.1	
WEIGHT OF RING	(g)	200.54	200.54	
WET WEIGHT OF SOIL	(g)	395.31	415.56	
FACTOR		0.303	0.303	
INITIAL WET UNIT WEIGHT	(pcf)	119.8	125.9	
DRY DENSITY	(pcf)	112.5	116.6	
% SATURATION (Assumed Sp.Gr. = 2.70)		34.9	48.3	
MOISTURE DETERMINATION				
WET WEIGHT OF SOIL	(g)	164.47	185.55	
DRY WEIGHT OF SOIL	(g)	154.54	171.88	
MOISTURE CONTENT	(%)	6.4	8.0	

RACK NO. : 1

SURCHARGE : 144 psf

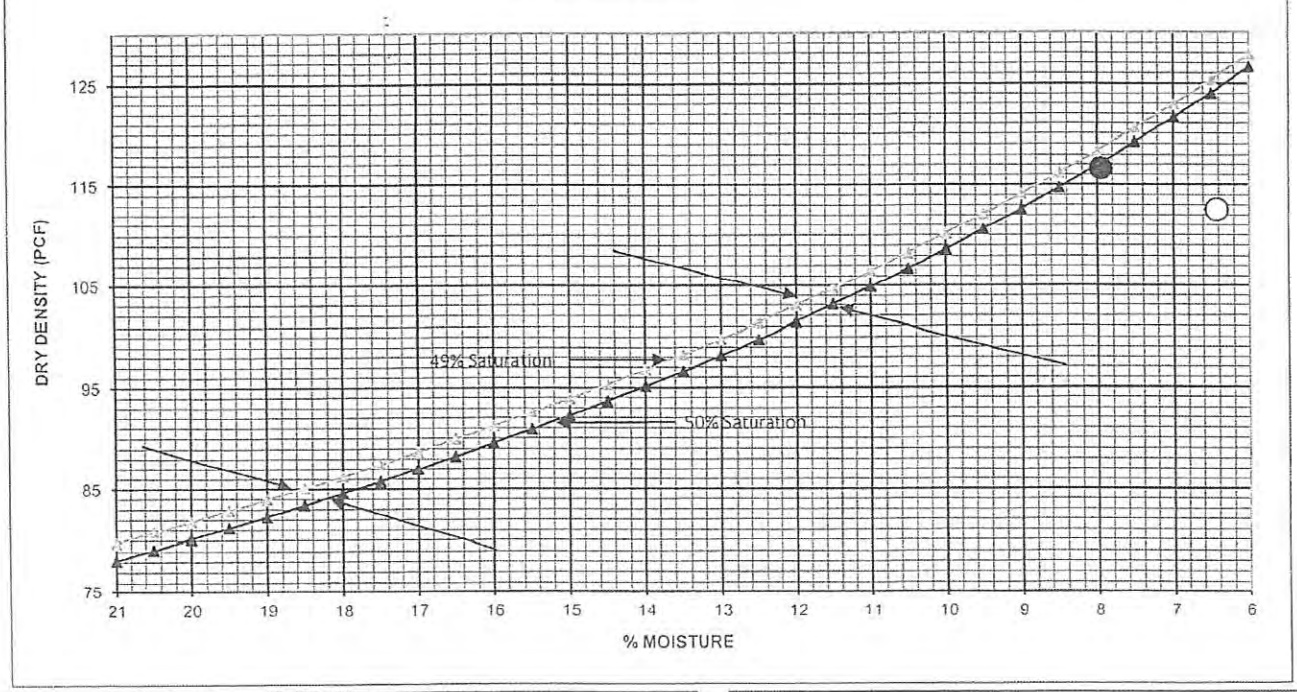
DATE	TIME	DIAL READINGS (In.)
5-Jun	8:19	0.120
6-Jun	6:59	0.162
	8:30	0.162
% RETAINED ON #4 SIEVE		-

EXPANSION INDEX : 42

REMARKS : _____

SOLUBLE SULFATE (SO_4) : - ppm

SATURATION CURVE



EXPANSION INDEX OF SOILS

(ASTM D 4829-11)

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Fig. C-13

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NO : G. A. NICOLL 6848-04

BORING NO. : B-3 SAMPLE NO./DEPTH : 1' - 4' TESTED BY : RMC DATE: 9-Jun-14

SAMPLE DESCRIPTIONS/CLASSIFICATION : BROWN LEAN CLAY (CL)

PLASTIC LIMIT

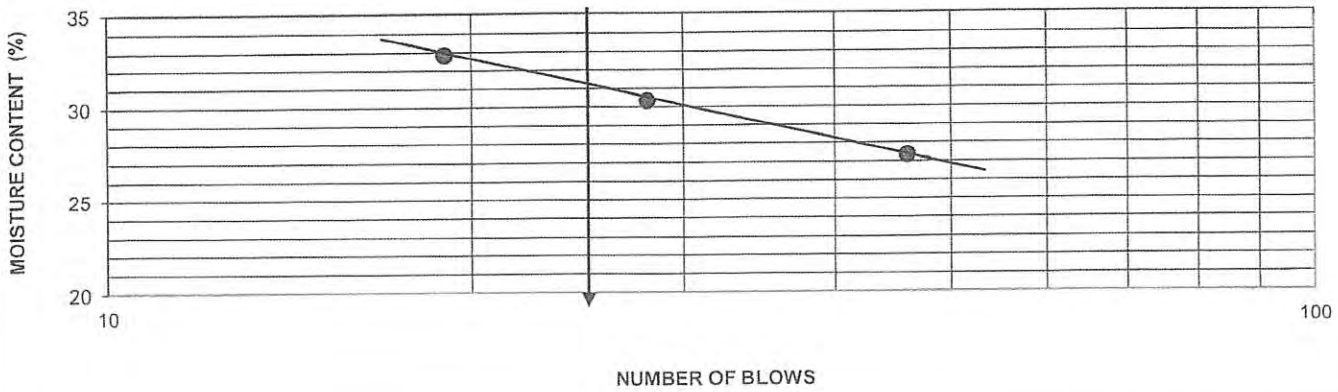
DETERMINATION NO.		1	2
DISH NO.		8	
MASS, DISH + WET SOIL	(g)	26.62	
MASS, DISH + DRY SOIL	(g)	25.85	
MASS OF WATER	(g)	0.77	
MASS OF DISH	(g)	20.21	
MASS OF DRY SOIL	(g)	5.64	
MOISTURE CONTENT	(%)	13.7	

LIQUID LIMIT

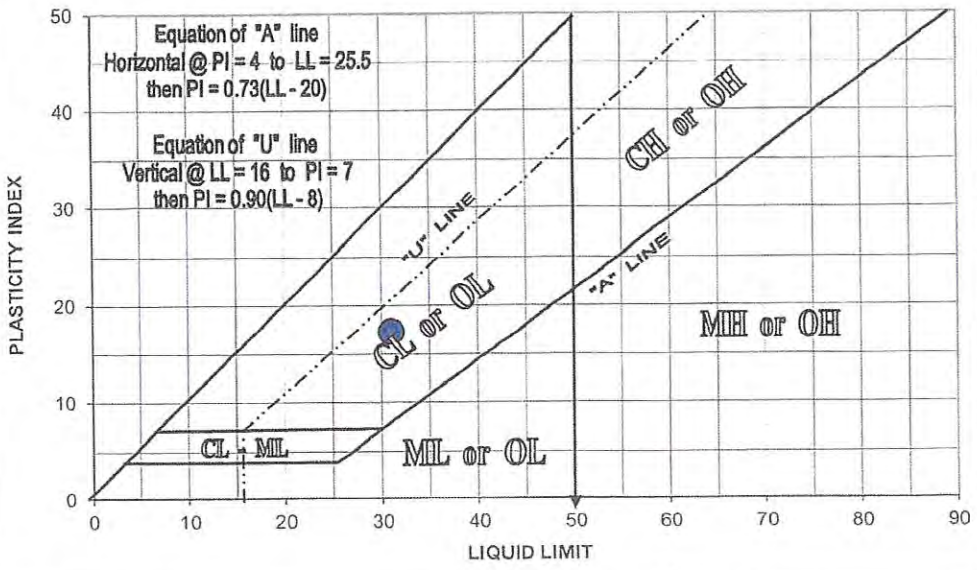
DETERMINATION NO.		1	2	3
DISH NUMBER		14	17	13
MASS, DISH + WET SOIL	(g)	40.23	39.28	32.92
MASS, DISH + DRY SOIL	(g)	36.81	35.56	31.18
MASS OF WATER	(g)	3.42	3.72	1.74
MASS OF DISH	(g)	26.40	23.30	24.82
MOISTURE CONTENT	(%)	32.9	30.3	27.4
NUMBER OF BLOWS		19	28	46

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	31
PLASTIC LIMIT (PL)	14
PLASTICITY INDEX (PI)	17
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

ATTERBERG LIMITS

(ASTM D4318)

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Fig. C-14

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NO : G. A. NICOLL 6848-04

BORING NO. : B-3 SAMPLE NO./DEPTH : 26' - 27.5' TESTED BY : RMC DATE: 16-Jun-14

SAMPLE DESCRIPTIONS/CLASSIFICATION : GRAYISH BROWN LEAN CLAY (CL)

PLASTIC LIMIT

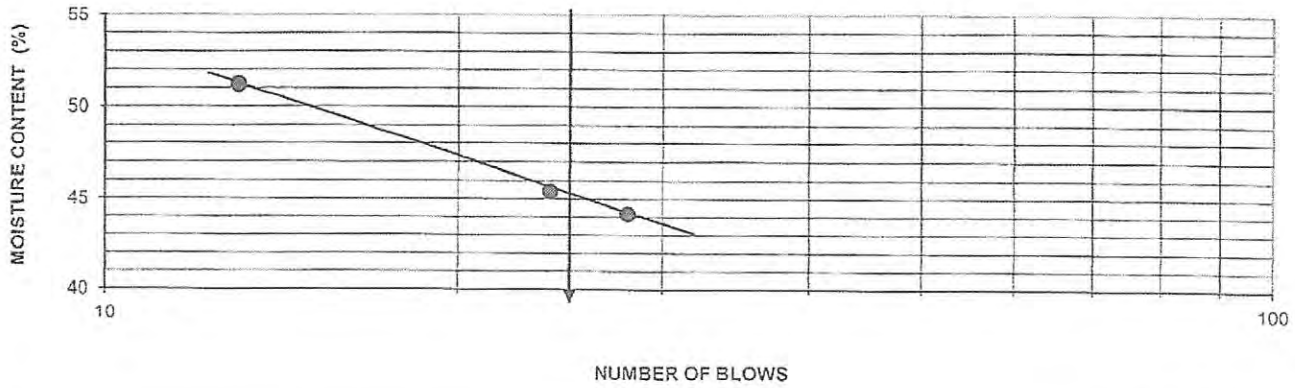
DETERMINATION NO.		1	2
DISH NO.		2	
MASS, DISH + WET SOIL	(g)	45.44	
MASS, DISH + DRY SOIL	(g)	43.26	
MASS OF WATER	(g)	2.18	
MASS OF DISH	(g)	30.38	
MASS OF DRY SOIL	(g)	12.88	
MOISTURE CONTENT	(%)	16.9	

LIQUID LIMIT

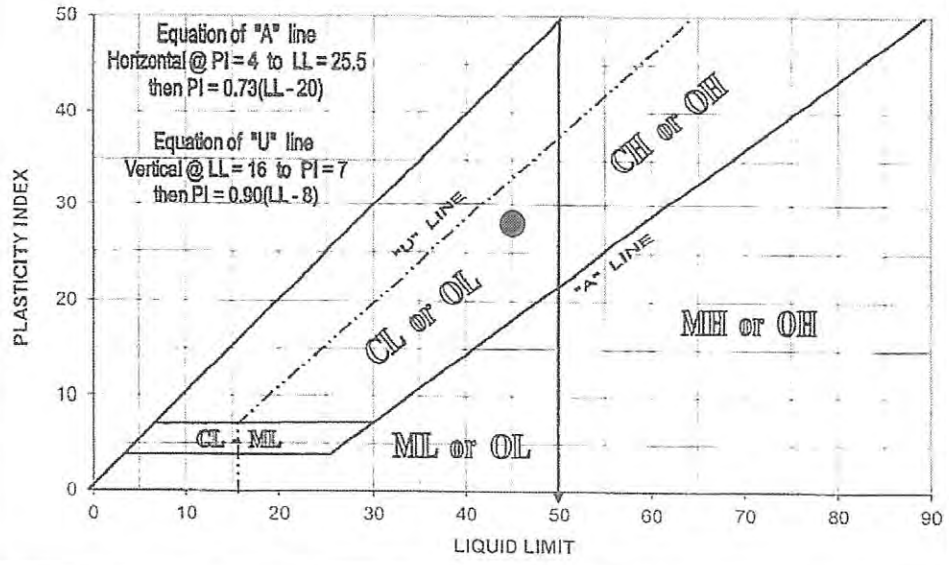
DETERMINATION NO.		1	2	3
DISH NUMBER		10	8	17
MASS, DISH + WET SOIL	(g)	36.12	32.45	36.97
MASS, DISH + DRY SOIL	(g)	33.31	28.63	32.35
MASS OF WATER	(g)	2.81	3.82	4.62
MASS OF DISH	(g)	26.95	20.22	23.33
MOISTURE CONTENT	(%)	44.2	45.4	51.2
NUMBER OF BLOWS		28	24	13

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	45
PLASTIC LIMIT (PL)	17
PLASTICITY INDEX (PI)	28
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS : SAMPLE WAS RECEIVED OVEN-DRIED

ATTERBERG LIMITS

(ASTM D4318)

G. A. Nicoll & Associates, Inc.
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Fig. C-15

PROJECT NAME : GANAHL - COSTA MESA PROJECT NO : G. A. NICOLL 6848-04

BORING NO. : B-3 SAMPLE NO./DEPTH : 45' - 46.5' TESTED BY : RMC DATE: 12-Jun-14

SAMPLE DESCRIPTIONS/CLASSIFICATION : GRAYISH BROWN LEAN CLAY (CL)

PLASTIC LIMIT

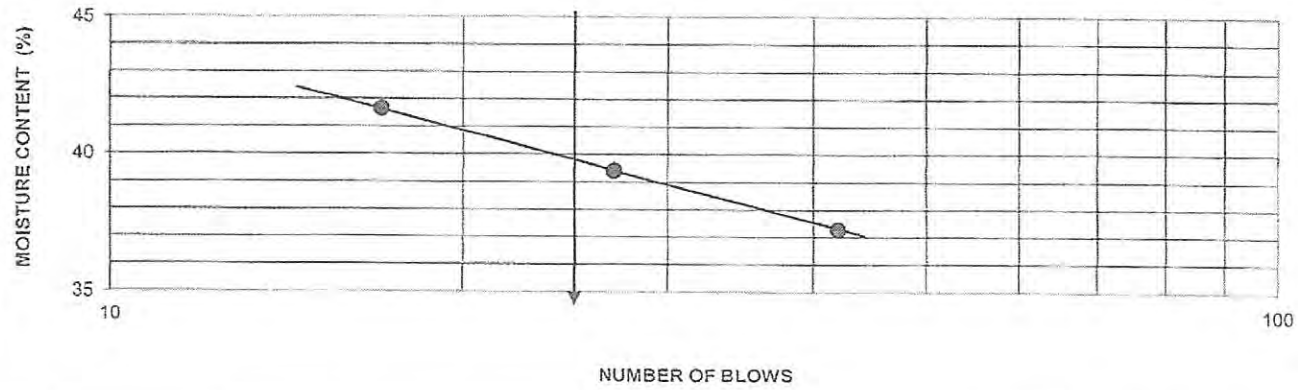
DETERMINATION NO.		1	2
DISH NO.		4	
MASS, DISH + WET SOIL	(g)	37.96	
MASS, DISH + DRY SOIL	(g)	35.37	
MASS OF WATER	(g)	2.59	
MASS OF DISH	(g)	22.22	
MASS OF DRY SOIL	(g)	13.15	
MOISTURE CONTENT	(%)	19.7	

LIQUID LIMIT

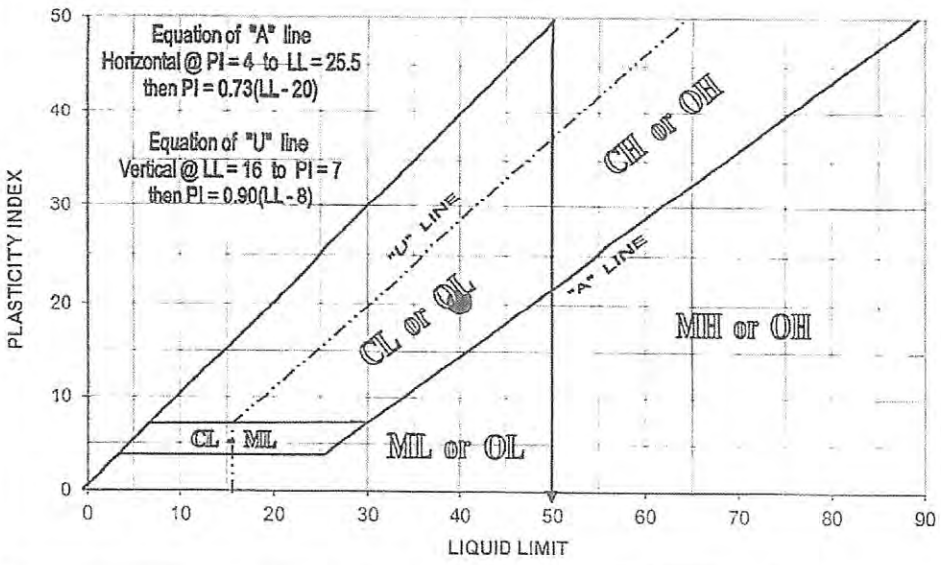
DETERMINATION NO.		1	2	3
DISH NUMBER		22	20	10
MASS, DISH + WET SOIL	(g)	34.58	36.52	34.18
MASS, DISH + DRY SOIL	(g)	31.36	33.43	32.22
MASS OF WATER	(g)	3.22	3.09	1.96
MASS OF DISH	(g)	23.63	25.59	26.96
MOISTURE CONTENT	(%)	41.7	39.4	37.3
NUMBER OF BLOWS		17	27	42

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	40
PLASTIC LIMIT (PL)	20
PLASTICITY INDEX (PI)	20
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS : SAMPLE WAS RECEIVED OVEN - DRIED

ATTERBERG LIMITS

(ASTM D4318)

G. A. Nicoll & Associates, Inc.
EARTH SCIENCE CONSULTANTS

Fig. C-16

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER : G. A. NICOLL 6948-04

LOCATION :

TESTED BY : RMC DATE : 10-Jun-14

SAMPLED BY: DATE :

SAMPLE IDENTIFICATION	B-3 @ 1' - 4'	B - 6 @ 3' - 6'		
VISUAL SOIL CLASSIFICATION	BROWN CLAYEY SAND (SC)	LT. BR. SANDY CLAY TO CLAYEY SAND (CL/SC)		
WATER-SOLUBLE SULFATE $_{CA\ TEST\ 417}$ (ppm)	150	270		
WATER SOLUBLE CHLORIDE $_{CA\ TEST\ 422}$ (ppm)	210	240		
MINIMUM RESISTIVITY,($R_{min\ -\ 15.5}$) (ohms-cm)	2197	1306		
pH VALUE ON (-)#10 MAT'LS.$_{ASTM\ D4972Mtd\ A}$	-	-		
pH VALUE ON (-)#8 MAT'LS.$_{CA\ TEST\ 643}$	8.5	8.7		
REMARKS				

CORROSITIVITY OF SOILS

G. A. Nicoll & Associates, Inc.
EARTH SCIENCE CONSULTANTS

Fig. C-17

APPENDIX D

Percolation Study for Infiltration Systems

FIELD INVESTIGATION / PERCOLATION TESTING

a) In conjunction with our geotechnical investigation, we have conducted a percolation study for the purpose of determining the feasibility of utilizing on-site infiltration system for the disposal surface water at the proposed development.

b) The percolation test results will assist in the design of infiltration basins, in conjunction with a future drainage study for the site.

c) Based on the subsurface characteristics of the soils found during our geotechnical investigation, two areas were selected to conduct the percolation tests. Two 8-inch diameter borings were drilled to depths of 10.5 feet. The boring locations are shown on the *Boring / Percolation Test Location Map, Figure D-1.* The borings were backfilled and compacted at the completion of percolation testing.

d) The materials encountered consisted of approximately 7.5 to 8 feet of fill, overlying fine- to coarse-grained Silty SAND in Boring BP-1, and fine- to coarse-grained SAND in Boring BP-2. The logs of the two borings are presented in *Figures D-2 and D-3.*

e) The percolation tests were conducted where it was estimated that suitable materials were present at the shallowest depths beneath the existing fill.

f) The second consideration was the 10-ft. separation requirement between the bottom of an infiltration system to the ground water level.

g) Ground water was encountered during our geotechnical investigation and stabilized at a level of 23.5 feet in Borings B-1 and B-3; a level of 10.5 to 12 feet above mean sea level (amsl). The historically highest ground water level was found to be at 30 feet during our review of the Seismic Hazard Zone Report for the Anaheim and Newport Beach Quadrangle (SHZR-030).

h) Two percolation tests were conducted for a period of 4.5 hours, measured in increments of 30 minutes. The borings were refilled to the previous levels at the end of each half-hour measurement. The details and results of the percolation tests are shown in *Percolation Test Results, Figure D-4.*

CONCLUSIONS

a) The percolation rates stabilized after the third hour. The percolation rates for the two tests are calculated using the following equation for the infiltration rate:

$$I_R \quad \frac{D \cdot 60 \cdot r}{2T \cdot (r + 2\,AWD)} = \text{inches / hour}$$

Where I_R = Infiltration Rate, T = Time Interval

D = Drop in final hour, r = Radius of boring

AWD = Average Wetted depth, 60 min/hr

b) Infiltration Rate for BP-1 = 0.68 in/hr
Infiltration Rate for BP-2 = 0.79 in/hr

RECOMMENDATIONS

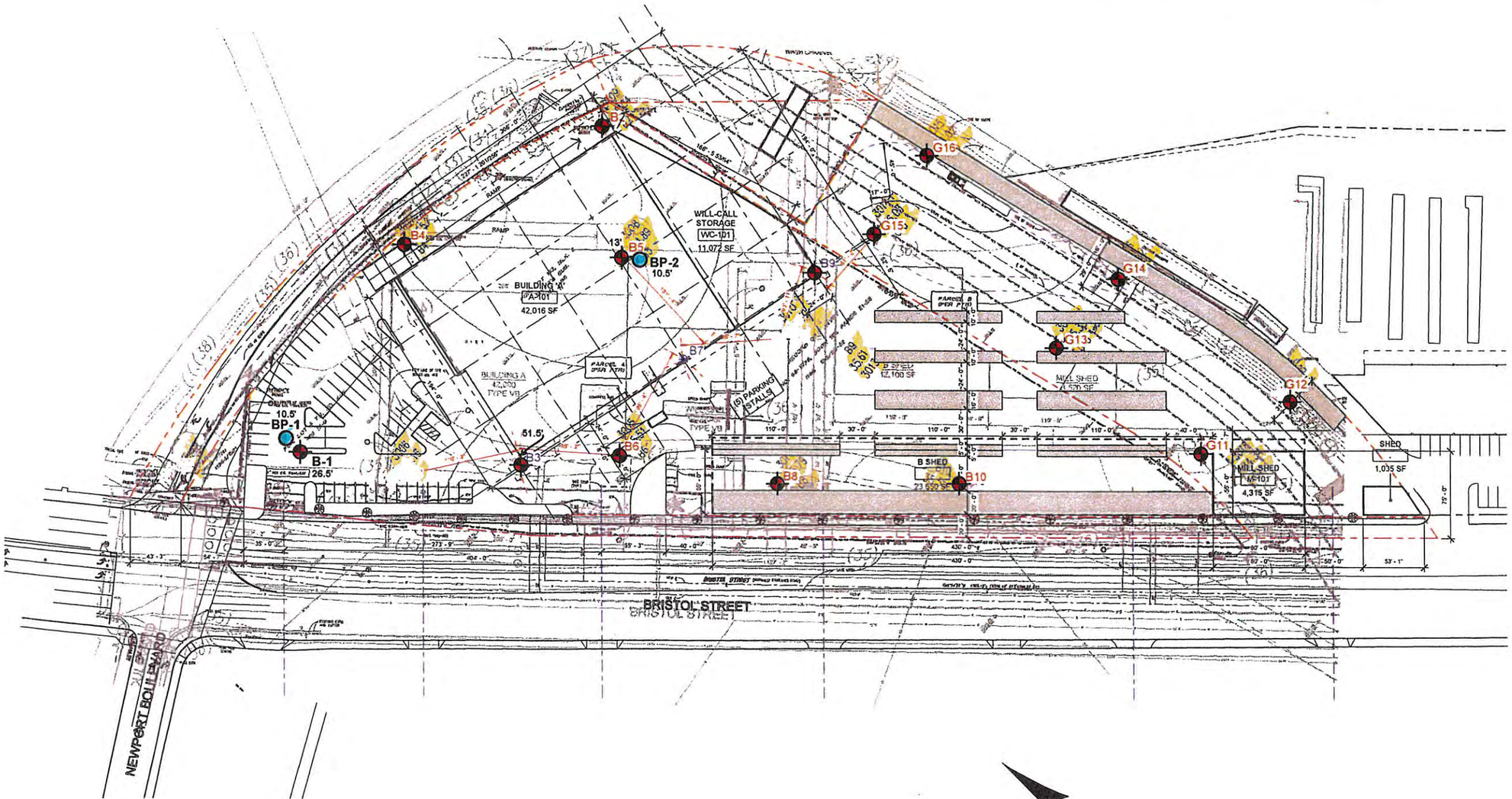
a) Based on our test results we took the average of the two test results and arrived at a recommended infiltration rate of 0.73 inches per hour.

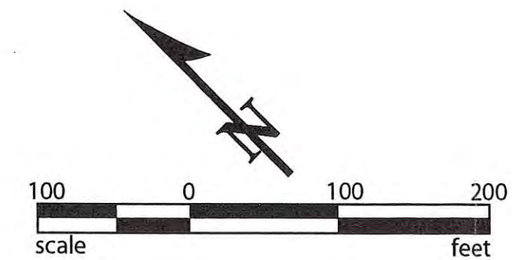
b) The design infiltration rate is applicable for the material tested and the systems should be constructed where materials with similar infiltration rates are present. The subsurface soils should be observed, and tested if necessary, in the area where an infiltration system is to be constructed.

c) The infiltration system should be constructed so that there is at least 10 feet of materials beneath the bottom and the ground water, which is at the shallowest amsl of 12 feet.

d) The design and construction of the infiltration system is not within the purview of this investigation.

PERCOLATION BORING LOCATION MAP





KEY

BP-2 10.5'	Location of Percolation Test Boring, showing total depth
B-9 G-16	Location of Geotechnical Borings

G. A. Nicoll & Associates, Inc.
EARTH SCIENCE CONSULTANTS

GANAHL CONSTRUCTION CORPORATION
New Costa Mesa Facility
1100 Southeast Bristol Street
Costa Mesa, California

6848-04	May 2014	Fig. D-1

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34 feet	PB-1

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE									
BULK	TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel FILL
						5		CL	Silty CLAY with Sand: dark brown, very moist, stiff @ 5 feet, more SAND @ 6 feet, more moisture FILL
						10		SM	Silty SAND: fine- to coarse-grained, light greenish-brown, medium dense to dense, some gravel TERRACE DEPOSITS
									Bottom of Boring at 10.5 feet. NOTE: 1) No ground water encountered. 2) No caving. 3) Percolation test conducted at 8 to 10.5 feet. 4) Boring backfilled and tamped.

G. A. Nicoll & Associates, Inc.
EARTH SCIENCE CONSULTANTS
Tustin, California

GANAHL - Costa Mesa, CA

Project No.:	Figure No.:
6848-04	D-2

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34.90 feet	PB-2

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE

BULK	TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: dark brown, fine- to coarse-grained
									@ 3 feet, coarse Gravel
									FILL
								CL	Silty CLAY: greenish-gray, moist, very stiff
						5			@ 5 feet, very moist
									@ 7 feet, some pockets of coarse SAND
									FILL
								SP	SAND: fine- to coarse-grained, light greenish-gray to yellowish-brown, dry to slightly moist, dense
						10			TERRACE DEPOSITS
									Bottom of Boring at 10.25 feet. NOTE: 1) No ground water encountered. 2) Minor caving during percolation testing. 3) Percolation testing at 8 to 10.25 feet. 4) Boring backfilled and tamped.

G. A. Nicoll & Associates, Inc.
EARTH SCIENCE CONSULTANTS
Tustin, California

GANAHL - Costa Mesa, CA

Project No.:	Figure No.:
6848-04	D-3

PERCOLATION TEST RESULTS

TEST NO. 1	Boring elevation at 34 feet	SOIL/BEDROCK DESCRIPTION:	Silty SAND: fine- to coarse-grained with fine gravel (QT)
BACKHOE PIT/ BORING NO. PB-1	TEST DATE: 5/20/2014	DEPTH OF TEST HOLE:	10.5 feet, 126 inches

BEGIN TIME T_1 (hr:min)	END TIME T_2 (hr:min)	TIME INTERVAL $T = T_1 - T_2$ (min)	READINGS R_1 (inches)	READINGS R_2 (inches)	DROP $D = R_2 - R_1$ (inches)	DEPTH OF HOLE AT END OF INTERVAL (inches)	AVERAGE WETTED DEPTH (inches)
10:45	11:15	30	96	103	7	126	26.5
11:15	11:45	30	96	102.5	6.5	126	
11:45	12:15	30	96	102	6	126	27
12:15	12:45	30	96	101.5	5.5	126	
12:45	1:15	30	96	101.25	5.25	126	
1:15	1:145	30	96	101.25	5.25	126	
1:45	2:15	30	96	101	5.0	126	27.5
2:15	2:45	30	95.5	100.5	5.0	126	
2:45	3:15	30	96	101	5.0	126	
3:15	3:45	30	96	101	5.0	126	27.5
	TOTAL TIME	270		FINAL DROP	5.0	FINAL DEPTH	27.5

PERCOLATION TEST RESULTS

TEST NO. 2	Boring elevation at 34.9 feet	SOIL/BEDROCK DESCRIPTION:	SAND: fine- to coarse-grained, slightly moist, medium dense to dense
BACKHOE PIT/ BORING NO. PB-2	TEST DATE: 5/20/2014	DEPTH OF TEST HOLE:	10.5 feet, 123 inches

BEGIN TIME T_1 (hr:min)	END TIME T_2 (hr:min)	TIME INTERVAL $T = T_1 - T_2$ (min)	READINGS R_1 (inches)	READINGS R_2 (inches)	DROP $D = R_2 - R_1$ (inches)	DEPTH OF HOLE AT END OF INTERVAL (inches)	AVERAGE WETTED DEPTH (inches)
11:00	11:30	30	96	104	8	123	23
11:30	12:00	30	96	102.25	6.25	123	
12:00	12:30	30	95	101	6.0	118	20
12:30	1:00	30	96	101.5	5.5	116	
1:00	1:30	30	96	100.5	4.5	115	
1:30	2:00	30	96	100	4.0	115	17
2:00	2:30	30	96	100	4.0	115	
2:30	3:00	30	96	99.75	3.75	115	3:00
3:00	3:30	30	96	99.75	3.75	115	
3:30	4:00	30	96	99.75	3.75	115	17.125
	TOTAL TIME	270		FINAL DROP	3.75	FINAL DEPTH	17

APPENDIX E

PHASE I ENVIRONMENTAL SITE ASSESSMENT

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AEI Consultants
Environmental & Engineering Services

April 24, 2014

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

Property Identification:
1100 South East Bristol Street
Costa Mesa, Orange County, California
92626

AEI Project No. 328646

Prepared for:
G.A. Nicoll and Associates, Inc.
3002 Dow Avenue, Suite 206
Tustin, California 92780

Prepared by:
AEI Consultants
2233 West 190th Street
Torrance, California 90504
(310) 798-4255

San Francisco HQ
Atlanta
Chicago
Dallas
Denver
Irvine
Los Angeles
Miami
New York
Phoenix
Portland
San Jose

PROJECT SUMMARY

1100 Bristol Street, Costa Mesa, Orange County, California

Report Section		No Further Action	REC	CREC	HREC	Environmental Issues	Non-ASTM Considerations	Recommended Action
2.1	Current use of subject property	**X**						
2.2	Adjoining property information	**X**						
3.1	Historical Summary	**X**				**X**		
4.0	Regulatory Agency Records Review	**X**						
5.0	Regulatory Database Records Review	**X**						
5.2	Vapor Encroachment	**X**						
6.3	Previous Reports	**x**						
7.0	Site Inspection and Reconnaissance	**X**				**X**		
7.2.1	Asbestos-Containing Materials	**X**						
7.2.2	Lead-Based Paint	**X**						
7.2.3	Radon	**X**						
7.2.4	Lead in Drinking Water	**X**						
7.2.5	Mold	**X**						

AEI Consultants

EXECUTIVE SUMMARY

AEI Consultants (AEI) was retained by G.A. Nicoll and Associates to conduct a Phase I Environmental Site Assessment (ESA), in conformance with the scope and limitations of ASTM Standard Practice E1527-13 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 1100 Bristol Street in the City of Costa Mesa, Orange County, California. Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report.

PROPERTY DESCRIPTION

The subject property, which consists of a vacant lot, is located on the northeast side of Bristol Street in a commercial area of Costa Mesa, California. The property totals approximately 5 acres and is currently not improved with any structures. The subject property is currently vacant. The property is improved with a concrete wall, asphalt-paved entrance area, and associated landscaping. The majority of the subject property lot is unpaved and is covered with gravel. Additionally the Santa Ana Delhi Channel bisects the subject property.

The subject property is owned by the Orange County Flood Control District. A concrete lined flood channel runs beneath the central and western portion of the subject property. The prospective future tenant (Ganahl Construction) is slated to utilize the subject property as a ground lease. Mr. Chiaravalloti works for Ganahl Construction who recently signed a 25 year lease with the city and is planning to relocate the adjacent Ganahl Lumber Yard (1275 Bristol Street) to the subject property.

According to historical sources, the current subject property has been a vacant lot since 2009. The subject property was a mix of undeveloped land and agricultural land with a river running through it from at least 1927 through 1947. By 1952 the subject property was only vacant land with a river running through it with what appears to be soil stock piles being stored on likely to be there because of the Santa Ana Delhi Channel construction and future road/highway development. The subject property remained undeveloped until 1994 when Bristol Street Mini Storage and RV Storage was constructed. Bristol Street Mini Storage and RV Storage occupied the subject property from 1994 until 2008.

The subject property was identified in the regulatory database as a Clandestine Drug Labs (CDL) site and a Facility and Manifest Data (HAZNET) site and is further discussed in Section 5.1.

The immediately surrounding properties consist of the following:

Direction from Site	Address-Tenant/Use
North	Vacant Land, followed by highway on ramps
Northeast	Corona Del Mar Freeway/ Route 73
East	Corona Del Mar Freeway/ Route 73
Southeast	Santa Ana Delhi Channel followed by Ganahl Lumber Co (1275 Bristol Street)
South	Bristol Street followed by Santa Ana Delhi Channel and The Missions Apartments (1330 South East Bristol Street)

West	Bristol Street followed by Acapulco Restaurant (Extra Storage Costa Mesa (1250 Bristol Street), Airport Irvine Animal (1206 Bristol Street) Medical Office Building (1202 Bristol Street), Medical Office Building (1182 Bristol Street), Office Building (1124 Bristol Street), ACS Architectural Services (1122 Bristol Street) Shorepoint Insurance (1120 Bristol Street), Farmers Insurance (1072 Bristol Street)
Northwest	Intersection of Bristol Street and Newport Boulevard followed by vacant land

The adjacent site to the south, 1275 South Bristol Street was identified in the regulatory database as an Underground Storage Tank (UST) site, a Statewide Environmental Evaluation and Planning System UST (SWEEPS UST) site, a Historical UST (Hist UST) site, and a Facility Inventory Database Underground Storage Tank (CA FID UST) site. Please refer to Section 5.1.

Based upon topographic map interpretation, the direction of groundwater flow beneath the subject property is inferred to be to the east-southeast. Based upon groundwater monitoring information obtained from the California Regional Water Quality Control Board's GeoTracker Website for a nearby site, identified as South Pacific Car Wash, 2750 South Bristol Street (located approximately 0.20 miles to the northwest); groundwater is presumed to be present at an estimated depth of 25-27 feet below ground surface (bgs).

Findings

Recognized Environmental Conditions (RECs) are defined by the ASTM Standard Practice E1527-13 as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to 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. AEI's assessment has revealed the following RECs associated with the subject property or nearby properties:

- No on-site RECs were identified during the course of this assessment.

Controlled Recognized Environmental Conditions (CRECs) are defined by the ASTM Standard Practice E1527-13 as a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. AEI's assessment has revealed the following CRECs associated with the subject property or nearby properties:

- No on-site CRECs were identified during the course of this assessment.

Historical Recognized Environmental Condition (HREC) is defined by the ASTM Standard Practice E1527-13 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. AEI's assessment has revealed the following HRECs associated with the subject property or nearby properties:

- No on-site HRECs were identified during the course of this assessment.

Environmental Issues include environmental concerns identified by AEI that warrant discussion, but do not qualify as recognized environmental conditions, as defined by the ASTM Standard Practice E1527-13. These can include, but are not limited to risks which can have a material

environmental or environmentally-driven impact on the business associated with the current or planned use of the subject property. AEI's investigation has revealed the following environmental issues associated with the subject property or nearby properties:

- Based on a review of aerial photographs, there is a potential that portions of the subject property were historically used for agricultural purposes. There is a potential that agricultural chemicals, such as pesticides, herbicides and fertilizers, were used onsite, and that the subject property has been impacted by the use of such agricultural chemicals. In general, historical agricultural use is not the subject of environmental enforcement actions by regulatory agencies, and therefore, could be considered a de minimis condition. However, AEI understands that the subject property is slated for commercial redevelopment. Consequently, it would be prudent for the owner of the subject property to determine whether sampling relating to the former agricultural use of the subject property is required by the local planning department or other applicable oversight agency prior to the commencement of redevelopment activities. However, it should be noted that the subject property was developed with a former RV and self-storage facility from 1994 until 2008. Development of this facility likely involved grading activities that would have likely removed or disturbed near surface soils. When this RV and self-storage facility was demolished, additional grading/earthmoving activities likely occurred that would have further reduced the potential for residual agricultural impacts.

- The Santa Ana Delhi Channel was observed bisecting the subsurface of the subject property. No hazardous materials or petroleum products were observed stored on the subject property, or near the Santa Ana Delhi Channel traversing the subject property. Therefore, these areas are not expected to represent a significant environmental concern. However, if future development in these areas is planned, AEI recommends contacting the Orange County Flood Control District as well as the local planning and/or building departments to determine what engineering controls and/or construction measures may be necessary prior to development.

- According to a review of aerial photographs, unidentified stockpiled soils were present on the subject property from at least 1972 to at least 1980. In 1972, the majority of the subject property appeared to be covered with rows of stockpiled soils. However by 1977, fewer stockpiles were visible in aerial photographs and by 1980, very few stockpiled soils remained. Aerials indicate that after the initial stockpiling in 1972, it does not appear that additional stockpiling occurred; which indicates that the stockpiling was likely a singular event likely associated with construction activities. The placement of these stockpiled soils from 1972-1980 corresponds with construction of the surrounding freeways. As such, these soils may correspond with excess soils during construction activities associated with the freeways. However, AEI was unable to verify this.

  In the 1989 aerial photograph, large stockpiled soils appear present as well as heavy construction activities. The flood channel formerly located on the eastern boundary of the subject property appears to be in the process of being diverted. This channel currently runs beneath the central and western portion of the property and it appears likely that the activities in this photograph correspond to the construction of the underground channel. However, AEI was unable to verify this.

As such, according to historical sources, stockpiled soils were formerly present on the subject property in the 1970s and 1980s, however, AEI was unable to verify the origin and nature of these soils. No indication was identified during the course of this investigation that these stockpiled soils would have likely contained any hazardous materials. Should the User desire a greater degree of certainty, subsurface sampling would be the most definitive course of action. However, based on the factors discussed above, as well as the redevelopment of the property with the former RV and self-storage facility (which likely involved grading activities that would have likely removed or disturbed near surface soils), this former soil stockpiling is not expected to represent a REC at this time.

Non-ASTM Considerations may include the presence of environmental conditions such as asbestos containing materials, lead-based paint, radon, mold, lead in drinking water, etc. which can affect the liabilities and financial obligations of the client, the health & safety of site occupants, and the value and marketability of the subject property. AEI's assessment has revealed the following Non-ASTM considerations associated with the subject property or nearby properties:

- Non-ASTM considerations were not identified during the course of this assessment.

CONCLUSIONS, OPINIONS AND RECOMMENDATIONS

We have performed a Phase I Environmental Site Assessment for the property located at 110 South East Bristol Street in the City of Costa Mesa, Orange County, California, in conformance with the scope and limitations of ASTM Standard Practice E1527-13 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312). Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report. This assessment has revealed no evidence of RECs in connection with the property. AEI recommends no further investigations for the subject property at this time.

TABLE OF CONTENTS

1.0 INTRODUCTION

This report documents the methods and findings of the Phase I Environmental Site Assessment (ESA) performed in conformance with the scope and limitations of ASTM Standard Practice E1527-13 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 1100 South East Bristol Street in the City of Costa Mesa, Orange County, California (Figure 1: Site Location Map, Figure 2: Site Map, and Appendix A: Property Photographs).

1.1 SCOPE OF WORK

The purpose of the Phase I Environmental Site Assessment is to assist the client in identifying potential environmental liabilities associated with the presence of any hazardous substances or petroleum products, their use, storage, and disposal at and in the vicinity of the subject property, as well as regulatory non-compliance that may have occurred at the subject property. Property assessment activities focused on: 1) a review of federal, state, tribal and local databases that identify and describe underground fuel tank sites, leaking underground fuel tank sites, hazardous waste generation sites, and hazardous waste storage and disposal facility sites within the ASTM approximate minimum search distance; 2) a property and surrounding site reconnaissance, and interviews with the past and present owners and current occupants and operators to identify potential environmental contamination; and 3) a review of historical sources to help ascertain previous land use at the site and in the surrounding area.

The goal of AEI Consultants in conducting the Phase I Environmental Site Assessment was to identify the presence or likely presence of any hazardous substances or petroleum products on the property that may indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum product into the soil, groundwater, or surface water of the property.

1.2 SIGNIFICANT ASSUMPTIONS

The following assumptions are made by AEI Consultants in this report. AEI Consultants relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, and personal interviews. AEI Consultants has reviewed and evaluated the thoroughness and reliability of the information derived from secondary sources including government agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, or personal interviews. It appears that all information obtained from outside sources and reviewed for this assessment is thorough and reliable. However, AEI cannot guarantee the thoroughness or reliability of this information.

Groundwater flow and depth to groundwater, unless otherwise specified by on-site well data, or well data from adjacent sites are assumed based on contours depicted on the United States Geological Survey topographic maps. AEI Consultants assumes the property has been correctly and accurately identified by the client, designated representative of the client, property contact, property owner, and property owner's representatives.

1.3 LIMITATIONS

Property conditions, as well as local, state, tribal and federal regulations can change significantly over time. Therefore, the recommendations and conclusions presented as a result of this study apply strictly to the environmental regulations and property conditions existing at the time the study was performed. Available information has been analyzed using currently accepted assessment techniques and it is believed that the inferences made are reasonably representative of the property. AEI Consultants makes no warranty, expressed or implied, except that the services have been performed in accordance with generally accepted environmental property assessment practices applicable at the time and location of the study.

Considerations identified by ASTM as beyond the scope of a Phase I ESA that may affect business environmental risk at a given property include the following: asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, mold, vapor intrusion, and high voltage lines. These environmental issues or conditions may warrant assessment based on the type of the property transaction; however, they are considered non-scope issues under ASTM Standard Practice E1527-13.

If requested by the client, these non-scope issues are discussed in Section 7.2. Otherwise, the purpose of this assessment is solely to satisfy one of the requirements for qualification of the innocent landowner defense, contiguous property owner or bona fide prospective purchaser under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). ASTM Standard Practice E1527-13 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) constitute the "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in:

1) 42 U.S.C § 9601(35)(B), referenced in the ASTM Standard Practice E1527-13.

2) Sections 101(35)(B) (ii) and (iii) of CERCLA and referenced in the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).

3) 42 U.S.C. 9601(40) and 42 U.S.C. 9607(q).

The Phase I Environmental Site Assessment is not, and should not be construed as, a warranty or guarantee about the presence or absence of environmental contaminants that may affect the property. Neither is the assessment intended to assure clear title to the property in question. The sole purpose of assessment into property title records is to ascertain a historical basis of prior land use. All findings, conclusions, and recommendations stated in this report are based upon facts, circumstances, and industry-accepted procedures for such services as they existed at the time this report was prepared (i.e., federal, state, and local laws, rules, regulations, market conditions, economic conditions, political climate, and other applicable matters). All findings, conclusions, and recommendations stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the property visit.

Responses received from local, state, or federal agencies or other secondary sources of information after the issuance of this report may change certain facts, findings, conclusions, or circumstances to the report. A change in any fact, circumstance, or industry-accepted

procedure upon which this report was based may adversely affect the findings, conclusions, and recommendations expressed in this report.

1.4 LIMITING CONDITIONS / DEVIATIONS

The performance of this Phase I Environmental Site Assessment was limited by the following condition(s):

AEI requested an interview with the subject property owner; however, the subject property owner has not responded as of this report date. Based on the quality of information obtained from other sources, this limitation is not expected to alter the overall findings of this assessment.

- On March 24, 2014, AEI contacted the Orange County Health Care Agency (OCHCA) for information on the subject property. Files at this agency may contain information regarding hazardous materials storage, as well as information regarding unauthorized releases of petroleum hydrocarbons or other contaminants that may affect the soil or groundwater in the area. However, records were not available for inclusion in this report. Based on the quality of information obtained from other sources (DTSC records, building Permits, City Directories, Historical Aerial Photographs), this limitation is not expected to alter the findings of this assessment.

- The User did not complete the ASTM User questionnaire or provide the User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this assessment.

- During the on-site reconnaissance, AEI was granted full access to the subject property except for the fenced off and locked gated Santa Ana Delhi Channel that bisects the ground beneath the subject property. This limitation is not expected to significantly alter the findings of this assessment.

1.5 DATA GAPS AND DATA FAILURE

According to ASTM E1527-13, data gaps occur when the Environmental Professional is unable to obtain information required, despite good faith efforts to gather such information.

Data failure is one type of data gap. According to ASTM E1527-13 “data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met”. Pursuant to ASTM Standards, historical sources are required to document property use back to the property’s first developed use or back to 1940, whichever is earlier.

The following data gaps were identified during the course of this assessment:

Data Gap:	The lack of historical sources for the subject property dating back to first developed use represents historical data source failure.				
Does this data gap affect the EP’s ability to identify RECs?		Yes		No	X
Rationale	The oldest historical resources is are a city directory listing in 1925 for a Raitt Dairy and a 1927 aerial photograph that depicts the use of the subject property				

	as fallow/agricultural and undeveloped land. It is assumed that prior to 1927 the subject property would have been used for similar purposes, if not undeveloped. Based on this notion, this limitation is not expected to significantly alter the findings of this investigation.
Information/ sources consulted	Historic aerial photographs, building records, Sanborn maps, and city directories

1.6 RELIANCE

All reports, both verbal and written, are for the benefit of G.A. Nicoll and Associates. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by G.A. Nicoll and Associates on March 20, 2014. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

2.0 SITE AND VICINITY DESCRIPTION

2.1 SITE LOCATION AND DESCRIPTION

The subject property, which consists of a vacant lot, is located on the northeast side of Bristol Street in a commercial area of Costa Mesa, California. The property totals approximately 5 acres and is currently not improved with any structures. The subject property is currently vacant. The property is improved with a concrete wall, asphalt-paved entrance area, and associated landscaping. The majority of the subject property lot is unpaved and is covered with gravel. Additionally the Santa Ana Delhi Channel bisects the subject property.

The subject property was identified in the regulatory database as a Clandestine Drug Labs (CDL) site and a Facility and Manifest Data (HAZNET) site and is further discussed in Section 5.1.

The Assessor's Parcel Number (APN) for the subject property is 427-363-01. According to Mr. John S. Chiaravalloti, heating and cooling systems on the subject property are fueled by natural gas and electricity provided by Southern California Gas Company and California Edison, respectively, and potable water and sewage disposal are provided by the city of Costa Mesa.

Refer to Figure 1: Site Location Map, Figure 2: Site Map, and Appendix A: Property Photographs for site location.

2.2 SITE AND VICINITY CHARACTERISTICS

The subject property is located in a commercial area of Costa Mesa. The immediately surrounding properties consist of the following:

Direction from Site	Address-Tenant/Use
North	Vacant Land, followed by highway on ramps
Northeast	Corona Del Mar Freeway/ Route 73
East	Corona Del Mar Freeway/ Route 73
Southeast	Santa Ana Delhi Channel followed by Ganahl Lumber Co (1275 Bristol Street)
South	Bristol Street followed by Santa Ana Delhi Channel and The Missions Apartments (1330 South East Bristol Street)
West	Bristol Street followed by Acapulco Restaurant (Extra Storage Costa Mesa (1250 Bristol Street), Airport Irvine Animal (1206 Bristol Street) Medical Office Building (1202 Bristol Street), Medical Office Building (1182 Bristol Street), Office Building (1124 Bristol Street), ACS Architectural Services (1122 Bristol Street) Shorepoint Insurance (1120 Bristol Street), Farmers Insurance (1072 Bristol Street)
Northwest	Intersection of Bristol Street and Newport Boulevard followed by vacant land

The adjacent site to the south, 1275 South Bristol Street was identified in the regulatory database as an Underground Storage Tank (UST) site, a Statewide Environmental Evaluation and Planning System UST (SWEEPS UST) site, a Historical UST (Hist UST) site, and a Facility Inventory Database Underground Storage Tank (CA FID UST) site. Please refer to Section 5.1.

2.3 PHYSICAL SETTING

Geology: According to the United States Department of Agriculture Soil Conservation Service Soil Survey of Orange County, the subject property is underlain by soils of the Myford Series. The Myford series consists of moderately well drained soils on marine terraces. These soils formed in sandy sediments. Slopes are 0 to 30 percent. Elevation ranges from 50 to 1,500 feet. In a typical profile the surface layer is pale brown and pinkish gray, medium acid sandy loam four inches thick. The subsurface layer is pinkish gray, medium acid sandy loam eight inches thick. The upper six inches of the subsoil is brown, medium acid sandy clay; the next seventeen inches is brown, neutral and moderately light brown, calcareous sandy clay loam and sandy loam. The substratum is very pale brown slightly acid sandy loam to a depth of 79 inches or more. Myford soils are used for citrus, pasture, range, barley, and urban development.	
USGS Topographic Map:	Newport Beach, California Quadrangle
Nearest surface water to subject property :	Santa Ana Delhi Channel/located on and abutting the subject property
Gradient Direction/Source:	East-Southeast/Topographic map interpretation
Estimated Depth to Groundwater/Source:	25-27 feet bgs/ Geotracker Website

3.0 HISTORICAL REVIEW OF SITE AND VICINITY

3.1 HISTORICAL SUMMARY

Reasonably ascertainable standard historical sources as outlined in ASTM Standard E1527-13 were used to determine previous uses and occupancies of the subject property that are likely to have led to RECs in connection with the subject property. A chronological summary of historical data found, including but not limited to aerial photographs, historic city directories, Sanborn fire insurance maps and agency records is as follows:

Date Range	Subject Property Description/Use	Source(s)
1927-1947	Undeveloped and agricultural and with a river running through it	Historical Aerial Photographs,
1952-1993	Vacant land with a river running through it and soil stock piles	Historical Aerial Photographs
1994-2008	Bristol Street Mini Storage and RV Storage	Historical Aerial Photographs, City Directories and Building Records
2009-2014	Vacant lot	Historical Aerial Photographs, City Directories and Building Records

According to historical sources, the current subject property has been a vacant lot since 2009. The subject property was a mix of undeveloped land and agricultural land with a river running through it from at least 1927 through 1947. By 1952 the subject property was only vacant land with a river running through it with what appears to be soil stock piles being stored on likely to be there because of the Santa Ana Delhi Channel construction and future road/highway development. The subject property remained undeveloped until 1994 when Bristol Street Mini Storage and RV Storage was constructed. Bristol Street Mini Storage and RV Storage occupied the subject property from 1994 until 2008.

Based on a review of aerial photographs, there is a potential that portions of the subject property were historically used for agricultural purposes. There is a potential that agricultural chemicals, such as pesticides, herbicides and fertilizers, were used onsite, and that the subject property has been impacted by the use of such agricultural chemicals. In general, historical agricultural use is not the subject of environmental enforcement actions by regulatory agencies, and therefore, could be considered a de minimis condition. However, AEI understands that the subject property is slated for commercial redevelopment. Consequently, it would be prudent for the owner of the subject property to determine whether sampling relating to the former agricultural use of the subject property is required by the local planning department or other applicable oversight agency prior to the commencement of redevelopment activities. However, it should be noted that the subject property was developed with a former RV and self-storage facility from 1994 until 2008. Development of this facility likely involved grading activities that would have likely removed or disturbed near surface soils. When this RV and self-storage facility was demolished, additional grading/earthmoving activities likely occurred that would have further reduced the potential for residual agricultural impacts.

According to a review of aerial photographs, unidentified stockpiled soils were present on the subject property from at least 1972 to at least 1980. In 1972, the majority of the subject

property appeared to be covered with rows of stockpiled soils. However by 1977, fewer stockpiles were visible in aerial photographs and by 1980, very few stockpiled soils remained. Aerials indicate that after the initial stockpiling in 1972, it does not appear that additional stockpiling occurred; which indicates that the stockpiling was likely a singular event likely associated with construction activities. The placement of these stockpiled soils from 1972-1980 corresponds with construction of the surrounding freeways. As such, these soils may correspond with excess soils during construction activities associated with the freeways. However, AEI was unable to verify this.

In the 1989 aerial photograph, large stockpiled soils appear present as well as heavy construction activities. The flood channel formerly located on the eastern boundary of the subject property appears to be in the process of being diverted. This channel currently runs beneath the central and western portion of the property and it appears likely that the activities in this photograph correspond to the construction of the underground channel. However, AEI was unable to verify this.

As such, according to historical sources, stockpiled soils were formerly present on the subject property in the 1970s and 1980s, however, AEI was unable to verify the origin and nature of these soils. No indication was identified during the course of this investigation that these stockpiled soils would have likely contained any hazardous materials. Should the User desire a greater degree of certainty, subsurface sampling would be the most definitive course of action. However, based on the factors discussed above, as well as the redevelopment of the property with the former RV and self-storage facility (which likely involved grading activities that would have likely removed or disturbed near surface soils), this former soil stockpiling is not expected to represent a REC at this time.

If available, copies of historical sources are provided in the report appendices.

3.2 AERIAL PHOTOGRAPH REVIEW

AEI Consultants reviewed aerial photographs of the subject property and surrounding area. Aerial photographs were reviewed for the following years:

Date(s)	Scale	Subject Property Description	Surrounding Area Descriptions
1927	1:500	Fallow/agricultural land and undeveloped land with a river cutting through the property north to south	**North:** Undeveloped land with a river **Northeast:** undeveloped land with a river **East:** undeveloped land with a river **Southeast:** undeveloped land with a river **South:** Undeveloped land with a river and roadway **West:** Roadway way followed by undeveloped land with two detention ponds **Northwest:** Roadway way followed by undeveloped land

1938	1:500	Agricultural land and undeveloped land with a river cutting through the property north to south	**North:** No significant changes **Northeast:** No significant changes **East:** Agricultural land **Southeast:** Undeveloped land followed by agricultural land **South:** No significant changes **West:** No significant changes **Northwest:** Roadway way followed by agricultural land
1947	1:500	No significant changes	**North:** No significant changes **Northeast:** No significant changes **East:** No significant changes **Southeast:** No significant changes **South:** No significant changes **West:** Roadway way followed by residential structures **Northwest:** Roadway way followed by residential structures
1952	1:500	Fallow/agricultural land and undeveloped land with a river cutting through the property north to south	**North:** No significant changes **Northeast:** Fallow agricultural land **East:** Fallow agricultural land **Southeast:** Fallow agricultural land **South:** No significant changes **West:** No significant changes **Northwest:** No significant changes
1963	1:500	Vacant land with the river bisecting the northeast portion of the subject property.	**North:** Vacant land **Northeast:** Vacant land and a river **East:** Vacant land **Southeast:** Vacant land **South:** No significant changes **West:** No significant changes **Northwest:** No significant changes
1972	1:500	Vacant land with soil stockpiles; entrance along Bristol. River has been diverted and now consists of a channel along the eastern property boundary.	**North:** Vacant land and stockpiled soils **Northeast:** No significant changes **East:** No significant changes **Southeast:** No significant changes **South:** Roadway followed by current river channel followed by current residential development **West:** Roadway followed by commercial structures **Northwest:** Roadway followed by vacant land

1977	1:500	No significant changes; fewer stockpiles are present	**North:** Vacant land **Northeast:** Current highway **East:** Current highway **Southeast:** Current lumber yard **South:** Current roadway followed by current river channel followed by current residential development **West:** Roadway followed by commercial structures **Northwest:** Roadway followed by vacant land
1980*	1:500	Significantly fewer stockpiles are present; largely vacant land	No significant changes
1989	1:500	Large stockpiled soils appear as well as heavy construction activities. The flood channel formerly located on the eastern boundary of the subject property appears to be in the process of being diverted. This channel currently runs beneath the central and western portion of the property and the activities in this photograph may correspond to the construction of the underground channel.	No significant changes
1995	1:500	Former Mini Storage facility; former flood channel no longer visible	**North:** Vacant land **Northeast:** Current highway **East:** Current highway **Southeast:** Current lumber yard **South:** Current roadway followed by current river channel followed by current residential development **West:** Roadway followed by commercial structures **Northwest:** Roadway followed by vacant land
2005	1:500	Former Mini Storage facility	**North:** Vacant land **Northeast:** Current highway **East:** Current highway **Southeast:** Current lumber yard **South:** Current roadway followed by current river channel followed by current residential development **West:** Current roadway followed by current commercial structures **Northwest:** Current roadway followed by vacant land

2009 2010 2012	1:500	Current vacant lot	**North:** Vacant land **Northeast:** Current highway **East:** Current highway **Southeast:** Current lumber yard **South:** Current roadway followed by current river channel followed by current residential development **West:** Current roadway followed by current commercial structures **Northwest:** Current roadway followed by vacant land

*=Reviewed on www.historicaerials.com and due to copyright restrictions, a copy was not provided in the appendices.

3.3 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance maps were developed in the late 1800s and early 1900s for use as an assessment tool for fire insurance rates in urbanized areas. A search was made of EDR's collection of Sanborn Fire Insurance maps.

Sanborn map coverage was not available for the subject property.

3.4 CITY DIRECTORIES

A search of historic city directories was conducted for the subject property by EDR. Directories were available and reviewed for the years 1920, 1921, 1922, 1925, 1926, 1930, 1936, 1941, 1945, 1946, 1950, 1952, 1955, 1956, 1960, 1961, 1965, 1966, 1970, 1971, 1975, 1980, 1986, 1991, 1992, 1995, 1997, 2001, 2002, 2003, 2008, and 2013. The following table summarizes the results of the city directory search.

City Directory Search Results

Date(s)	Occupant Listed
1920-1922	Not Listed
1925	Raitt Dairy
1926-1992	Not Listed
1995-2008	Bristol Street Mini Storage and RV Storage (including 1204 Bristol Street in 1995 which seems to be an error)
2013	Not Listed

According to a review of historical city directories, the subject property address was occupied by Raitt Dairy in 1925. The subject property was not listed in any directories from 1926 through 1992. The former tenant Bristol Street Mini Storage and RV Storage was first identified under the address 1204 Bristol Street in 1995. The address associated with this listing appears to be an error. The former tenant Bristol Street Mini Storage and RV Storage is identified as the subject property from 2002 through 2008. The subject property is not listed after 2008.

The subject property was identified as a dairy in 1925; in the 1927 aerial photograph the subject property was identified as vacant/agricultural land. This former dairy may have been associated with a larger facility as no structures were identified on the subject property during this time. Former agricultural uses are further discussed in Section 3.1.

3.5 HISTORICAL TOPOGRAPHIC MAPS

In accordance with our approved scope of services, historical topographic maps were not reviewed as a part of this assessment.

3.6 CHAIN OF TITLE

In accordance with our approved scope of services, a Chain of Title search was not performed as part of this assessment.

4.0 REGULATORY AGENCY RECORDS REVIEW

4.1 REGULATORY AGENCIES

Local and state agencies, such as environmental health departments, fire prevention bureaus, and building and planning departments are contacted to identify any current or previous reports of hazardous materials use, storage, and/or unauthorized releases that may have impacted the subject property. In addition, information pertaining to Activity and Use Limitations (AULs), defined as legal or physical restrictions, or limitations on the use of, or access to, a site or facility, is requested.

4.1.1 HEALTH DEPARTMENT

On March 24, 2014, AEI contacted the Orange County Health Care Agency (OCHCA) for information on the subject property. Files at this agency may contain information regarding hazardous materials storage, as well as information regarding unauthorized releases of petroleum hydrocarbons or other contaminants that may affect the soil or groundwater in the area. However, records were not available for inclusion in this report. Based on the quality of information obtained from other sources (DTSC records, building Permits, City Directories, Historical Aerial Photographs), this limitation is not expected to alter the findings of this assessment.

4.1.2 FIRE DEPARTMENT

On March 24, 2014 AEI contacted the Costa Mesa Fire Department (CMFD) for information on the subject property to identify any evidence of previous or current hazardous material usage.

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the CMFD.

4.1.3 BUILDING DEPARTMENT

On March 24, 2014, AEI contacted the Costa Mesa Building Department (CMBD) for information on the subject property in order to identify historical tenants and property use. Please refer to the following table for a listing of permits reviewed:

Building Permits Reviewed

Year(s)	Owner/Applicant	Description of Permit/Building Use
1994	Orange County Flood Control	Permit to construct new mini storage and RV facility
1994	Orange County Flood Control	Grading permit for new mini storage and RV facility
1994	Orange County Flood Control/Instant Storage	Wall permit
1994	Orange County Flood Control/Instant Storage	Permit to construct office
1994	Orange County Flood Control/Instant Storage	Permit to construct trash enclosure
1994	Orange County Flood Control/Instant Storage	Permit to construct flag pole
1994	Orange County Flood Control/Instant Storage	Permit to construct sign permit for Bristol Street Mini Storage and RV Storage

Year(s)	Owner/Applicant	Description of Permit/Building Use
1997	Orange County Flood Control	Plumbing
2008	Orange County Flood Control	Electrical permit for irrigation

No information indicating current or prior use or storage of hazardous materials, or the existence of AULs was on file for the subject property with the CMBD.

4.1.4 PLANNING DEPARTMENT

On March 24, 2014, AEI contacted the Costa Mesa Planning Department (CMPD) for information on the subject property in order to identify AULs associated with the subject property.

No information indicating the existence of AULs was on file for the subject property with the CMPD. However the CMPD did state that the Orange County Flood Control owned the subject property.

4.1.5 COUNTY ASSESSOR OFFICE

On April 15, 2014, AEI visited the Orange County assessor's office for information on the subject property in order to determine the earliest recorded date of development and use.

According to the Orange County assessor's office, the earliest recorded date of development on subject property was 1994, and the subject property was utilized for an office, residence, and storage facility.

4.1.6 DEPARTMENT OF OIL AND GAS

California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) maps concerning the subject property and nearby properties were reviewed. DOGGR maps contain information regarding oil and gas development.

According to the DOGGR map, there are no oil or gas wells within 500 feet of the subject property. No environmental concerns were noted during the DOGGR map review.

4.1.7 OTHER AGENCIES SEARCHED

On March 24, 2014, AEI visited the **Regional Water Quality Control Board's (RWQCB**) online GeoTracker database for information on the subject property and/or nearby sites of concern to identify any evidence of unauthorized releases of hazardous materials to the groundwater. Cases typically handled by the RWQCB include releases from underground storage tanks (USTs).

No information indicating any release of hazardous materials on the subject property was on file with the RWQCB.

South Coast Air Quality Management District (SCAQMD) On March 24, 2014, AEI visited the SCAQMD website for information regarding any records of Permits to Operate (PTO), Notices of Violation (NOV), or Notices to Comply (NTC) issued to occupants of the subject property and associated with air emission equipment primarily related to stationary sources of air pollution, such as dry cleaning machines, boilers, and/or underground storage tanks.

No information on the subject property was on file with the SCAQMD.

Department of Toxic Substances Control (DTSC) On March 24, 2014AEI visited the online Waste Tracking System (HWTS) database maintained by the DTSC for information regarding documented hazardous wastes generated at the subject property.

The following information regarding the generation of hazardous wastes was found on file for the subject property on the DTSC HWTS website:

Date	Business	Document type	Document Notes/Violations
2007	Brookfield Homes	Waste Code by Year Matrix	The subject property generated the following hazardous materials: 0.8000 ton of Methyl ethyl ketone

No further pertinent information was available on the DTSC HWTS website regarding the subject property. Although the above wastes were noted on the DTSC website, the subject property was not listed in the regulatory database as a RCRA generator, and as such it is presumed that the wastes generated would have been in quantities which did not trigger RCRA reporting requirements. Consequently, it is AEI's opinion that the listed wastes are not expected to represent a significant environmental concern.

AEI also interviewed as Mr. Adam Palmer of the DSTC Emergency Response Program for more information regarding the database CDL Listing. According to Mr. Palmer, the DTSC was called to remove drug lab equipment for storage container 327 on the subject property on January 7, 1998. The onsite manager called the police at the time of emptying the contents of abandoned storage unit when he observed suspicious items located in the unit. The local police then contacted the DTSC and told the onsite manger to leave them items for the Police and DTSC to remove offsite. The items were removed off site and the case was both opened and closed on January 7, 1998. No release case was listed. Due to the items being removed offsite and the demolition of the former storage facility structures this listing is not likely to represent a significant environmental concern.

5.0 REGULATORY DATABASE RECORDS REVIEW

AEI contracted Environmental Data Resources (EDR) to conduct a search of federal, state, tribal, and local databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-13 are summarized in the following table. A copy of the regulatory database report is included in Appendix B of this report.

The subject property was identified in the regulatory database as a Clandestine Drug Labs (CDL) site and a Facility and Manifest Data (HAZNET) site and is further discussed in Section 5.1.

In determining if a site is a potential environmental concern to the subject property in the records summary table below, AEI has applied the following criteria to classify the site(s) as low concern: 1) the site(s) only hold an operating permit (which does not imply a release), 2) the site(s) have been granted "No Further Action" by the appropriate regulatory agency, and/or 3) based upon AEI's review, the distance and/or topographic position relative to the subject property reduce the level of risk associated with the site(s).

5.1 RECORDS SUMMARY

Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Recognized Environmental Condition or Environmental Issue (Yes/No)
NPL	1	No	0	
DELISTED NPL	0.5	No	0	
CERCLIS	0.5	No	0	
CERCLIS NFRAP	0.5	No	0	
RCRA CORRACTS	1	No	0	
RCRA-TSD	0.5	No	0	
RCRA LG-GEN, SM-GEN, CESQGs, VGN, NLR	TP/ADJ	No	0	
US ENG CONTROLS	TP	No	0	
US INST CONTROLS	TP	No	0	
ERNS	TP	No	0	
STATE/TRIBAL HWS (includes Spills, SLIC, Envirostor, Historical Cal Sites for CA)	1	No	14	No, however a nearby site is discussed below
STATE/TRIBAL SWLF	0.5	No	2	No, however these two sites are further discussed below

Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Recognized Environmental Condition or Environmental Issue (Yes/No)
STATE/TRIBAL REGISTERED STORAGE TANKS	TP/ADJ	No	0	
STATE/TRIBAL LUST	0.5	No	14	No
STATE/TRIBAL ENG-INST CONTROLS	TP	No	0	
STATE/TRIBAL VCP	0.5	No	0	
STATE/TRIBAL BROWNFIELD	0.5	No	0	
ORPHAN	N/A	No	5	None of the identified orphan sites are located in the immediate vicinity (500-feet) of the subject property, and therefore, these sites are not expected to represent a significant environmental concern.
NON-ASTM DATABASES	TP/ADJ	No	2	No, however the subject property is further discussed below

Site Name: Storage Container @ 1100 South Bristol Street #327 & Brookfield Homes Database(s): CDL Address: 1100 South Bristol Street Distance: Subject Property Direction: Subject Property
Comments: According to the database the subject property was identified as a CDL site. Please refer to section 4.1.7 for further discussion. According to the database the subject property was identified as a HAZNET site in 2007 for 0.8 ton of off-specified, aged or surplus organics. This information is duplicative of the information discussed in DTSC HWTS website portion of 4.1.7. These listing are not expected to represent an environmental concern based on information further discussed in 4.1.7.

Site Name: Barr Lumber Database(s): HIST UST, UST, SWEEPS UST, and a CA FID UST Address: 1275 South Bristol Street Distance: Abutting Direction: South
Comments: According to the database this adjacent down gradient site is identified a HIST UST site for an 8,000-gallon UST of unleaded fuel installed in 1973. According to the UST, Sweeps UST, and FID UST this site is still an active UST site for an 8,000-gallon UST of Diesel fuel. No documented releases or violations were identified in the regulatory database or on the Geotracker Website. Based on the lack of a release, a review of regulatory records was not deemed necessary and this site is not expected to represent an environmental concern to the subject property at this time.

Site Name: CALTRANS Costa Mesa Maintenance Station Database(s): Solid Waste Facility/Landfill (SWF/LF) site, a California Hazardous material Incident Report System (CHMIRS) site, a Facility Index System (FINDS) site, Resource Conservation and Recovery Act Small Quantity Generator (RCRA-SQG) site, Address: 1090 South Bristol Street Distance: over 150 feet Direction: North
Comments: This nearby site was identified as RCRA-SQG site for the generation of Tetrachloroethylene in 2001. No further pertinent information was available. Detailed information on this listing was not provided in the regulatory database. This listing is presumed to be in association with the RCRA-SQG listing discussed above. Due to the lack of violations or a documented release, a review of regulatory records was not deemed necessary and this RCRA-SQG and FINDS listing are not expected to represent a significant environmental concern. According to the database this site was identified as a CHMIRS site for a blocked sewage release caused by a blockage in the main line that happened on October 14, 2013. The Costa Mesa Sanitary District responded and repaired and cleaned the release of sewage. No further pertinent information was available. Base on the nature of this release (sewage) this CHMIRS listing does not represent an environmental concern. According to the database this site was identified as a SWF/LF site (permitted in 2011). This site is listed as an active Limited Volume Transfer Operation operated by CAL Trans. The items listed as accepted wastes are green materials, mixed municipal, and tires. Based on the limited nature of this transfer site and the lack of any documented releases or violations, a review of regulatory records was not deemed necessary and this nearby site is not expected to represent an environmental concern to the subject property.

Site Name: Newport Avenue Station #1 Database(s): SWF/LF, a Waste Management Unit Database (WMUDS/SWAT) site Address: NW Corner of Newport FWY & Bristol 2700 Distance: over 700 feet Direction: North
Comments: According to the database this nearby site was identified as a SWF/LF and a WMUDS/SWAT site and stated this site was a solid waste disposal site. Detailed information on this listing was not provided in the regulatory database. According to the Geotracker Website this site was a 10-acre site filled with municipal solid waste, wood, concrete block, brick, glass, and cans. Most waste material disposed was identified as inert. No hazardous wastes are known to have been disposed at the site. Estimated volume of remaining waste is approximately 44,000 cubic yards after clean closure of two parcels. Orange County operated the site as a public rubbish disposal site from 1946-1955. In 1955 the county eased operations and closed the disposal station. In 1967 the county briefly operated site as a burn site subsequent to site closure. In 1993 a Water Solid Waste Assessment Test (SWAT) conducted and report submitted to the Regional Water Quality Control Board. In 1997 a Supplemental water SWAT reported no metals or Volatile Organic Compounds (VOCs) detected at concentrations exceeding maximum contaminant levels (MCLs), indicating that site has not impacted shallow groundwater. No further investigation required is stated for site. In 2000 was included in a Closed Landfill Environmental Assessment and Response (CLEAR) project. According to the DTSC ENVIROSTOR Website the closest well to the subject property (MW-5R) is located over 700 feet from the subject property. AEI reviewed site maps of this former Landfill on the GeoTracker website and no evidence suggest that landfill activities extended onto the subject property. According to the DTSC ENVIROSTOR Website the latest groundwater monitoring report results dated September 28, 2013 indicate that groundwater in the southern portion of this area flows to the northeast, away

from the subject property. Due to the factors discussed above, this nearby site is not expected to represent a REC to the subject property.

Site Name: Costa Mesa Air National Guard Database(s): ENVIROSTOR, HIST Cal-Sites, Cortese, RESPONSE Address: South of Presidio Drive & west of Newport BLVD Distance: Over 1,100 feet Direction: West
Comments: According to the database this site is an 8.5 acre facility. The facility is located on former Santa Ana Army Air base property. Activities include routine maintenance of vehicles, generators, and various ground equipment. Hazardous wastes resulting from these activities include varying amounts of waste fuels, oils, paints, thinners, and solvents. A preliminary assessment was submitted in December 1990 where a recommendation for NFA was concluded. In June 2002, a Phase II was submitted presenting the results of the soil and groundwater field investigations. A total of nine areas of concern (AOCs) were identified where potential risks to human health and the environment may exist. These include a battery room floor drain, motor vehicle lift area, fuel storage area, grease rack, oil and water separator, diesel refueller spill, groundwater sampling, lead-based paint sampling, and hydraulic fluid spill area. Contaminants detected include petroleum hydrocarbons, volatile organic compounds, and lead-based paint. The extent of contamination was not determined. DTSC submitted comments on August 26, 2002 not concurring with the No Further Action recommendations by the Air Force, and requested additional sampling to be conducted to determine the extent of contamination. According to the GeoTracker website the closest well to the subject property (MW-GR-3) is located over 1,000 feet from the subject property. According to the GeoTracker website the latest groundwater monitoring report results dated July, 2013 indicate that groundwater in this area flows to the west-southwest, away from the subject property. Due to the factors discussed above, this nearby site is not expected to represent a REC to the subject property.

5.2 VAPOR ENCROACHMENT

A Tier 1 Vapor Encroachment Screen (VES) pursuant to ASTM E2600-10 was performed as part of this assessment to determine whether a potential *vapor encroachment condition* (VEC) exists at the subject property. The VES included the review of reasonably ascertainable information for the subject and nearby properties. During the course of this assessment, a reasonable probability was not identified to indicate that a VEC exists at the subject property.

6.0 INTERVIEWS AND USER PROVIDED INFORMATION

6.1 INTERVIEWS

Pursuant to ASTM E1527-13, the following interviews were performed during this investigation in order to obtain information indicating RECs in connection with the subject property.

6.1.1 INTERVIEW WITH OWNER

AEI requested an interview with the subject property owner; however, the subject property owner has not responded as of this report date. Based on the quality of information obtained from other sources, this limitation is not expected to alter the overall findings of this assessment.

6.1.2 INTERVIEW WITH KEY SITE MANAGER

The key site manager, Mr. John S. Chiaravalloti, was interviewed in person on April 15, 2014. Mr. Chiaravalloti has been associated with the subject property since approximately 2013. Mr. Chiaravalloti provided general information regarding historic and current operations at the subject property. Mr. Chiaravalloti stated the subject property has been a vacant lot since approximately 2009 and is current owned by the Orange County Flood Control District. Mr. Chiaravalloti works for Ganahl Construction who recently signed a 25 year lease with the city and is planning to relocate the adjacent Ganahl Lumber Yard (1275 Bristol Street) to the subject property.

Mr. Chiaravalloti was asked if he was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property.		Yes	**X**	No
Any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.		Yes	**X**	No
Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.		Yes	**X**	No
Any incidents of flooding, leaks, or other water intrusion, and/or complaints related to indoor air quality.		Yes	**X**	No

6.1.3 PAST OWNERS, OPERATORS AND OCCUPANTS

In an attempt to interview past owners, operators and occupants regarding historical on-site operations, AEI requested the contact information for these entities from the subject property owner, Mr. John S. Chiaravalloti. Mr. John S. Chiaravalloti was unable to provide the contact information for the past owners, operators and occupants. Other methods of researching the contact information for past owners, operators and occupants performed by AEI included reviewing historical agency records and online research. None of these additional research methods provided AEI contact information for past owners, operators and occupants. Consequently, interviews with these entities regarding historical on site operations were not reasonably ascertainable which constitutes a data gap.

6.1.4 INTERVIEW WITH OTHERS

Information obtained during interviews with local government officials is incorporated into the appropriate segments of this section.

6.2 USER PROVIDED INFORMATION

User provided information is intended to help identify the possibility of RECs in connection with the subject property. According to ASTM E1527-13 and EPA's AAI Rule, certain items should be researched by the prospective landowner or grantee, and the results of such inquiries may be provided to the environmental professional. The responsibility for qualifying for Landowner Liability Protections (LLPs) by conducting the inquiries ultimately rests with the User, and providing the information to the environmental professional would be prudent if such information is available.

The User did not complete the ASTM User questionnaire or provide the User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this assessment. However the prospective tenant of the subject property, Mr. Brad Satterfield General Manager of Ganahl Lumber Co completed the questionnaire out. A copy of Mr. Satterfield's question is provided in the appendices. According to the questionnaire Mr. Satterfield stated the subject property is currently a vacant lot and was formerly developed with a self-storage business and before that subject property was utilized as a storage yard and Christmas tree lot by the county of Orange.

6.3 PREVIOUS REPORTS AND OTHER PROVIDED DOCUMENTATION

No prior reports or relevant documentation in association with the subject property were made available to AEI during the course of this assessment.

7.0 SITE INSPECTION AND RECONNAISSANCE

On April 15, 2014, a site reconnaissance of the subject property and adjacent properties was conducted by Ms. Kelly McMann of AEI in order to obtain information indicating the likelihood of RECs at the subject property and adjacent properties as specified in ASTM Standard Practice E1527-13 §8.4.2, 8.4.3 and 8.4.4. During the on-site reconnaissance, AEI was accompanied by Mr. John S. Chiaravalloti, of Ganahl Construction the intended future tenant of the subject property. During the on-site reconnaissance, AEI was granted full access to the subject property except for the fenced off and locked gated Santa Ana Delhi Channel that bisects the ground beneath the subject property. This limitation is not expected to significantly alter the findings of this assessment.

7.1 SUBJECT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation
	X	Hazardous Substances and/or Petroleum Products in Connection with Property Use
	X	Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs / USTs)
	X	Hazardous Substance and Petroleum Product Containers and Unidentified Containers not in Connection with Property Use
	X	Unidentified Substance Containers
	X	Electrical or Mechanical Equipment Likely to Contain Fluids
	X	Interior Stains or Corrosion
	X	Strong, Pungent or Noxious Odors
	X	Pools of Liquid
	X	Drains, Sumps and Clarifiers
	X	Pits, Ponds and Lagoons
	X	Stained Soil or Pavement
	X	Stressed Vegetation
	X	Solid Waste Disposal or Evidence of Fill Materials
	X	Waste Water Discharges
	X	Wells
	X	Septic Systems
X		Other

The subject property is currently vacant. The above identified observed items are further discussed below.

OTHER

The Santa Ana Delhi Channel was observed bisecting the subsurface of the subject property. No hazardous materials or petroleum products were observed stored on the subject property, or near the Santa Ana Delhi Channel traversing the subject property. Therefore, these areas are not expected to represent a significant environmental concern. However, if future development in these areas is planned, AEI recommends contacting the Orange County Flood Control District

as well as the local planning and/or building departments to determine what engineering controls and/or construction measures may be necessary prior to development.

7.2 NON-ASTM SERVICES

7.2.1 ASBESTOS-CONTAINING BUILDING MATERIALS

The subject property is currently vacant land or lacks structures. Consequently, no building components containing suspect asbestos containing materials were identified during the site inspection.

7.2.2 LEAD-BASED PAINT

The subject property is currently vacant land or lacks structures. Consequently, no building components containing suspect lead-based paint were identified during the site inspection.

7.2.3 RADON

Radon is a naturally-occurring, odorless, invisible gas. Natural radon levels vary and are closely related to geologic formations. Radon may enter buildings through basement sumps or other openings.

The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action limit of 4.0 picoCuries per Liter (pCi/L). It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not requested as part of this investigation. According to the US EPA, the radon zone level for the area is Zone 3, which has a predicted average indoor screening level less than 2.0 pCi/L, below the action level of 4.0 pCi/L set forth by the EPA.

7.2.4 DRINKING WATER SOURCES AND LEAD IN DRINKING WATER

The city of Costa Mesa Public Utilities supplies potable water to properties in the vicinity of the subject property. The most recent water quality report states that lead levels in the areas water supply were well within standards established by the USEPA.

7.2.5 MOLD / INDOOR AIR QUALITY ISSUES

The subject property is currently vacant land or lacks structures. Consequently, mold was not addressed as part of this assessment.

7.3 ADJACENT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation
	X	Hazardous Substances and/or Petroleum Products in Connection with Property Use
	X	Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs / USTs)
	X	Hazardous Substance and Petroleum Product Containers and Unidentified Containers not in Connection with Property Use
	X	Unidentified Substance Containers
	X	Electrical or Mechanical Equipment Likely to Contain Fluids
	X	Strong, Pungent or Noxious Odors
	X	Pools of Liquid
	X	Drains, Sumps and Clarifiers
	X	Pits, Ponds and Lagoons
	X	Stained Soil or Pavement
	X	Stressed Vegetation
	X	Solid Waste Disposal or Evidence of Fill Materials
	X	Waste Water Discharges
	X	Wells
	X	Septic Systems
	X	Other

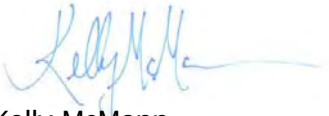
None of the above listed items were observed during the site inspection.

8.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

By signing this report, the senior author declares that, to the best of his or her professional knowledge and belief, he or she meets the definition of *Environmental Professional* as defined in §312.10 of 40 CFR Part 312.

The senior author has the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. The senior author has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40CFR Part 312.

Prepared By:



Kelly McMann
Project Manager

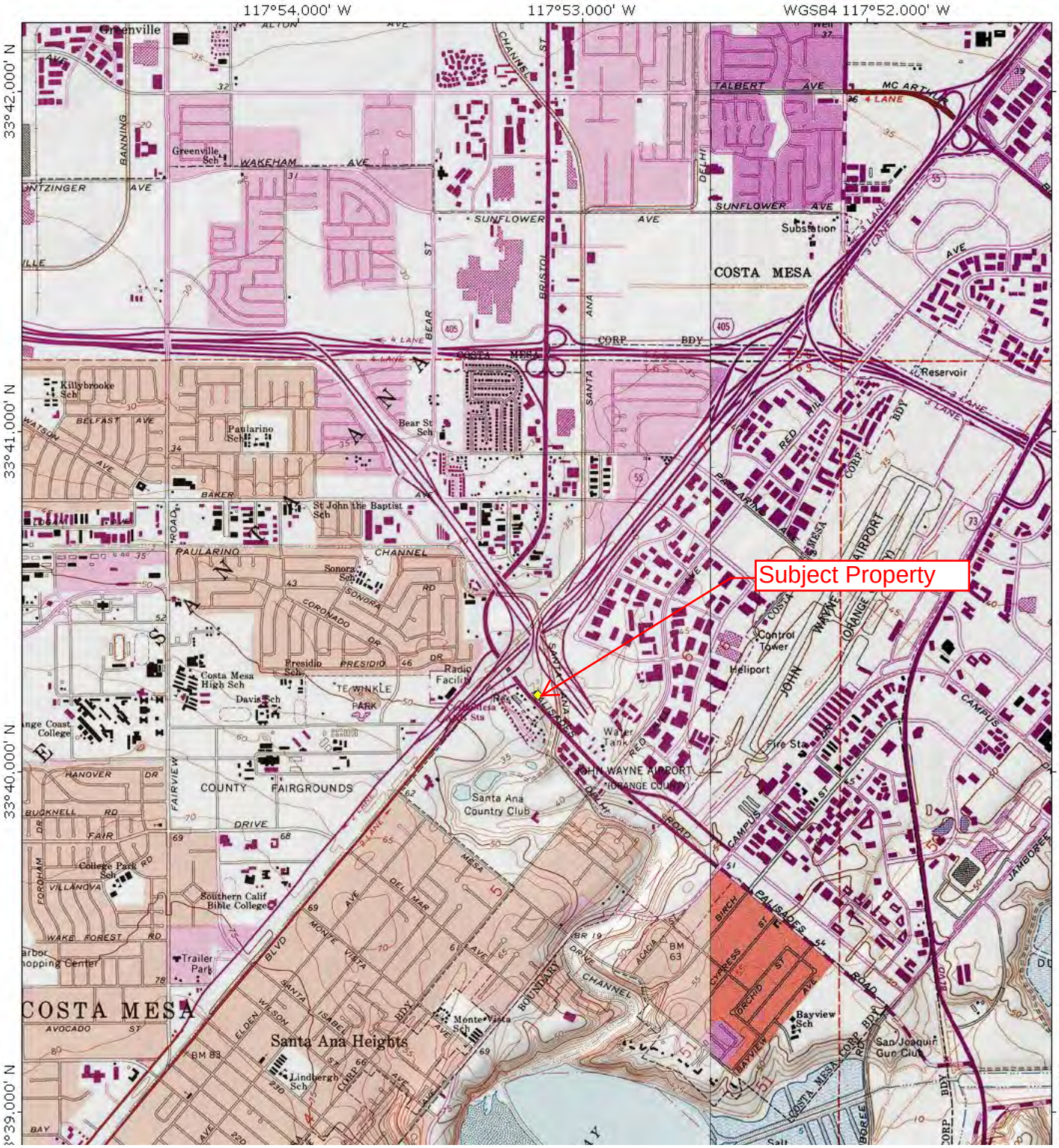
Reviewed By:

Victor DeTroy
Senior Author

9.0 REFERENCES

Item	Date(s)	Source
Regulatory Database Report	March 24, 2014	Environmental Data Resources, Inc. (EDR)
Aerial Photographs	1927-2012 (not inclusive)	EDR
Building Records	1983-1998	Costa Mesa Building Department
Newport Beach, California Quadrangle Topographic Map	1978 and photo revised 1981	United States Geological Survey
Sanborn Maps Search	March 24, 2014	EDR
Air Quality Records Search	March 24, 2014	The South Coast Air Quality Management District http://www3.aqmd.gov/webappl/fim/prog/search.aspx
Fire Records	March 24, 2014	Costa Mesa Fire Department
Utilities Records	March 24, 2014	Costa Mesa Department of Utilities
Department of Toxic Substance Control (DTSC) Hazardous Waste Tracking System (HWTS) Records Search	March 24, 2014	Department of Toxic Substance Controls http://hwts.dtsc.ca.gov/report_search.cfm?id=5
RWQCB GeoTracker Database Search	March 24, 2014	Regional Water Quality Control Board http://geotracker.waterboards.ca.gov/
UST HAZMAT Records	March 24, 2014	Costa Mesa Fire Department
Health Department Records	March 24, 2014	Orange County Health Care Agency (OCHCA)
Radon Zone Information	1993	United States Environmental Protection Agency
Assessor Information	April 3, 2014	Orange County Assessor's Office
Soils Information	1997	California Soil Resources Lab, Online Soil Survey
Department of Oil, Gas, and Geothermal Resources Well Records Search	March 24, 2014	California Department of Conservation, Division of Oil, Gas, and Geothermal Resources http://maps.conservation.ca.gov/doms/index.html
City Directory Search	March 24, 2014	EDR

FIGURES



SITE LOCATION MAP

1100 South East Bristol Street, Costa Mesa, California 92626

N

Source: USGS Topographic Map,

Newport Beach Quadrangle, California (1981)

FIGURE 1

Project Number: 328646

AEI Consultants

SITE MAP

1100 South East Bristol Street, Costa Mesa, California 92626*

N

Legend

Approximate Property Boundary

Inferred Direction of Groundwater Flow (East-souteast)

* Listed in Regulatory Database

FIGURE 2

Project Number: 328646

AEI Consultants

APPENDIX A

PROPERTY PHOTOGRAPHS

1. View of the subject property's western property line facing east.

2. View of the entrance located on the subject property facing west.

3. View of the subject property's western property line facing southeast

4. View of the subject property's western property line facing northeast

5. View of the eastern portion of the subject property facing southwest.

6. View of the central portion of the subject property facing southeast.

7. View of the Santa Ana Delhi Channel located on the subject property.

8. Alternate view of the Santa Ana Delhi Channel located on the subject property.

9. View of the central portion of the subject property facing southwest.

10. View of an irrigation feature located on the subject property.

11. View of the entrance located on the subject property facing west.

12. View of the central portion of the subject property facing north.

13. View of the central portion of the subject property facing northwest.

14. View of adjacent properties to the south of the subject property.

15. View of an adjacent property to the south of the subject property.

16. View of an adjacent property to the south of the subject property.

17. View of the adjacent property to the southeast of the subject property.

18. View of an adjacent property to the south of the subject property.

19. View of an adjacent property to the south of the subject property.

20. View of the adjacent property to the north of the subject property.

APPENDIX B

REGULATORY DATABASE

328646
1100 Bristol Street
Costa Mesa, CA 92626

Inquiry Number: 3888392.2s
March 24, 2014

The EDR Radius Map™ Report

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1100 BRISTOL STREET
COSTA MESA, CA 92626

COORDINATES

Latitude (North):	33.6706000 - 33° 40' 14.16''
Longitude (West):	117.8860000 - 117° 53' 9.60''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	417862.2
UTM Y (Meters):	3725792.5
Elevation:	29 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33117-F8 NEWPORT BEACH (DIGITAL), CA
Most Recent Revision:	0
East Map:	33117-F7 TUSTIN, CA
Most Recent Revision:	1981

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
BROOKEFIELD HOMES 1100 BRISTOL ST COSTA MESA, CA 92626	HAZNET	N/A
STORAGE CONT. @ 1100 S BRISTOL, # STORAGE CONT. @ 1100 S BRISTOL, #327 COSTA MESA, CA 92626	CDL	N/A

EXECUTIVE SUMMARY

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

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

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-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls
LUCIS ---------- Land Use Control Information System

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ---- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---- Underground Storage Tanks on Indian Land
FEMA UST ---- Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing
VCP ---- Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory
SWRCY ---- Recycler Database
HAULERS ---- Registered Waste Tire Haulers Listing
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---- Clandestine Drug Labs
SCH ---- School Property Evaluation Program
Toxic Pits ---- Toxic Pits Cleanup Act Sites
US HIST CDL ---- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---- CERCLA Lien Information
LIENS ---- Environmental Liens Listing
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
Orange Co. Industrial Site ---- List of Industrial Site Cleanups
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ---- RCRA - Non Generators
DOT OPS ---- Incident and Accident Data
DOD ---- Department of Defense Sites
CONSENT ---- Superfund (CERCLA) Consent Decrees

ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA BOND EXP. PLAN	Bond Expenditure Plan
NPDES	NPDES Permits Listing
UIC	UIC Listing
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
ENF	Enforcement Action Listing
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
PRP	Potentially Responsible Parties
WDS	Waste Discharge System
US AIRS	Aerometric Information Retrieval System Facility Subsystem
MWMP	Medical Waste Management Program Listing
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing
US FIN ASSUR	Financial Assurance Information
PCB TRANSFORMER	PCB Transformer Registration Database
Financial Assurance	Financial Assurance Information Listing
PROC	Certified Processors Database
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
LEAD SMELTERS	Lead Smelter Sites

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List

EXECUTIVE SUMMARY

RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 09/10/2013 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CAL DEPT OF TRANSPORTATION	***1090 S BRISTOL ST***	***SSW 0 - 1/8 (0.032 mi.)***	***B4***	***10***

State- and tribal - equivalent NPL

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, and dated 02/03/2014 has revealed that there is 1 RESPONSE site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COSTA MESA AIR NATIONAL GUARD	***S OF PRESIDIO DR & WEST***	***WNW 1/8 - 1/4 (0.248 mi.)***	***14***	***19***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which

there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 02/03/2014 has revealed that there are 10 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COSTA MESA AIR NATIONAL GUARD Status: Active	***S OF PRESIDIO DR & WEST***	***WNW 1/8 - 1/4 (0.248 mi.)***	***14***	***19***
AL & J'S CLEANERS Status: Refer: 1248 Local Agency	270 BRISTOL STREET, NO.	SE 1/4 - 1/2 (0.279 mi.)	F18	31
(CMAFP) SANTA ANA AIRUG Status: Inactive - Needs Evaluation		WSW 1/4 - 1/2 (0.351 mi.)	25	43
EXOTIC MATERIAL INC Status: Refer: Other Agency	2930 BRISTOL ST	N 1/4 - 1/2 (0.449 mi.)	I29	53
KNIGHT EQUIPMENT CORP Status: Refer: Other Agency	***2955 AIRWAY AVE***	***E 1/2 - 1 (0.523 mi.)***	***36***	***67***
SIGMA CIRCUITS INC Status: Refer: Other Agency	***2970 AIRWAY AVE***	***E 1/2 - 1 (0.527 mi.)***	***37***	***68***
FRYE & SMITH, INC. Status: Inactive - Needs Evaluation	150 E. BAKER STREET	NE 1/2 - 1 (0.756 mi.)	38	76
ORANGE COUNTY AIRPORT Status: Inactive - Needs Evaluation		E 1/2 - 1 (0.816 mi.)	40	80
SANTA ANA AAB Status: Inactive - Needs Evaluation		WSW 1/2 - 1 (0.856 mi.)	L41	81
CERADYNE, INC. Status: Inactive - Needs Evaluation	***3169 REDHILL AVENUE***	***NE 1/2 - 1 (0.883 mi.)***	***43***	***83***

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 02/14/2014 has revealed that there are 2 SWF/LF sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CALTRANS COSTA MESA MAINTENANC	***1090 BRISTOL ST.***	***SSW 0 - 1/8 (0.032 mi.)***	***B3***	***8***
NEWPORT AVENUE STATION #1	NW CORNER OF NEWPORT AV	WNW 1/8 - 1/4 (0.210 mi.)	10	16

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 12/16/2013 has revealed that there are 14 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COASTAL COMMUNITY HOSPITAL	2701 BRISTOL ST	NW 1/8 - 1/4 (0.216 mi.)	D11	16
SHELL OIL	1512 BRISTOL	ENE 1/4 - 1/2 (0.269 mi.)	E15	26
SHELL SERVICE STATION	***1512 BRISTOL***	***ENE 1/4 - 1/2 (0.269 mi.)***	***E16***	***27***
Status: Completed - Case Closed				
THRIFTY OIL #008	***704***	***SE 1/4 - 1/2 (0.302 mi.)***	***19***	***32***
SOUTH PACIFIC CAR WASH	***2750 BRISTOL ST***	***NNW 1/4 - 1/2 (0.312 mi.)***	***G20***	***33***
Status: Completed - Case Closed				
SOUTH PACIFIC CAR WASH	2750 BRISTOL ST S	NNW 1/4 - 1/2 (0.312 mi.)	G21	36
ORANGE COUNTY DEPARTMENT OF ED	***200 KALMUS DR***	***ENE 1/4 - 1/2 (0.331 mi.)***	***22***	***37***
Status: Completed - Case Closed				
UNOCAL #5909	***1476 BRISTOL ST***	***SE 1/4 - 1/2 (0.335 mi.)***	***H23***	***40***
Status: Completed - Case Closed				
BRISTOL PLAZA CHEVRON	300 BRISTOL ST	SE 1/4 - 1/2 (0.358 mi.)	26	44
Status: Completed - Case Closed				
ANTIMITE PEST CONTROL	696 RANDOLPH AVE	N 1/4 - 1/2 (0.421 mi.)	28	50
Status: Completed - Case Closed				
VISTA PAINT	***2931 BRISTOL ST***	***N 1/4 - 1/2 (0.459 mi.)***	***I30***	***54***
Status: Completed - Case Closed				
SANTA ANA COUNTRY CLUB	***20241 SANTA ANA AVE***	***S 1/4 - 1/2 (0.476 mi.)***	***J31***	***56***
Status: Completed - Case Closed				
PEP BOYS #660	2946 BRISTOL	N 1/4 - 1/2 (0.484 mi.)	K33	63
PEP BOYS #660	***2946 BRISTOL ST***	***N 1/4 - 1/2 (0.484 mi.)***	***K34***	***64***
Status: Completed - Case Closed				

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 12/16/2013 has revealed that there are 2 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BRISTOL VILLAGE CLEANERS	***260 BRISTOL ST***	***SE 1/4 - 1/2 (0.271 mi.)***	***F17***	***29***
Facility Status: Completed - Case Closed				
CREEKSIDE PROPERTY	2900 BRISTOL AVENUE	N 1/4 - 1/2 (0.395 mi.)	27	50
Facility Status: Completed - Case Closed				

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, and dated 12/16/2013 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FUTURE HARTS CARPETS	101 KALMUS DR	NE 1/8 - 1/4 (0.228 mi.)	13	19
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
BARR LUMBER	***1275 BRISTOL ST***	***SSE 1/8 - 1/4 (0.135 mi.)***	***C6***	***12***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, and dated 04/01/2000 has revealed that there is 1 WMUDS/SWAT site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NEWPORT AVENUE	NEWPORT & BRISTOL	NW 1/8 - 1/4 (0.218 mi.)	D12	18

Local Lists of Hazardous waste / Contaminated Sites

HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there is 1 HIST Cal-Sites site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COSTA MESA AIR NATIONAL GUARD	***S OF PRESIDIO DR & WEST***	***WNW 1/8 - 1/4 (0.248 mi.)***	***14***	***19***

Local Lists of Registered Storage Tanks

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are

2 CA FID UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BARR LUMBER	1275 BRISTOL ST	SSE 1/8 - 1/4 (0.135 mi.)	C7	13
SOUTH COAST SHELL	***1512 SEBRISTOL ST***	***SSE 1/8 - 1/4 (0.207 mi.)***	***9***	***14***

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
LOUSISIANA-PACIFIC CORP.	1275 BRISTOL ST	SSE 0 - 1/8 (0.117 mi.)	C5	12

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BARR LUMBER	***1275 BRISTOL ST***	***SSE 1/8 - 1/4 (0.135 mi.)***	***C6***	***12***
SOUTH COAST SHELL	***1512 SEBRISTOL ST***	***SSE 1/8 - 1/4 (0.207 mi.)***	***9***	***14***

Other Ascertainable Records

FUDS: 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.

A review of the FUDS list, as provided by EDR, and dated 12/31/2011 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SANTA ANA ARMY AIR BASE		WSW 1/2 - 1 (0.858 mi.)	L42	82

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 12/30/2013 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COSTA MESA AIR NATIONAL GUARD	***S OF PRESIDIO DR & WEST***	***WNW 1/8 - 1/4 (0.248 mi.)***	***14***	***19***

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 7 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHELL SERVICE STATION	***1512 BRISTOL***	***ENE 1/4 - 1/2 (0.269 mi.)***	***E16***	***27***
THRIFTY OIL #008	***704***	***SE 1/4 - 1/2 (0.302 mi.)***	***19***	***32***
UNOCAL #5909	***1476 BRISTOL ST***	***SE 1/4 - 1/2 (0.335 mi.)***	***H23***	***40***
VISTA PAINT	***2931 BRISTOL ST***	***N 1/4 - 1/2 (0.459 mi.)***	***I30***	***54***
SANTA ANA COUNTRY CLUB	***20241 SANTA ANA AVE***	***S 1/4 - 1/2 (0.476 mi.)***	***J31***	***56***
SANTA ANA COUNTRY CLUB	***20241***	***S 1/4 - 1/2 (0.476 mi.)***	***J32***	***62***
PEP BOYS	***2946 BRISTOL ST***	***N 1/4 - 1/2 (0.484 mi.)***	***K35***	***65***

Notify 65: 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.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 3 Notify 65 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNOCAL SERVICE STATION #5909	1476 SOUTH EAST BRISTOL	SE 1/4 - 1/2 (0.335 mi.)	H24	43
SHELL OIL	***3045 BRISTOL ST***	***N 1/2 - 1 (0.810 mi.)***	***39***	***77***
COSTA MESA AIR NATIONAL GUARD	***2651 NEWPORT BLVD***	***SW 1/2 - 1 (0.929 mi.)***	***44***	***85***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: 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 US Hist Auto Stat list, as provided by EDR, has revealed that there is 1 EDR US Hist Auto Stat site within approximately 0.25 miles of the target property.

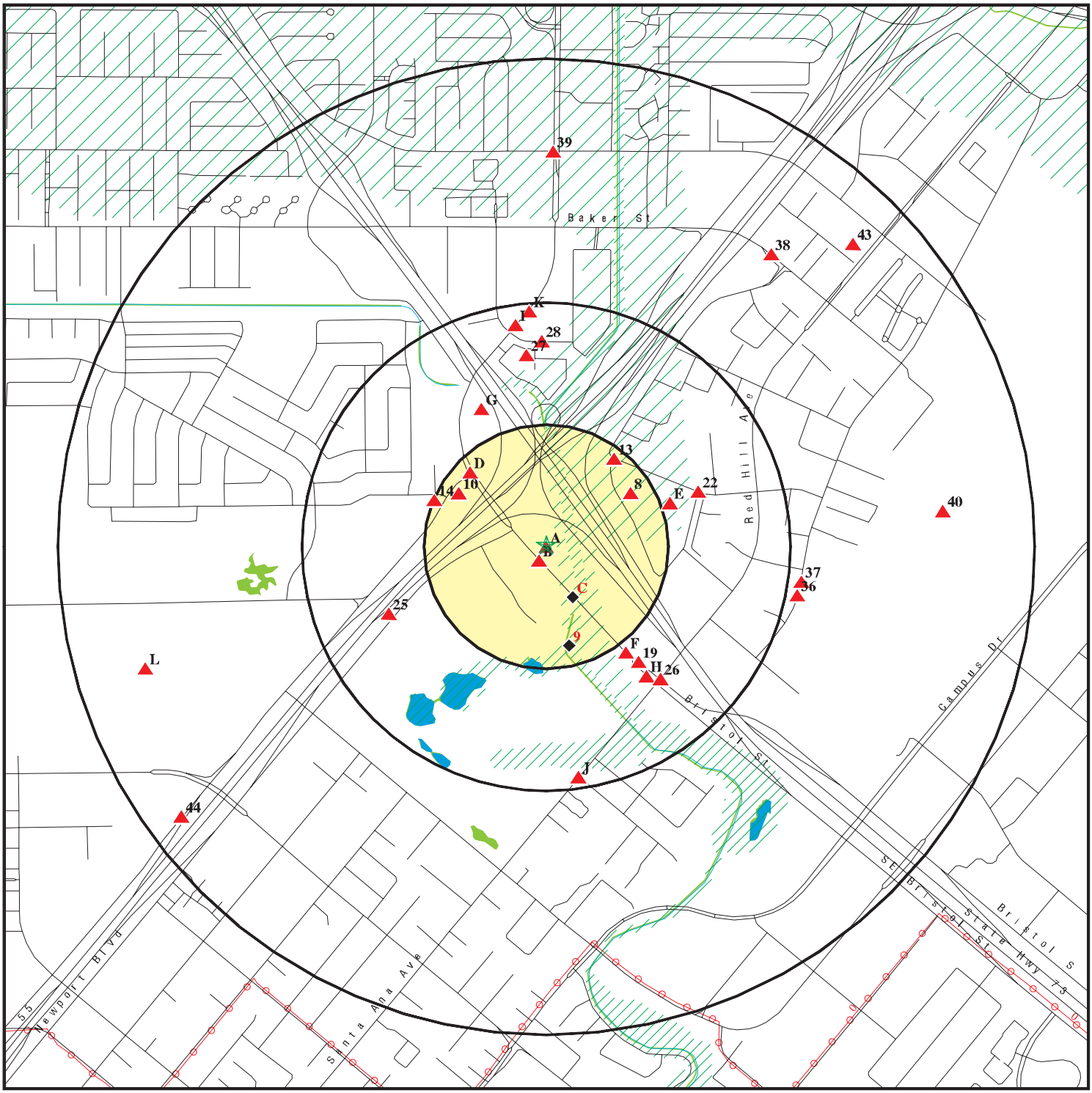
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	151 KALMUS DR	ENE 1/8 - 1/4 (0.205 mi.)	8	13

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
COSTA MESA AIR NATIONAL G	HIST CORTESE
JIFFY LUBE	SWEEPS UST
WARD RANCH	HIST UST
PRESTIGE STATIONS INC #766	HIST UST
SHELL OIL PRODUCTS SAP 129410	RCRA-SQG

OVERVIEW MAP - 3888392.2s



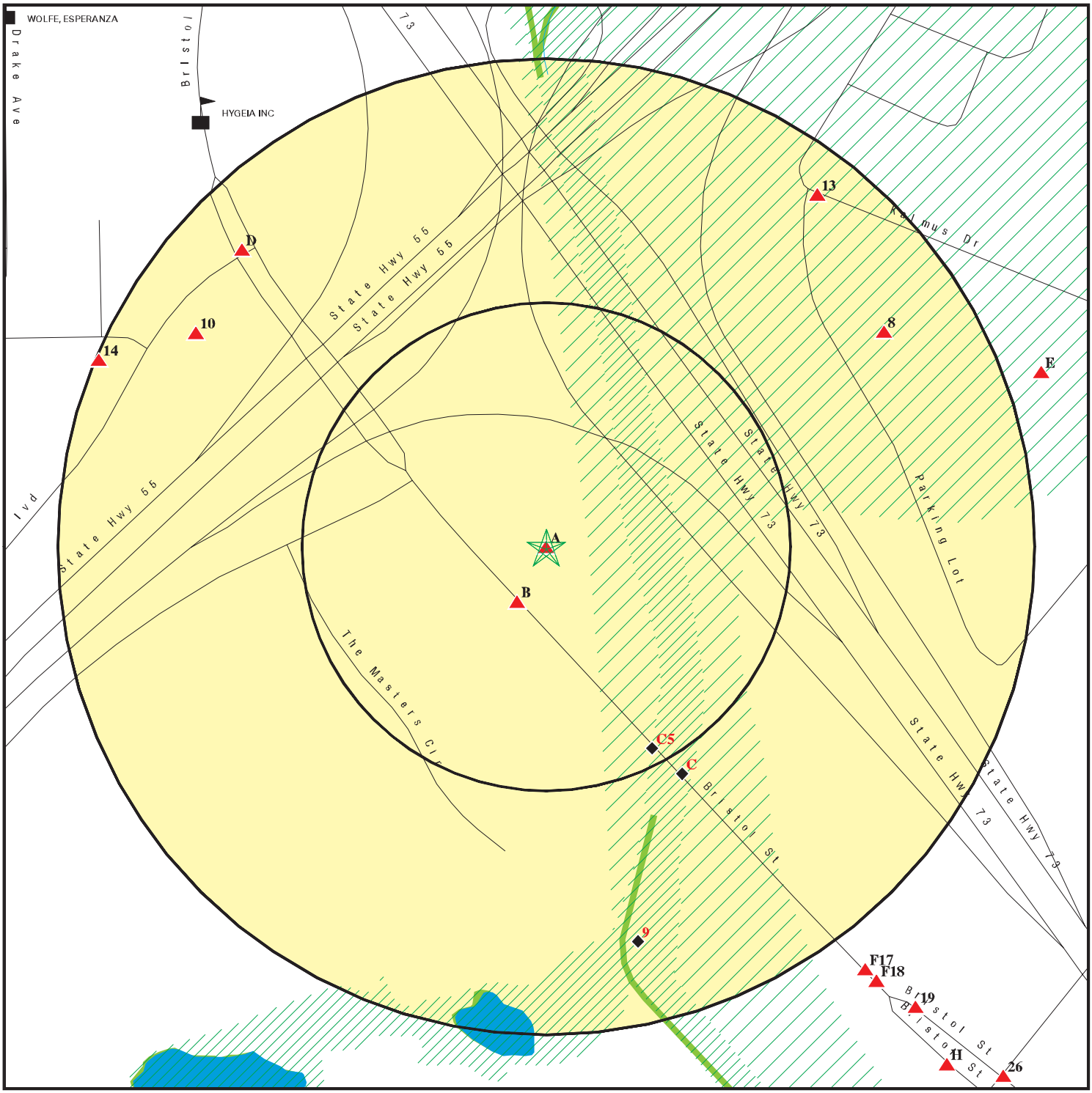
0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- 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: 328646	CLIENT: AEI Consultants
ADDRESS: 1100 Bristol Street Costa Mesa CA 92626	CONTACT: Solange
LAT/LONG: 33.6706 / 117.886	INQUIRY #: 3888392.2s DATE: March 24, 2014 1:38 pm

DETAIL MAP - 3888392.2s



- 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
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- 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: 328646	CLIENT: AEI Consultants
ADDRESS: 1100 Bristol Street Costa Mesa CA 92626	CONTACT: Solange
LAT/LONG: 33.6706 / 117.886	INQUIRY #: 3888392.2s DATE: March 24, 2014 1:40 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
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	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	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		1	0	NR	NR	NR	1
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	1	0	0	NR	1
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	1	3	6	NR	10
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		1	1	0	NR	NR	2
State and tribal leaking storage tank lists								
LUST	0.500		0	1	13	NR	NR	14

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
SLIC	0.500		0	0	2	NR	NR	2
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	2	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	1	0	NR	NR	1
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	1	0	0	NR	1
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP	1	NR	NR	NR	NR	NR	1
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		0	2	NR	NR	NR	2
HIST UST	0.250		1	0	NR	NR	NR	1
SWEEPS UST	0.250		0	2	NR	NR	NR	2
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	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
MCS	TP		NR	NR	NR	NR	NR	0
Orange Co. Industrial Site	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	1	NR	1
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	1	0	NR	NR	1
HIST CORTESE	0.500		0	0	7	NR	NR	7
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	1	2	NR	3
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
HAZNET	TP	1	NR	NR	NR	NR	NR	1
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
PROC	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
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	1	NR	NR	NR	1
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
Target Property
Actual: 29 ft.

BROOKEFIELD HOMES
1100 BRISTOL ST
COSTA MESA, CA 92626

HAZNET **S112965900**
N/A

Site 1 of 2 in cluster A

HAZNET:

Year:	2007
Gepaid:	CAC002623713
Contact:	ROBERT LOOMANS
Telephone:	7143311874
Mailing Name:	Not reported
Mailing Address:	3090 BRISTOL ST
Mailing City,St,Zip:	COSTA MESA, CA 92626
Gen County:	Not reported
TSD EPA ID:	CAD008302903
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.8
Facility County:	Orange

A2
Target Property
Actual: 29 ft.

STORAGE CONT. @ 1100 S BRISTOL, #327
COSTA MESA, CA 92626

CDL **S107540785**
N/A

Site 2 of 2 in cluster A

CDL:

Facility ID:	199801021
Date:	01/07/1998
Lab Type:	Illegal Drug Lab (L) - location where an illegal drug lab was operated or drug lab equipment and/or materials were stored.

B3
SSW
< 1/8
0.032 mi.
168 ft.
Relative: Higher
Actual: 35 ft.

CALTRANS COSTA MESA MAINTENANCE STATION
1090 BRISTOL ST.
COSTA MESA, CA

SWF/LF **S106399700**
CHMIRS **N/A**

Site 1 of 2 in cluster B

SWF/LF (SWIS):

Region:	STATE
Facility ID:	30-AB-0456
Lat/Long:	33.6719900 / -117.88651
Owner Name:	State of California
Owner Telephone:	7146853221
Owner Address:	Not reported
Owner Address2:	1808 North Batavia St.
Owner City,St,Zip:	Orange, CA 92865
Operational Status:	Active
Operator:	Caltrans
Operator Phone:	7146853221
Operator Address:	Not reported
Operator Address2:	1808 North Batavia St.
Operator City,St,Zip:	Orange, CA 92865
Permit Date:	04/01/2011
Permit Status:	Notification
Permitted Acreage:	$1.00

CALTRANS COSTA MESA MAINTENANCE STATION (Continued) **S106399700**

Activity:	Limited Volume Transfer Operation
Regulation Status:	Notification
Landuse Name:	Residential
GIS Source:	Map
Category:	Transfer/Processing
Unit Number:	01
Inspection Frequency:	Annual
Accepted Waste:	Green Materials,Mixed municipal,Tires
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	Not reported
SWIS Num:	30-AB-0456
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	45
Actual Throughput with Units:	Cu Yards/day
Permitted Capacity with Units:	12480
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Cu Yards/year

CHMIRS:

OES Incident Number:	03-5329
OES notification:	10/14/2003
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported

CALTRANS COSTA MESA MAINTENANCE STATION (Continued) **S106399700**

Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2003
Agency:	Costa Mesa Sanitary District
Incident Date:	10/14/200312:00:00 AM
Admin Agency:	Orange Cnty Management Div - HazMat Div.
Amount:	Not reported
Contained:	Yes
Site Type:	Other
E Date:	Not reported
Substance:	sewage
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	40
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	Release caused by blockage in the main line.

B4 **CAL DEPT OF TRANSPORTATION** **RCRA-SQG 1004677561**
SSW **1090 S BRISTOL ST** **FINDS CAR000098905**
< 1/8 **COSTA MESA, CA**
0.032 mi.
168 ft. **Site 2 of 2 in cluster B**

Relative:
Higher

Actual:
35 ft.

RCRA-SQG:

Date form received by agency:	06/21/2001
Facility name:	CAL DEPT OF TRANSPORTATION
Facility address:	1090 S BRISTOL ST COSTA MESA, CA 92626
EPA ID:	CAR000098905
Contact:	PATRICK MORALES
Contact address:	1090 S BRISTOL ST COSTA MESA, CA 92626
Contact country:	US
Contact telephone:	(714) 708-5706
Contact email:	Not reported
EPA Region:	09

CAL DEPT OF TRANSPORTATION (Continued) **1004677561**

Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CALIFORNIA STATE OF
Owner/operator address: 1090 S BRISTOL ST
COSTA MESA, CA 92626
Owner/operator country: Not reported
Owner/operator telephone: (714) 708-5706
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D039
Waste name: TETRACHLOROETHYLENE

Violation Status: No violations found

FINDS:

Registry ID: 110012202605

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

CAL DEPT OF TRANSPORTATION (Continued) **1004677561**

corrective action activities required under RCRA.

C5 **LOUSISIANA-PACIFIC CORP.** **HIST UST** **U001576885**
SSE **1275 BRISTOL ST** **N/A**
< 1/8 **COSTA MESA, CA 92627**
0.117 mi.
616 ft. **Site 1 of 3 in cluster C**

Relative:
Lower

Actual:
19 ft.

HIST UST:

Region:	STATE
Facility ID:	00000055004
Facility Type:	Other
Other Type:	LBR & BLDG MAT SUPPL
Total Tanks:	0001
Contact Name:	KEN RANEY
Telephone:	7145561500
Owner Name:	LOUISIANA-PACIFIC CORPORATION
Owner Address:	111 S.W. FIFTH AVENUE
Owner City,St,Zip:	PORTLAND, OR 97204
Tank Num:	001
Container Num:	1275
Year Installed:	1973
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	1/4" inches
Leak Detection:	Visual, Stock Inventor

C6 **BARR LUMBER** **UST** **U003783806**
SSE **1275 BRISTOL ST** **SWEEPS UST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.135 mi.
715 ft. **Site 2 of 3 in cluster C**

Relative:
Lower

Actual:
10 ft.

UST:

Facility ID:	6391
Latitude:	33.6691
Longitude:	-117.88509
Permitting Agency:	ORANGE COUNTY

SWEEPS UST:

Status:	Active
Comp Number:	6391
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-006391-000001
Tank Status:	A
Capacity:	8000
Active Date:	Not reported
Tank Use:	M.V. FUEL

BARR LUMBER (Continued) **U003783806**

STG: P
Content: DIESEL
Number Of Tanks: 1

C7 **BARR LUMBER** **CA FID UST** **U002095925**
SSE **1275 BRISTOL ST** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.135 mi.
715 ft. **Site 3 of 3 in cluster C**

Relative:
Lower

Actual:
10 ft.

CA FID UST:
Facility ID: 30003401
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: JAMES LUMBER CO P O
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

---

8 **EDR US Hist Auto Stat** **1015239946**
ENE **151 KALMUS DR** **N/A**
1/8-1/4 **COSTA MESA, CA 92626**
0.205 mi.
1083 ft.

Relative:
Higher

Actual:
41 ft.

EDR Historical Auto Stations:
Name: AMERICAN AUTO SERVICE
Year: 2003
Address: 151 KALMUS DR

Name: AMERICAN AUTO SERVICE
Year: 2004
Address: 151 KALMUS DR

Name: AMERICAN AUTO SERVICE
Year: 2005
Address: 151 KALMUS DR

Name: AMERICAN AUTO SERVICE
Year: 2006
Address: 151 KALMUS DR

9
SSE
1/8-1/4
0.207 mi.
1095 ft.

SOUTH COAST SHELL
1512 SEBRISTOL ST
SANTA ANA, CA 92707

CA FID UST **U001559794**
SWEEPS UST **N/A**

Relative:
Lower

Actual:
10 ft.

CA FID UST:

Facility ID:	30017435
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145570640
Mail To:	Not reported
Mailing Address:	P O BOX
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SANTA ANA 92707
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	2357
Number:	9
Board Of Equalization:	44-015956
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-002357-000001
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	5

Status:	Active
Comp Number:	2357
Number:	9
Board Of Equalization:	44-015956
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-002357-000002
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL
Number Of Tanks:	Not reported

SOUTH COAST SHELL (Continued) **U001559794**

Status:	Active
Comp Number:	2357
Number:	9
Board Of Equalization:	44-015956
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-002357-000003
Tank Status:	A
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	LEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	2357
Number:	9
Board Of Equalization:	44-015956
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-002357-000004
Tank Status:	A
Capacity:	550
Active Date:	Not reported
Tank Use:	PETROLEUM
STG:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	2357
Number:	9
Board Of Equalization:	44-015956
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-002357-000009
Tank Status:	A
Capacity:	500
Active Date:	Not reported
Tank Use:	PETROLEUM
STG:	P
Content:	Not reported
Number Of Tanks:	Not reported

10
WNW
1/8-1/4
0.210 mi.
1110 ft.

NEWPORT AVENUE STATION #1 — **SWF/LF** — **S102361524**
NW CORNER OF NEWPORT FWY & BRISTOL 2700 — **N/A**
COSTA MESA, CA

Relative:
Higher

Actual:
43 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	30-CR-0071
Lat/Long:	33.6719999 / -117.88800
Owner Name:	Reinking L
Owner Telephone:	Not reported
Owner Address:	(Petter C.)Metro Commercial Relaty Corp.
Owner Address2:	227 20th Street
Owner City,St,Zip:	Newport Beach, CA 92663
Operational Status:	Closed
Operator:	OC Waste and Recycling
Operator Phone:	7148344000
Operator Address:	Not reported
Operator Address2:	300 N Flower Street, Suite 400
Operator City,St,Zip:	Santa Ana, CA 92703
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	$0.00
Activity:	Solid Waste Disposal Site
Regulation Status:	Pre-regulations
Landuse Name:	Residential,Commercial
GIS Source:	Map
Category:	Disposal
Unit Number:	01
Inspection Frequency:	Quarterly
Accepted Waste:	Not reported
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	$0.00
SWIS Num:	30-CR-0071
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	0
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	0
Remaining Capacity:	0
Remaining Capacity with Units:	Not reported

D11
NW
1/8-1/4
0.216 mi.
1139 ft.

COASTAL COMMUNITY HOSPITAL — **LUST** — **S103771124**
2701 BRISTOL ST — **N/A**
SANTA ANA, CA 97707

Site 1 of 2 in cluster D

Relative:
Higher

Actual:
42 ft.

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083003397T
Local Case Num:	Not reported
Case Type:	Aquifer affected
Substance:	Diesel
Qty Leaked:	Not reported

COASTAL COMMUNITY HOSPITAL (Continued) **S103771124**

Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Cross Street:	CENTRAL
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	Corrosion
Leak Source:	Tank
Global ID:	T0605902249
How Stopped Date:	2/17/1999
Enter Date:	Not reported
Date Confirmation of Leak Began:	2/17/1999
Date Preliminary Assessment Began:	Not reported
Discover Date:	2/17/1999
Enforcement Date:	Not reported
Close Date:	5/10/2000
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	2/17/1999
Date Post Remedial Action Monitoring:	2/1/2000
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	ND
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.7111585
Longitude:	-117.885167
MTBE Date:	12/28/1999
Max MTBE GW:	130
MTBE Concentration:	2
Max MTBE Soil:	11
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	Not reported
Staff:	NOM
Staff Initials:	JB
Lead Agency:	Regional Board
Local Agency:	Santa Ana, Orange County
Hydr Basin #:	COASTAL PLAIN OF ORA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: DRAFTED A LETTER REQUIRING A WORK PLAN. LETTER REGARDING SITE SENT OUT 8/19/99.

D12
NW
1/8-1/4
0.218 mi.
1150 ft.

NEWPORT AVENUE
NEWPORT & BRISTOL
COSTA MESA, CA

Site 2 of 2 in cluster D

WMUDS/SWAT **S103442595**
N/A

Relative:
Higher

Actual:
42 ft.

WMUDS/SWAT:

Edit Date:	19940630
Complexity:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Base Meridian:	SB
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False
Open To Public:	False
Waste List:	False
Agency Type:	Not reported
Agency Name:	ORANGE COUNTY
Agency Department:	INTEGRATED WASTE MNGT
Agency Address:	Not reported
Agency City,St,Zip:	Not reported
Agency Contact:	SUZANNE MCCLANAHAN
Agency Telephone:	Not reported
Land Owner Name:	KOLL MANAGEMENT
Land Owner Address:	2900 BRISTOL ST., STE B-105
Land Owner City,St,Zip:	COSTA MESA, CA 92626
Land Owner Contact:	SERENA ELLIOTT
Land Owner Phone:	Not reported
Region:	8
Facility Type:	Not reported
Facility Description:	Not reported
Facility Telephone:	Not reported
SWAT Facility Name:	Not reported
Primary SIC:	Not reported
Secondary SIC:	Not reported
Comments:	Not reported
Last Facility Editors:	BDNBDNJHM
Waste Discharge System:	False
Solid Waste Assessment Test Program:	True
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act:	False
Department of Defence:	False
Solid Waste Assessment Test Program:	ORANGE COUNTY
Threat to Water Quality:	Not reported
Sub Chapter 15:	False
Regional Board Project Officer:	GSR
Number of WMUDS at Facility:	1
Section Range:	06S10W02
RCRA Facility:	Not reported
Waste Discharge Requirements:	Not reported
Self-Monitoring Rept. Frequency:	Not reported
Waste Discharge System ID:	8 300015NUR
Solid Waste Information ID:	Not reported

13
NE
1/8-1/4
0.228 mi.
1202 ft.

FUTURE HARTS CARPETS
101 KALMUS DR
COSTA MESA, CA 92626

UST **U003779380**
N/A

Relative:
Higher

Actual:
39 ft.

UST:
Facility ID: 18761
Latitude: 33.67311
Longitude: -117.88346
Permitting Agency: ORANGE COUNTY

14
WNW
1/8-1/4
0.248 mi.
1311 ft.

COSTA MESA AIR NATIONAL GUARD
S OF PRESIDIO DR & WEST OF NEWPORT BLVD
COSTA MESA, CA 92626

HIST Cal-Sites **S101481491**
Cortese **N/A**
RESPONSE
ENVIROSTOR

Relative:
Higher

Actual:
46 ft.

Calsite:
Region: GLENDALE
Facility ID: 30970004
Facility Type: OPEN
Type: OPEN MILITARY BASE
Branch: SO
Branch Name: OMF-SOUTHERN CALIF
File Name: Not reported
State Senate District: 01011995
Status: ANNUAL WORKPLAN (AWP) - ACTIVE SITE
Status Name: ANNUAL WORKPLAN - ACTIVE SITE
Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL
NPL: Not Listed
SIC Code: 97
SIC Name: NATIONAL SECURITY/INTERNATIONAL AFFAIRS
Access: Not reported
Cortese: Not reported
Hazardous Ranking Score: Not reported
Date Site Hazard Ranked: Not reported
Groundwater Contamination: Not reported
Staff Member Responsible for Site: Not reported
Supervisor Responsible for Site: Not reported
Region Water Control Board: Not reported
Region Water Control Board Name: Not reported
Lat/Long Direction: Not reported
Lat/Long (dms): 0 0 0 / 0 0 0
Lat/long Method: Not reported
Lat/Long Description: Not reported
State Assembly District Code: 68
State Senate District Code: 35
Facility ID: 30970004
Activity: BWEBS
Activity Name: BASEWIDE ENVIRONMENTAL BASELINE SURVEY
AWP Code: SITE1
Proposed Budget: 0
AWP Completion Date: 12162002
Revised Due Date: Not reported
Comments Date: 12162002
Est Person-Yrs to complete: 0
Estimated Size: Not reported
Request to Delete Activity: Not reported
Activity Status: AWP

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	30970004
Activity:	SS
Activity Name:	SITE SCREENING
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	08081991
Revised Due Date:	Not reported
Comments Date:	08081991
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Alternate Address:	S OF PRESIDIO DR & WEST OF NEWPORT BLVD
Alternate City,St,Zip:	COSTA MESA, CA 92626
Background Info:	The Costa Mesa ANG station is an 8.5 acre facility that has been active since 1964. The facility is located on former Santa Ana A rmy Air Base property. Activities include routine maintenance of vehicles, generators, and various ground equipment. Hazardous w astes resulting from these activities include varying amounts of waste fuels, oils, paints, thinners, and solvents. A preliminary assessment was submitted in December 1990 where a recommendation for NFA was concluded.
Comments Date:	08081991
Comments:	Letter sent to Air National Guard (ANG) stating no concurr- ance
Comments Date:	08081991
Comments:	with nfa recommendation & explaining pea process and funding opti
Comments Date:	08081991
Comments:	on for DTSC oversight.
Comments Date:	12162002
Comments:	BWEBS - SITE 1: In June 2002, the Phase II EBS was submitted pres
Comments Date:	12162002
Comments:	enting the results of the soil and groundwater field investigatio
Comments Date:	12162002

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Comments: ns. A total of nine areas of concern (AOCs) were identified wher
Comments Date: 12162002
Comments: e potential risks to human health and the environment may exist.
Comments Date: 12162002
Comments: These include a battery room floor drain, motor vehicle lift are
Comments Date: 12162002
Comments: a, fuel storage area, grease rack, oil and water sparator, diesel
Comments Date: 12162002
Comments: refueller spill, groundwater sampling, lead-based paint sampling
Comments Date: 12162002
Comments: , and hydraulic fluid spill area. Contaminants detected include p
Comments Date: 12162002
Comments: etroleum hydrocarbons, volatile organic compounds, and lead-based
Comments Date: 12162002
Comments: paint. Also, the extent of contamination was not determined. D
Comments Date: 12162002
Comments: TSC submitted comments on August 26, 2002 not concurring with the
Comments Date: 12162002
Comments: No Further Action recommendations by the Air Force, and requeste
Comments Date: 12162002
Comments: d additional sampling to be conducted to determine the extent of
Comments Date: 12162002
Comments: contamination. The Air Force responded with a final letter on Oc
Comments Date: 12162002
Comments: tober 8, 2002 finalizing the EBS report and deferring any future
Comments Date: 12162002
Comments: actions until a relocation date for the CMANG is known.
ID Name: Not reported
ID Value: Not reported
Alternate Name: SANTA ANA ARMY BASE (1940S & 50S)COSTA MESA AIR NATIONAL GUARD
Special Programs Code: DSMOA
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT

CORTESE:
Region: CORTESE
Envirostor Id: 30970004
Site/Facility Type: STATE RESPONSE
Cleanup Status: ACTIVE
Status Date: 06/28/2011
Site Code: 400498
Latitude: 33.671666
Longitude: -117.88888
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: export
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported

AWP:
AWP Facility ID: 30970004

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Region Code:	3
Region:	GLENDALE
SMBR Branch Code:	SO
SMBR Branch Unit:	OMF-SOUTHERN CALIF
Site Name.:	Not reported
Current Status Date:	01011995
Current Status:	ANNUAL WORKPLAN - ACTIVE SITE
Lead Agency Code:	DTSC
Lead Agency:	DEPT OF TOXIC SUBSTANCES CONTROL
Facility Type:	Open military facility
Awp Site Type:	OPEN MILITARY BASE
NPL:	Not Listed
Tier Of AWP Site:	Not reported
Source Of Funding:	Not reported
Responsible Staff Member:	Not reported
Supervisor Responsible:	Not reported
SIC Code:	97
Facility SIC:	NATIONAL SECURITY/INTERNATIONAL AFFAIRS
RWQCB Code:	Not reported
RWQCB Associated With Site:	Not reported
Site Access Controlled:	Not reported
Site Listed HWS List:	Not reported
Hazard Ranking Score:	Not reported
Date Site Hazard Ranked:	Not reported
Groundwater Contamination:	Not reported
# Of Contamination Sources:	0
Lat/Long:	Not reported
Lat/Long (dms):	0 0 0 / 0 0 0
Lat/long Method:	Not reported
Description Of Entity:	Not reported
State Assembly Distt Code:	68
State Senate District:	35

RESPONSE:

Facility ID:	30970004
Site Type:	State Response
Site Type Detail:	Open Base
Acres:	8.5
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	Isaac Hirbawi
Supervisor:	Manny Alonzo
Division Branch:	Cleanup Cypress
Site Code:	400498
Site Mgmt. Req.:	NONE SPECIFIED
Assembly:	74
Senate:	37
Special Program Status:	DSMOA
Status:	Active
Status Date:	06/28/2011
Restricted Use:	NO
Funding:	DERA
Latitude:	33.67166
Longitude:	-117.8888
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Potential COC : NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: SANTA ANA ARMY BASE (1940S & 50S)
Alias Type: Alternate Name
Alias Name: T0605959838
Alias Type: GeoTracker Global ID
Alias Name: 400498
Alias Type: Project Code (Site Code)
Alias Name: 30970004
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Baseline Survey
Completed Date: 12/16/2002
Comments: BWEBS - SITE 1: In June 2002, the Phase II EBS was submitted presenting the results of the soil and groundwater field investigations. A total of nine areas of concern (AOCs) were identified where potential risks to human health and the environment may exist. These include a battery room floor drain, motor vehicle lift area, fuel storage area, grease rack, oil and water sparator, diesel refueller spill, groundwater sampling, lead-based paint sampling, and hydraulic fluid spill area. Contaminants detected include petroleum hydrocarbons, volatile organic compounds, and lead-based paint. Also, the extent of contamination was not determined. DTSC submitted comments on August 26, 2002 not concurring with the No Further Action recommendations by the Air Force, and requested additional sampling to be conducted to determine the extent of contamination. The Air Force responded with a final letter on October 8, 2002 finalizing the EBS report and deferring any future actions until a relocation date for the CMANG is known.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 08/08/1991
Comments: Letter sent to Air National Guard (ANG) stating no concurr- ance with nfa recommendation & explaining pea process and funding option for DTSC oversight.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inventory Project Report (INPR)
Completed Date: 03/04/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)
Completed Date: 08/25/2012
Comments: Final work plan was submitted in August 2012 and field activities are scheduled for September 2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Completed Date:	07/24/1991
Comments:	Not reported
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Investigation Report
Future Due Date:	2014
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Plan
Future Due Date:	2014
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Removal Action Completion Report
Future Due Date:	2015
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Feasibility Study Report
Future Due Date:	2014
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Fact Sheets
Schedule Due Date:	02/28/2014
Schedule Revised Date:	04/18/2015
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Preliminary Assessment/Site Inspection Report (PA/SI)
Schedule Due Date:	12/30/2013
Schedule Revised Date:	Not reported

ENVIROSTOR:

Site Type:	State Response
Site Type Detailed:	Open Base
Acres:	8.5
NPL:	NO
Regulatory Agencies:	DTSC
Lead Agency:	DTSC
Program Manager:	Isaac Hirbawi
Supervisor:	Manny Alonzo
Division Branch:	Cleanup Cypress
Facility ID:	30970004
Site Code:	400498
Assembly:	74
Senate:	37
Special Program:	DSMOA
Status:	Active
Status Date:	06/28/2011
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	DERA
Latitude:	33.67166
Longitude:	-117.8888
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Alias Name: SANTA ANA ARMY BASE (1940S & 50S)
Alias Type: Alternate Name
Alias Name: T0605959838
Alias Type: GeoTracker Global ID
Alias Name: 400498
Alias Type: Project Code (Site Code)
Alias Name: 30970004
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Baseline Survey
Completed Date: 12/16/2002
Comments: BWEBS - SITE 1: In June 2002, the Phase II EBS was submitted presenting the results of the soil and groundwater field investigations. A total of nine areas of concern (AOCs) were identified where potential risks to human health and the environment may exist. These include a battery room floor drain, motor vehicle lift area, fuel storage area, grease rack, oil and water sparator, diesel refueller spill, groundwater sampling, lead-based paint sampling, and hydraulic fluid spill area. Contaminants detected include petroleum hydrocarbons, volatile organic compounds, and lead-based paint. Also, the extent of contamination was not determined. DTSC submitted comments on August 26, 2002 not concurring with the No Further Action recommendations by the Air Force, and requested additional sampling to be conducted to determine the extent of contamination. The Air Force responded with a final letter on October 8, 2002 finalizing the EBS report and deferring any future actions until a relocation date for the CMANG is known.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 08/08/1991
Comments: Letter sent to Air National Guard (ANG) stating no concurr- ance with nfa recommendation & explaining pea process and funding option for DTSC oversight.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Inventory Project Report (INPR)
Completed Date: 03/04/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)
Completed Date: 08/25/2012
Comments: Final work plan was submitted in August 2012 and field activities are scheduled for September 2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 07/24/1991
Comments: Not reported

COSTA MESA AIR NATIONAL GUARD (Continued) **S101481491**

Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Investigation Report
Future Due Date:	2014
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Plan
Future Due Date:	2014
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Removal Action Completion Report
Future Due Date:	2015
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Feasibility Study Report
Future Due Date:	2014
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Fact Sheets
Schedule Due Date:	02/28/2014
Schedule Revised Date:	04/18/2015
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Preliminary Assessment/Site Inspection Report (PA/SI)
Schedule Due Date:	12/30/2013
Schedule Revised Date:	Not reported

E15 **SHELL OIL** **LUST** **1000288485**
ENE **1512 BRISTOL** **N/A**
1/4-1/2 **SANTA ANA, CA 92707**
0.269 mi.
1419 ft. **Site 1 of 2 in cluster E**

Relative:
Higher

Actual:
38 ft.

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083000343T
Local Case Num:	86UT126
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900269
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	7/17/1986
Enforcement Date:	Not reported

SHELL OIL (Continued) **1000288485**

Close Date:	10/25/1996
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.666364
Longitude:	-117.882042
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

E16 **SHELL SERVICE STATION** **HIST CORTESE S104791728**
ENE **1512 BRISTOL** **LUST N/A**
1/4-1/2 **COSTA MESA, CA 92707**
0.269 mi.
1419 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
38 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000343T

LUST:

Region:	STATE
Global Id:	T0605900269
Latitude:	33.7269945
Longitude:	-117.8852694
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/25/1996
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	KL
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083000343T

SHELL SERVICE STATION (Continued) **S104791728**

LOC Case Number: 86UT126
File Location: Local Agency
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605900269
Contact Type: Local Agency Caseworker
Contact Name: KEVIN LAMBERT
Organization Name: ORANGE COUNTY LOP
Address: 1241 E DYER ROAD SUITE 120
City: SANTA ANA
Email: klambert@ochca.com
Phone Number: 7144336261

Global Id: T0605900269
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: cbernhardt@waterboards.ca.gov
Phone Number: 9517824495

Status History:
Global Id: T0605900269
Status: Open - Case Begin Date
Status Date: 07/17/1986

Global Id: T0605900269
Status: Completed - Case Closed
Status Date: 10/25/1996

Regulatory Activities:
Global Id: T0605900269
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605900269
Action Type: REMEDIATION
Date: 01/01/1950
Action: Free Product Removal

Global Id: T0605900269
Action Type: REMEDIATION
Date: 01/01/1950
Action: Pump & Treat (P&T) Groundwater

Global Id: T0605900269
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

SHELL SERVICE STATION (Continued) **S104791728**

ORANGE CO. LUST:
- Region: ORANGE
- Facility Id: 86UT126
- Current Status: Certification (Case Closed)
- Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
- Date Closed: 10/25/1996
- Case Type: Other Ground Water
- Record ID: RO0001350

F17 **BRISTOL VILLAGE CLEANERS** **RCRA-SQG** **1000389232**
SE **260 BRISTOL ST** **FINDS** **CAD981999139**
1/4-1/2 **COSTA MESA, CA 92626** **SLIC**
0.271 mi. **Orange Co. Industrial Site**
1431 ft. **Site 1 of 2 in cluster F**

Relative: Higher

Actual: 50 ft.

RCRA-SQG:
- Date form received by agency: 12/21/1993
- Facility name: BRISTOL VILLAGE CLEANERS
- Facility address: 260 BRISTOL ST
  COSTA MESA, CA 92626
- EPA ID: CAD981999139
- Contact: HYOUNG KIM
- Contact address: 260 BRISTOL ST
  COSTA MESA, CA 92626
- Contact country: US
- Contact telephone: (714) 754-1351
- Contact email: Not reported
- EPA Region: 09
- Classification: Small Small Quantity Generator
- Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
- Owner/operator name: HYOUNG KIM
- Owner/operator address: 260 BRISTOL ST
  COSTA MESA, CA 92626
- Owner/operator country: Not reported
- Owner/operator telephone: (714) 754-1351
- Legal status: Private
- Owner/Operator Type: Owner
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

- Owner/operator name: NOT REQUIRED
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, ME 99999
- Owner/operator country: Not reported
- Owner/operator telephone: (415) 555-1212
- Legal status: Private
- Owner/Operator Type: Operator
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

BRISTOL VILLAGE CLEANERS (Continued) **1000389232**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002771947

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	01/16/1997
Global Id:	SLT8R0613945
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	97IC002
Latitude:	33.6663114340909
Longitude:	-117.912097261932
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	SLT8R061
File Location:	Not reported
Potential Media Affected:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Tetrachloroethylene (PCE), Trichloroethylene (TCE)
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

SLIC REG 8:

Type:	Soil and Groundwater
Facility Status:	3
Staff:	WDM

BRISTOL VILLAGE CLEANERS (Continued) **1000389232**

Substance: TCE, PCE
Lead Agency: Regional Board
Location Code: CM-8
Thomas Bros Code: 859-D7

Orange Co. Industrial Site:
Case ID: 97IC002
Region: ORANGE
Record ID: RO0000588
Current Status: CLOSED, 1/16/1997
Closure Type: Closure certification issued
Released Chemical: PERCHLOROETHYLENE

F18 **AL & J'S CLEANERS** **ENVIROSTOR** **S106797623**
SE **270 BRISTOL STREET, NO. 106 (1F)** **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.279 mi.
1474 ft. **Site 2 of 2 in cluster F**

Relative:
Higher

Actual:
50 ft.

ENVIROSTOR:
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Referred - Not Assigned
Division Branch: Cleanup Cypress
Facility ID: 30720003
Site Code: Not reported
Assembly: 68
Senate: 35
Special Program: Not reported
Status: Refer: 1248 Local Agency
Status Date: 04/08/2004
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: Not Applicable
Latitude: 0
Longitude: 0
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 30720003
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported

AL & J'S CLEANERS (Continued) **S106797623**

Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

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19 **THRIFTY OIL #008** **HIST CORTESE** **S102439054**
SE **704** **LUST** **N/A**
1/4-1/2 **SANTA ANA, CA 92700**
0.302 mi.
1595 ft.

Relative:
Higher

Actual:
51 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000764T

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Remedial action (cleanup) Underway
Case Number:	083000764T
Local Case Num:	Not reported
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Cross Street:	7TH
Enf Type:	SI
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0605900604
How Stopped Date:	Not reported
Enter Date:	9/18/1996
Date Confirmation of Leak Began:	10/27/1994
Date Preliminary Assessment Began:	Not reported
Discover Date:	10/27/1994
Enforcement Date:	Not reported
Close Date:	Not reported
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	11/21/2003
Date Remediation Plan Submitted:	1/16/2003
Date Remedial Action Underway:	7/28/2004
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	9/18/1996
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported

THRIFTY OIL #008 (Continued) **S102439054**

Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.75071575
Longitude:	-117.8853749
MTBE Date:	11/10/1998
Max MTBE GW:	29000
MTBE Concentration:	1
Max MTBE Soil:	809
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	A
Staff:	VJJ
Staff Initials:	JB
Lead Agency:	Regional Board
Local Agency:	Santa Ana, Orange County
Hydr Basin #:	COASTAL PLAIN OF ORA
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: LAST COMMUNICATION WAS 3/27/89. REOPENED 10/27/94. EXCAVATION AT TANK AREA TO RE-LINE (1) 10,000 GAL TANK REVEALED SOIL W/ SOME CONTAM. SOIL WILL BE PUT BACK IN EXCAVATION TO BE REMEDIATED W/ REST OF SITE. 7/19/96 - TANK TEST FAILED

G20 **SOUTH PACIFIC CAR WASH** **LUST U003433465**
NNW **2750 BRISTOL ST** **UST N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.312 mi.
1647 ft. **Site 1 of 2 in cluster G**

Relative:
Higher

Actual:
34 ft.

LUST:

Region:	STATE
Global Id:	T0605970478
Latitude:	33.674096
Longitude:	-117.888502
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/04/2010
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	03UT012
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605970478
Contact Type:	Regional Board Caseworker
Contact Name:	TOM E. MBEKE-EKANEM
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	tmbeke-ekanem@waterboards.ca.gov

SOUTH PACIFIC CAR WASH (Continued) **U003433465**

Phone Number: 9513202007

Global Id: T0605970478
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Status History:
Global Id: T0605970478
Status: Open - Case Begin Date
Status Date: 03/10/2003

Global Id: T0605970478
Status: Open - Site Assessment
Status Date: 06/23/2003

Global Id: T0605970478
Status: Open - Site Assessment
Status Date: 01/12/2004

Global Id: T0605970478
Status: Completed - Case Closed
Status Date: 06/04/2010

Regulatory Activities:
Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 03/13/2003
Action: Notice of Responsibility

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 12/02/2003
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 01/07/2004
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 02/20/2004
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 02/24/2005
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT

SOUTH PACIFIC CAR WASH (Continued) **U003433465**

Date: 07/24/2007
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 02/03/2006
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 11/28/2006
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 06/04/2007
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 05/12/2008
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 06/04/2010
Action: Closure/No Further Action Letter

Global Id: T0605970478
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0605970478
Action Type: REMEDIATION
Date: 01/01/1950
Action: Soil Vapor Extraction (SVE)

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 09/26/2008
Action: Staff Letter

Global Id: T0605970478
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 05/12/2005
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 01/03/2006
Action: Staff Letter

SOUTH PACIFIC CAR WASH (Continued) **U003433465**

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 07/03/2009
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 03/19/2010
Action: Staff Letter

Global Id: T0605970478
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 03/06/2009
Action: Staff Letter

Global Id: T0605970478
Action Type: ENFORCEMENT
Date: 07/02/2009
Action: Staff Letter

UST:
Facility ID: 11327
Latitude: 33.67369
Longitude: -117.88905
Permitting Agency: ORANGE COUNTY

G21 **SOUTH PACIFIC CAR WASH** **LUST** **S106117671**
NNW **2750 BRISTOL ST S** **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.312 mi.
1647 ft. **Site 2 of 2 in cluster G**

Relative:
Higher

Actual:
34 ft.

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Pollution Characterization
Case Number: Not reported
Local Case Num: 03UT012
Case Type: Soil only
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: SEL
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Close Tank
Leak Cause: Unknown
Leak Source: D
Global ID: T0605970478

SOUTH PACIFIC CAR WASH (Continued) **S106117671**

How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	3/10/2003
Enforcement Date:	Not reported
Close Date:	Not reported
Date Prelim Assessment Workplan Submitted:	6/23/2003
Date Pollution Characterization Began:	1/12/2004
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	0
Longitude:	0
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	272000
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	Not reported
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

---

22 **ORANGE COUNTY DEPARTMENT OF EDUCATION** **LUST** **U001576825**
ENE **200 KALMUS DR** **HIST UST** **N/A**
1/4-1/2 **COSTA MESA, CA 92628**
0.331 mi.
1749 ft.

Relative:
Higher

Actual:
40 ft.

LUST:

Region:	STATE
Global Id:	T0605901442
Latitude:	33.673763
Longitude:	-117.881085
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/28/2000
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001934T
LOC Case Number:	91UT089

ORANGE COUNTY DEPARTMENT OF EDUCATION (Continued) **U001576825**

File Location: Local Agency
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605901442
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Global Id: T0605901442
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: cbernhardt@waterboards.ca.gov
Phone Number: 9517824495

Status History:
Global Id: T0605901442
Status: Open - Case Begin Date
Status Date: 08/13/1991

Global Id: T0605901442
Status: Completed - Case Closed
Status Date: 04/28/2000

Regulatory Activities:
Global Id: T0605901442
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605901442
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0605901442
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 91UT089
Current Status: Certification (Case Closed)

ORANGE COUNTY DEPARTMENT OF EDUCATION (Continued) **U001576825**

Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 04/28/2000
Case Type: Soil Only
Record ID: RO0003002

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001934T
Local Case Num:	91UT089
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901442
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	8/31/1991
Enforcement Date:	Not reported
Close Date:	4/28/2000
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6724628
Longitude:	-117.881133
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported

ORANGE COUNTY DEPARTMENT OF EDUCATION (Continued) **U001576825**

Beneficial: MUN
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

HIST UST:
Region: STATE
Facility ID: 00000031674
Facility Type: Other
Other Type: CENTRAL OFFICE FACIT
Total Tanks: 0001
Contact Name: ROBERT PETERSON, ED.D.-SUPERIN
Telephone: 7149664000
Owner Name: ORANGE COUNTY DEPARTMENT OF ED
Owner Address: 200 KALMUS DRIVE
Owner City,St,Zip: COSTA MESA, CA 92626

Tank Num: 001
Container Num: 1
Year Installed: 1972
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

H23 **UNOCAL #5909** **HIST CORTESE S101299432**
SE **1476 BRISTOL ST** **LUST N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.335 mi.
1769 ft. **Site 1 of 2 in cluster H**

Relative:
Higher

Actual:
49 ft.

HIST CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083001502T

LUST:
Region: STATE
Global Id: T0605901145
Latitude: 33.727577
Longitude: -117.885177
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 03/10/2000
Lead Agency: ORANGE COUNTY LOP
Case Worker: DB
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083001502T
LOC Case Number: 90UT109
File Location: Local Agency
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

UNOCAL #5909 (Continued) **S101299432**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605901145
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Global Id:	T0605901145
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0605901145
Status:	Open - Case Begin Date
Status Date:	04/16/1990

Global Id:	T0605901145
Status:	Completed - Case Closed
Status Date:	03/10/2000

Regulatory Activities:

Global Id:	T0605901145
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

Global Id:	T0605901145
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	90UT109
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	03/10/2000
Case Type:	Other Ground Water
Record ID:	RO0001968

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region

UNOCAL #5909 (Continued) **S101299432**

Facility Status:	Case Closed
Case Number:	083001502T
Local Case Num:	90UT109
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901145
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	4/16/1990
Enforcement Date:	Not reported
Close Date:	3/10/2000
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.727577
Longitude:	-117.885177
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	NOM
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

H24
SE
1/4-1/2
0.335 mi.
1769 ft.

UNOCAL SERVICE STATION #5909
1476 SOUTH EAST BRISTOL S
COSTA MESA, CA 90220

Site 2 of 2 in cluster H

Notify 65 **S100230462**
N/A

Relative:
Higher

Actual:
49 ft.

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90220

25
WSW
1/4-1/2
0.351 mi.
1851 ft.

(CMAFP) SANTA ANA AIRUG

SANTA ANA, CA

ENVIROSTOR **S107735759**
N/A

Relative:
Higher

Actual:
47 ft.

ENVIROSTOR:

Site Type:	Military Evaluation
Site Type Detailed:	FUDS
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Douglas Bautista
Division Branch:	Cleanup Cypress
Facility ID:	80000028
Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	Not reported
Status:	Inactive - Needs Evaluation
Status Date:	07/01/2005
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	DERA
Latitude:	33.66861
Longitude:	-117.8916
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CA99799F693800
Alias Type:	Federal Facility ID
Alias Name:	J09CA0042
Alias Type:	INPR
Alias Name:	80000028
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	Not reported
Completed Sub Area Name:	Not reported
Completed Document Type:	Not reported
Completed Date:	Not reported
Comments:	Not reported

(CMAFP) SANTA ANA AIRUG (Continued) **S107735759**

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

26
SE
1/4-1/2
0.358 mi.
1890 ft.

BRISTOL PLAZA CHEVRON **LUST** **S103650567**
300 BRISTOL ST **N/A**
COSTA MESA, CA 92626

Relative:
Higher

Actual:
49 ft.

LUST:

Region:	STATE
Global Id:	T0605902077
Latitude:	33.6666664118938
Longitude:	-117.881659269333
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/02/2013
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003044T
LOC Case Number:	97UT025
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605902077
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Global Id:	T0605902077
Contact Type:	Regional Board Caseworker
Contact Name:	TOM E. MBEKE-EKANEM
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	tmbeke-ekanem@waterboards.ca.gov
Phone Number:	9513202007

BRISTOL PLAZA CHEVRON (Continued) **S103650567**

Status History:

Global Id:	T0605902077
Status:	Open - Case Begin Date
Status Date:	06/27/1996
Global Id:	T0605902077
Status:	Open - Site Assessment
Status Date:	12/12/1996
Global Id:	T0605902077
Status:	Open - Remediation
Status Date:	10/18/2002
Global Id:	T0605902077
Status:	Open - Remediation
Status Date:	11/14/2004
Global Id:	T0605902077
Status:	Open - Verification Monitoring
Status Date:	03/16/2010
Global Id:	T0605902077
Status:	Completed - Case Closed
Status Date:	01/02/2013

Regulatory Activities:

Global Id:	T0605902077
Action Type:	ENFORCEMENT
Date:	06/13/2007
Action:	Staff Letter
Global Id:	T0605902077
Action Type:	ENFORCEMENT
Date:	05/19/2008
Action:	Staff Letter
Global Id:	T0605902077
Action Type:	ENFORCEMENT
Date:	06/21/2007
Action:	Staff Letter
Global Id:	T0605902077
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	In Situ Physical/Chemical Treatment (other than SVE)
Global Id:	T0605902077
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	In Situ Physical/Chemical Treatment (other than SVE)
Global Id:	T0605902077
Action Type:	ENFORCEMENT
Date:	10/22/2012
Action:	Notification - Preclosure

BRISTOL PLAZA CHEVRON (Continued) **S103650567**

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 11/27/2012
Action: Notification - Preclosure

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 10/13/2010
Action: File review

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 10/01/2008
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 08/01/2011
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 12/28/2010
Action: File review

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 11/25/2008
Action: Technical Correspondence / Assistance / Other

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 01/02/2013
Action: Closure/No Further Action Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 05/12/2009
Action: Staff Letter

Global Id: T0605902077
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 01/10/2012
Action: Staff Letter

Global Id: T0605902077
Action Type: RESPONSE
Date: 03/18/2010
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0605902077
Action Type: ENFORCEMENT

BRISTOL PLAZA CHEVRON (Continued) **S103650567**

Date: 10/15/2008
Action: Staff Letter

Global Id: T0605902077
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 02/24/2011
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 03/16/2010
Action: Staff Letter

Global Id: T0605902077
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 01/22/2008
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 03/21/2008
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 07/15/2009
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 10/22/2012
Action: Notification - Preclosure

Global Id: T0605902077
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 08/04/1997
Action: Notice of Responsibility

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 04/09/2003
Action: Staff Letter

BRISTOL PLAZA CHEVRON (Continued) **S103650567**

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 06/17/2004
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 03/02/2005
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 09/22/2005
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 10/20/2005
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 07/23/2007
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 08/17/2007
Action: Staff Letter

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 02/22/2011
Action: File review

Global Id: T0605902077
Action Type: ENFORCEMENT
Date: 10/22/2012
Action: Notification - Preclosure

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 97UT025
Current Status: Certification (Case Closed)
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 01/08/2013
Case Type: Other Ground Water
Record ID: RO0001621

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Remediation Plan
Case Number: 083003044T

BRISTOL PLAZA CHEVRON (Continued) **S103650567**

Local Case Num:	97UT025
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	SEL
Funding:	Not reported
How Discovered:	SA
How Stopped:	Other Means
Leak Cause:	Unknown
Leak Source:	D
Global ID:	T0605902077
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	6/27/1996
Enforcement Date:	Not reported
Close Date:	Not reported
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	12/12/1996
Date Remediation Plan Submitted:	10/18/2002
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.666695
Longitude:	-117.882091
MTBE Date:	4/7/2004
Max MTBE GW:	5800
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	TME
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

27
North
1/4-1/2
0.395 mi.
2084 ft.

CREEKSIDE PROPERTY
2900 BRISTOL AVENUE
COSTA MESA, CA

SLIC **S101541126**
N/A

Relative:
Higher

Actual:
42 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	01/15/1994
Global Id:	SLT8R2133991
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	33.6760328016934
Longitude:	-117.88583278656
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	SLT8R213
File Location:	Regional Board
Potential Media Affected:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Other Chlorinated Hydrocarbons, Tetrachloroethylene (PCE), Trichloroethylene (TCE)
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

SLIC REG 8:

Type:	Soil and Groundwater
Facility Status:	Closed
Staff:	MGC
Substance:	TCE,PCE
Lead Agency:	Regional Board
Location Code:	CM-3
Thomas Bros Code:	859-D5

28
North
1/4-1/2
0.421 mi.
2224 ft.

ANTIMITE PEST CONTROL
696 RANDOLPH AVE
COSTA MESA, CA 92626

LUST **S103959921**
N/A

Relative:
Higher

Actual:
41 ft.

LUST:

Region:	STATE
Global Id:	T0605902196
Latitude:	33.6769419
Longitude:	-117.885585
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/07/2003
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003252T
LOC Case Number:	98UT054
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

ANTIMITE PEST CONTROL (Continued) **S103959921**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605902196
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Global Id:	T0605902196
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0605902196
Status:	Open - Case Begin Date
Status Date:	08/06/1998

Global Id:	T0605902196
Status:	Completed - Case Closed
Status Date:	05/07/2003

Regulatory Activities:

Global Id:	T0605902196
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

Global Id:	T0605902196
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery

Global Id:	T0605902196
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Soil Vapor Extraction (SVE)

Global Id:	T0605902196
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	In Situ Physical/Chemical Treatment (other than SVE)

Global Id:	T0605902196
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation

ANTIMITE PEST CONTROL (Continued) **S103959921**

ORANGE CO. LUST:

Region:	ORANGE
Facility Id:	98UT054
Current Status:	Certification (Case Closed)
Released Substance:	Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed:	06/20/2003
Case Type:	Other Ground Water
Record ID:	RO0002390

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083003252T
Local Case Num:	98UT054
Case Type:	Other ground water affected
Substance:	Gasoline
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Tank
Global ID:	T0605902196
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	8/6/1998
Enforcement Date:	Not reported
Close Date:	5/7/2003
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6769487
Longitude:	-117.8848721
MTBE Date:	10/18/2001
Max MTBE GW:	137
MTBE Concentration:	0
Max MTBE Soil:	.009
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*

ANTIMITE PEST CONTROL (Continued) **S103959921**

Staff:	NOM
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

I29 **EXOTIC MATERIAL INC** **ENVIROSTOR** **S100200509**
North **2930 BRISTOL ST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.449 mi.
2371 ft. **Site 1 of 2 in cluster I**

Relative:
Higher

Actual:
40 ft.

ENVIROSTOR:

Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	* Mmonroy
Division Branch:	Cleanup Cypress
Facility ID:	30280530
Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	* RCRA 3012 - Past Haz Waste Disp Inven Site
Status:	Refer: Other Agency
Status Date:	08/23/1984
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.67743
Longitude:	-117.8858
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	* UNSPECIFIED ACID SOLUTION, * UNSPECIFIED OIL CONTAINING WASTE, * UNSPECIFIED SOLVENT MIXTURES
Confirmed COC:	* UNSPECIFIED ACID SOLUTION, * UNSPECIFIED OIL CONTAINING WASTE, * UNSPECIFIED SOLVENT MIXTURES, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	DOW CHEMICAL COMPANY (SEAL BEACH)
Alias Type:	Alternate Name
Alias Name:	PERKIN-ELMER CORP
Alias Type:	Alternate Name
Alias Name:	CAD008339988
Alias Type:	EPA Identification Number
Alias Name:	110002632802
Alias Type:	EPA (FRS #)
Alias Name:	30280530
Alias Type:	Envirostor ID Number

Completed Info:

EXOTIC MATERIAL INC (Continued) **S100200509**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 10/25/1994
Comments: DATABASE VALIDATION PROGRAM CONFIRMS NFA FOR DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 08/23/1984
Comments: FACILITY DRIVE-BY OLD LOCATION: BLDG VACANT. WAREHOUSE W/ OFFICE IN FRONT. NO VISIBLE PROB. CURR LOC: DRUMS STACKD AROUND SMALL METAL STORAGE. NO VISIBLE PROB. CLEAN SUBMIT TO EPA PRELIM ASSESS DONE RCRA 3012

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 10/12/1983
Comments: FACILITY IDENTIFIED ID FROM ERRIS

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

I30 **VISTA PAINT** **HIST CORTESE S104809797**
North **2931 BRISTOL ST** **LUST N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.459 mi.
2422 ft. **Site 2 of 2 in cluster I**

Relative:
Higher

Actual:
41 ft.

HIST CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083000438T

LUST:
Region: STATE
Global Id: T0605900350
Latitude: 33.67772
Longitude: -117.887176
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 08/13/1987
Lead Agency: ORANGE COUNTY LOP
Case Worker: DB
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083000438T
LOC Case Number: 87UT041
File Location: Local Agency

VISTA PAINT (Continued) **S104809797**

Potential Media Affect: Under Investigation
Potential Contaminants of Concern: Stoddard solvent / Mineral Spriits / Distillates
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605900350
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Global Id: T0605900350
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: cbernhardt@waterboards.ca.gov
Phone Number: 9517824495

Status History:
Global Id: T0605900350
Status: Completed - Case Closed
Status Date: 08/13/1987

Global Id: T0605900350
Status: Open - Case Begin Date
Status Date: 08/13/1987

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 87UT041
Current Status: Certification (Case Closed)
Released Substance: Paint thinner
Date Closed: 08/13/1987
Case Type: Undetermined
Record ID: RO0001793

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083000438T
Local Case Num: 87UT041
Case Type: Undefined
Substance: Paint Thinner
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported

VISTA PAINT (Continued) **S104809797**

Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900350
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	1/1/1965
Enforcement Date:	Not reported
Close Date:	8/13/1987
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6772006
Longitude:	-117.8872402
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

J31 **SANTA ANA COUNTRY CLUB** **HIST CORTESE** **U003659696**
South **20241 SANTA ANA AVE** **LUST** **N/A**
1/4-1/2 **SANTA ANA, CA 92707** **UST**
0.476 mi. **SWEEPS UST**
2515 ft. **Site 1 of 2 in cluster J**

Relative:
Higher

Actual:
41 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083000714T

SANTA ANA COUNTRY CLUB (Continued) **U003659696**

LUST:

Region:	STATE
Global Id:	T0605902156
Latitude:	33.664042
Longitude:	-117.885888
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/23/1999
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	KL
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003171T
LOC Case Number:	98UT032
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605902156
Contact Type:	Local Agency Caseworker
Contact Name:	KEVIN LAMBERT
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E DYER ROAD SUITE 120
City:	SANTA ANA
Email:	klambert@ochca.com
Phone Number:	7144336261

Global Id:	T0605902156
Contact Type:	Regional Board Caseworker
Contact Name:	NANCY OLSON-MARTIN
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	nolson-martin@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0605902156
Status:	Open - Case Begin Date
Status Date:	04/23/1998

Global Id:	T0605902156
Status:	Completed - Case Closed
Status Date:	04/23/1999

Regulatory Activities:

Global Id:	T0605902156
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

Global Id:	T0605902156
Action Type:	Other

SANTA ANA COUNTRY CLUB (Continued) **U003659696**

Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605902156
Action Type: ENFORCEMENT
Date: 02/26/1999
Action: Closure/No Further Action Letter

Global Id: T0605902156
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Region: STATE
Global Id: T0605900564
Latitude: 33.664042
Longitude: -117.885888
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 01/03/1989
Lead Agency: ORANGE COUNTY LOP
Case Worker: KL
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083000714T
LOC Case Number: 87UT224
File Location: Local Agency
Potential Media Affect: Soil
Potential Contaminants of Concern: Diesel
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605900564
Contact Type: Local Agency Caseworker
Contact Name: KEVIN LAMBERT
Organization Name: ORANGE COUNTY LOP
Address: 1241 E DYER ROAD SUITE 120
City: SANTA ANA
Email: klambert@ochca.com
Phone Number: 7144336261

Global Id: T0605900564
Contact Type: Regional Board Caseworker
Contact Name: PATRICIA HANNON
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: phannon@waterboards.ca.gov
Phone Number: Not reported

Status History:
Global Id: T0605900564
Status: Open - Case Begin Date
Status Date: 10/05/1987

SANTA ANA COUNTRY CLUB (Continued) **U003659696**

Global Id: T0605900564
Status: Completed - Case Closed
Status Date: 01/03/1989

Regulatory Activities:
Global Id: T0605900564
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605900564
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 87UT224
Current Status: Certification (Case Closed)
Released Substance: Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed: 01/03/1989
Case Type: Soil Only
Record ID: RO0001542

Region: ORANGE
Facility Id: 98UT032
Current Status: Certification (Case Closed)
Released Substance: Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed: 04/23/1999
Case Type: Soil Only
Record ID: RO0001828

Region: ORANGE
Facility Id: 98UT032
Current Status: Not reported
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 04/23/1999
Case Type: Not reported
Record ID: RO0001828

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083000714T
Local Case Num: 87UT224
Case Type: Soil only
Substance: Diesel
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: Not reported
Funding: Not reported
How Discovered: Tank Closure

SANTA ANA COUNTRY CLUB (Continued) **U003659696**

How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605900564
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	10/5/1987
Enforcement Date:	Not reported
Close Date:	1/3/1989
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.7480113
Longitude:	-117.8851239
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	PAH
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083003171T
Local Case Num:	98UT032
Case Type:	Soil only
Substance:	12034,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure

SANTA ANA COUNTRY CLUB (Continued) **U003659696**

How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605902156
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	4/23/1998
Enforcement Date:	Not reported
Close Date:	4/23/1999
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6641531
Longitude:	-117.8843551
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*
Staff:	NOM
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

UST:

Facility ID:	8791
Latitude:	33.70597
Longitude:	-117.86808
Permitting Agency:	ORANGE COUNTY

ORANGE CO. UST:

Facility ID:	FA0024642

SWEEPS UST:

Status:	Active
Comp Number:	8791
Number:	9

SANTA ANA COUNTRY CLUB (Continued) **U003659696**

Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-008791-000001
Tank Status:	A
Capacity:	2000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL
Number Of Tanks:	2

Status:	Active
Comp Number:	8791
Number:	9
Board Of Equalization:	Not reported
Referral Date:	09-30-92
Action Date:	09-15-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	30-000-008791-000002
Tank Status:	A
Capacity:	2000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	P
Content:	LEADED
Number Of Tanks:	Not reported

J32 **SANTA ANA COUNTRY CLUB** **HIST CORTESE** **U002096309**
South **20241** **CA FID UST** **N/A**
1/4-1/2 **SANTA ANA, CA 92707**
0.476 mi.
2515 ft. **Site 2 of 2 in cluster J**

Relative:
Higher

Actual:
41 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	30
Reg By:	LTNKA
Reg Id:	083003171T

CA FID UST:

Facility ID:	30001714
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7145458235
Mail To:	Not reported
Mailing Address:	20382 W NEWPORT BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SANTA ANA 92707
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported

SANTA ANA COUNTRY CLUB (Continued) **U002096309**

NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

K33 **PEP BOYS #660** **LUST** **S106175994**
North **2946 BRISTOL** **N/A**
1/4-1/2 **COSTA MESA, CA 92626**
0.484 mi.
2553 ft. **Site 1 of 3 in cluster K**

Relative:
Higher

Actual:
42 ft.

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083003260T
Local Case Num:	98UT073
Case Type:	Soil only
Substance:	Waste Oil
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605902200
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	10/2/1998
Enforcement Date:	Not reported
Close Date:	3/10/2000
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6775596
Longitude:	-117.8865351
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.
MTBE Class:	*

PEP BOYS #660 (Continued) **S106175994**

Staff:	NOM
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

K34 **PEP BOYS #660** **FINDS** **1007676836**
North **2946 BRISTOL ST** **LUST** **N/A**
1/4-1/2 **COSTA MESA, CA** **UST**
0.484 mi.
2553 ft. **Site 2 of 3 in cluster K**

Relative: Higher

Actual: 42 ft.

FINDS:

Registry ID: 110017952429

Environmental Interest/Information System
UORS (California - Used Oil Recycling System). California Integrated Waste Management Board (CIWMB) helps communities establish and promote convenient collection opportunities for used oil and used oil filters.

LUST:

Region:	STATE
Global Id:	T0605902200
Latitude:	33.678113
Longitude:	-117.8860998
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	03/10/2000
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083003260T
LOC Case Number:	98UT073
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0605902200
Contact Type:	Local Agency Caseworker
Contact Name:	DENAMARIE BAKER
Organization Name:	ORANGE COUNTY LOP
Address:	1241 E. DYER ROAD, STE. 120
City:	SANTA ANA
Email:	dbaker@ochca.com
Phone Number:	7144336255

Global Id: T0605902200

PEP BOYS #660 (Continued) **1007676836**

Contact Type: Regional Board Caseworker
Contact Name: NANCY OLSON-MARTIN
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: nolson-martin@waterboards.ca.gov
Phone Number: Not reported

Status History:
Global Id: T0605902200
Status: Open - Case Begin Date
Status Date: 10/02/1998

Global Id: T0605902200
Status: Completed - Case Closed
Status Date: 03/10/2000

Regulatory Activities:
Global Id: T0605902200
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605902200
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 98UT073
Current Status: Certification (Case Closed)
Released Substance: Waste oil/Used oil
Date Closed: 03/10/2000
Case Type: Soil Only
Record ID: RO0002818

UST:
Facility ID: 1965
Latitude: 33.67768
Longitude: -117.88654
Permitting Agency: ORANGE COUNTY

K35 **PEP BOYS** **HIST CORTESE** **S101631302**
North **2946 BRISTOL ST** **CA FID UST** **N/A**
1/4-1/2 **COSTA MESA, CA 92626** **SWEEPS UST**
0.484 mi.
2553 ft. **Site 3 of 3 in cluster K**

Relative:
Higher

Actual:
42 ft.

HIST CORTESE:
Region: CORTESE
Facility County Code: 30
Reg By: LTNKA
Reg Id: 083003260T

PEP BOYS (Continued) **S101631302**

CA FID UST:
Facility ID: 30017418
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7145491533
Mail To: Not reported
Mailing Address: 1122 WASHINGTON BLVD P O
Mailing Address 2: Not reported
Mailing City,St,Zip: COSTA MESA 92626
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Not reported
Comp Number: 1965
Number: Not reported
Board Of Equalization: 44-010401
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-001965-000001
Tank Status: Not reported
Capacity: 550
Active Date: Not reported
Tank Use: UNKNOWN
STG: PRODUCT
Content: Not reported
Number Of Tanks: 1

Status: Active
Comp Number: 1965
Number: 9
Board Of Equalization: 44-010401
Referral Date: 09-30-92
Action Date: 09-15-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: 30-000-001965-000004
Tank Status: A
Capacity: 550
Active Date: Not reported
Tank Use: PETROLEUM
STG: P
Content: Not reported
Number Of Tanks: 1

36
East
1/2-1
0.523 mi.
2764 ft.

KNIGHT EQUIPMENT CORP
2955 AIRWAY AVE
COSTA MESA, CA 92626

HIST UST **U001576790**
EMI **N/A**
ENVIROSTOR

Relative:
Higher

Actual:
52 ft.

HIST UST:

Region:	STATE
Facility ID:	00000064585
Facility Type:	Other
Other Type:	MANUFACTURING
Total Tanks:	0002
Contact Name:	Not reported
Telephone:	7149796300
Owner Name:	COMMODORE INTERNATIONAL LIMITE
Owner Address:	1200 WILLSON DRIVE
Owner City,St,Zip:	WESTCHESTER, PA 19380

Tank Num:	001
Container Num:	1
Year Installed:	1972
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Tank Construction:	Not reported
Leak Detection:	Visual

Tank Num:	002
Container Num:	2
Year Installed:	1980
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Tank Construction:	Not reported
Leak Detection:	Visual

EMI:

Year:	1987
County Code:	30
Air Basin:	SC
Facility ID:	58258
Air District Name:	SC
SIC Code:	9999
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

ENVIROSTOR:

Site Type:	Tiered Permit
Site Type Detailed:	Tiered Permit
Acres:	Not reported

KNIGHT EQUIPMENT CORP (Continued) **U001576790**

NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Cypress
Facility ID: 71002508
Site Code: Not reported
Assembly: 74
Senate: 37
Special Program: Not reported
Status: Refer: Other Agency
Status Date: Not reported
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: Not reported
Latitude: 33.66970
Longitude: -117.8769
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD063119796
Alias Type: EPA Identification Number
Alias Name: 71002508
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Consent Agreement
Completed Date: 07/07/1999
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

37
East
1/2-1
0.527 mi.
2784 ft.

Relative:
Higher

Actual:
52 ft.

SIGMA CIRCUITS INC
2970 AIRWAY AVE
COSTA MESA, CA 92626

CERC-NFRAP **1000294703**
RCRA-SQG **CAD981658669**
FINDS
SLIC
Orange Co. Industrial Site
HAZNET
EMI
ENVIROSTOR

CERC-NFRAP:
Site ID: 0903532
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL

SIGMA CIRCUITS INC (Continued) **1000294703**

Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:
Contact Sequence ID: 13290511.00000
Person ID: 13003854.00000

Contact Sequence ID: 13296106.00000
Person ID: 13003858.00000

Contact Sequence ID: 13301964.00000
Person ID: 13004003.00000

CERCLIS-NFRAP Site Alias Name(s):
Alias Name: ZEUS MFG
Alias Address: Not reported
CA

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: / /
Date Completed: 12/01/87
Priority Level: Not reported

Action: ARCHIVE SITE
Date Started: / /
Date Completed: 03/15/89
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 03/15/89
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: SIGMA CIRCUITS INC
Facility address: 2970 AIRWAY AVE
COSTA MESA, CA 92626
EPA ID: CAD981658669
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

SIGMA CIRCUITS INC (Continued) **1000294703**

Owner/Operator Summary:
- Owner/operator name: ANGLYNN LYNN
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, ME 99999
- Owner/operator country: Not reported
- Owner/operator telephone: (415) 555-1212
- Legal status: Private
- Owner/Operator Type: Owner
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

- Owner/operator name: NOT REQUIRED
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, ME 99999
- Owner/operator country: Not reported
- Owner/operator telephone: (415) 555-1212
- Legal status: Private
- Owner/Operator Type: Operator
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: No
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Historical Generators:
- Date form received by agency: 09/01/1996
- Facility name: SIGMA CIRCUITS INC
- Classification: Small Quantity Generator

- Date form received by agency: 03/15/1996
- Facility name: SIGMA CIRCUITS INC
- Site name: SIGMA CIRCUITS, INC - SOUTHERN CA DIVISI
- Classification: Large Quantity Generator

- Date form received by agency: 03/25/1994
- Facility name: SIGMA CIRCUITS INC
- Site name: SIGMA CIRCUITS INC.
- Classification: Large Quantity Generator

- Date form received by agency: 02/26/1992
- Facility name: SIGMA CIRCUITS INC
- Classification: Large Quantity Generator

SIGMA CIRCUITS INC (Continued) **1000294703**

Date form received by agency: 04/06/1990
Facility name: SIGMA CIRCUITS INC
Classification: Large Quantity Generator

Date form received by agency: 11/11/1986
Facility name: SIGMA CIRCUITS INC
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: FR - 262.10-12.A
Area of violation: Generators - General
Date violation determined: 12/02/1991
Date achieved compliance: 11/08/1993
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 11/08/1993
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

Evaluation date: 12/02/1991
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 11/08/1993
Evaluation lead agency: State Contractor/Grantee

FINDS:

Registry ID: 110000784278

Environmental Interest/Information System

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SLIC:
Region: STATE

SIGMA CIRCUITS INC (Continued) **1000294703**

Facility Status:	**Completed - Case Closed**
Status Date:	04/03/1997
Global Id:	SLT8R1824103
Lead Agency:	ORANGE COUNTY LOP
Lead Agency Case Number:	Not reported
Latitude:	33.680164
Longitude:	-117.869715
Case Type:	Cleanup Program Site
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	SLT8R182
File Location:	Not reported
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Orange Co. Industrial Site:

Case ID:	86IC010
Region:	ORANGE
Record ID:	RO0003078
Current Status:	CLOSED, 12/9/1987
Closure Type:	Closed pre 1994, file review required to determine closure type
Released Chemical:	PLATING WASTE-OTHER METALS

Case ID:	89IC003
Region:	ORANGE
Record ID:	RO0000205
Current Status:	CLOSED, 5/31/1991
Closure Type:	Closed pre 1994, file review required to determine closure type
Released Chemical:	PLATING WASTE-COPPER

Case ID:	89IC056
Region:	ORANGE
Record ID:	RO0000234
Current Status:	CLOSED, 7/19/1991
Closure Type:	Closed pre 1994, file review required to determine closure type
Released Chemical:	ACID WASTE

Case ID:	96IC032
Region:	ORANGE
Record ID:	RO0000554
Current Status:	CLOSED, 4/3/1997
Closure Type:	Closure certification issued
Released Chemical:	LEAD COMPOUNDS

HAZNET:

Year:	1997
Gepaid:	CAD981658669
Contact:	SIGMA CIRCUITS INC
Telephone:	4087279169
Mailing Name:	Not reported
Mailing Address:	393 MATHEW ST
Mailing City,St,Zip:	SANTA CLARA, CA 950503113
Gen County:	Not reported

SIGMA CIRCUITS INC (Continued) **1000294703**

TSD EPA ID: UTD981552177
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Treatment, Incineration
Tons: 6.7424
Facility County: Orange

Year: 1996
Gepaid: CAD981658669
Contact: SIGMA CIRCUITS INC
Telephone: 4087279169
Mailing Name: Not reported
Mailing Address: 393 MATHEW ST
Mailing City,St,Zip: SANTA CLARA, CA 950503113
Gen County: Not reported
TSD EPA ID: CAT000612150
TSD County: Not reported
Waste Category: Liquids with cyanides >= 1,000 Mg./L
Disposal Method: Not reported
Tons: .8548
Facility County: Orange

Year: 1996
Gepaid: CAD981658669
Contact: SIGMA CIRCUITS INC
Telephone: 4087279169
Mailing Name: Not reported
Mailing Address: 393 MATHEW ST
Mailing City,St,Zip: SANTA CLARA, CA 950503113
Gen County: Not reported
TSD EPA ID: HAH036050092
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Transfer Station
Tons: .4587
Facility County: Orange

Year: 1996
Gepaid: CAD981658669
Contact: SIGMA CIRCUITS INC
Telephone: 4087279169
Mailing Name: Not reported
Mailing Address: 393 MATHEW ST
Mailing City,St,Zip: SANTA CLARA, CA 950503113
Gen County: Not reported
TSD EPA ID: AZD980735500
TSD County: Not reported
Waste Category: Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Disposal Method: Recycler
Tons: 130.4844
Facility County: Orange

Year: 1996
Gepaid: CAD981658669
Contact: SIGMA CIRCUITS INC
Telephone: 4087279169
Mailing Name: Not reported

SIGMA CIRCUITS INC (Continued) **1000294703**

Mailing Address: 393 MATHEW ST
Mailing City,St,Zip: SANTA CLARA, CA 950503113
Gen County: Not reported
TSD EPA ID: CAD000088252
TSD County: Not reported
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Transfer Station
Tons: .6880
Facility County: Orange

Click this hyperlink while viewing on your computer to access
53 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year: 1987
County Code: 30
Air Basin: SC
Facility ID: 45852
Air District Name: SC
SIC Code: 3679
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1990
County Code: 30
Air Basin: SC
Facility ID: 45852
Air District Name: SC
SIC Code: 3672
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 2
Part. Matter 10 Micrometers & Smllr Tons/Yr: 1

Year: 1995
County Code: 30
Air Basin: SC
Facility ID: 45852
Air District Name: SC
SIC Code: 3672
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported

SIGMA CIRCUITS INC (Continued) **1000294703**

Total Organic Hydrocarbon Gases Tons/Yr:	7
Reactive Organic Gases Tons/Yr:	7
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1996
County Code:	30
Air Basin:	SC
Facility ID:	45852
Air District Name:	SC
SIC Code:	3672
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	8
Reactive Organic Gases Tons/Yr:	8
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

ENVIROSTOR:

Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	* Mmonroy
Division Branch:	Cleanup Cypress
Facility ID:	30280370
Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	* CERC2
Status:	Refer: Other Agency
Status Date:	10/18/1988
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.66989
Longitude:	-117.8760
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	* HALOGENATED SOLVENTS, * HYDROCARBON SOLVENTS, * Metals - Other Inorganic Solid Waste, * Metals - Sludge, * ORGANIC LIQUIDS WITH METALS, * OXYGENATED SOLVENTS, * ACID SOLUTION 2>PH WITH METALS, * UNSPECIFIED SOLVENT MIXTURES, * OTHER INORGANIC SOLID WASTE, * POLYMERIC RESIN WASTE
Confirmed COC:	* HALOGENATED SOLVENTS, * HYDROCARBON SOLVENTS, * Metals - Other Inorganic Solid Waste, * Metals - Sludge, * ORGANIC LIQUIDS WITH METALS, * OXYGENATED SOLVENTS, * ACID SOLUTION 2>PH WITH METALS, *

SIGMA CIRCUITS INC (Continued) **1000294703**

UNSPECIFIED SOLVENT MIXTURES, * OTHER INORGANIC SOLID WASTE, * POLYMERIC RESIN WASTE, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 30280370
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 10/25/1994
Comments: Database verification project confirms NFA for DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 06/23/1988
Comments: PRELIM ASSESS DONE PRELIMINARY ASSESSMENT COMPLETED. THERE IS A NEW COMPANY ON LOCATION KNOWN AS SIGMA CIRCUIT. SIGMA CIRCUIT LISTED AS A GENERATOR. SIGMA CIRCUIT MANUFAC- TURES PRINTED CIRCUIT BOARDS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 09/02/1982
Comments: FACILITY IDENTIFIED VIA A TIP FACILITY DRIVE-BY APPROX. 250 DRUMS AT SITE ABANDONED & ACCESSIBLE TO THE PUBLIC;SPILLS; OPEN DRUMS; CORRODED DRUMS; WATER REACTIVE DRUM ON SIDE & BUILDING. FINAL STRATEGY SITE REFERRED: TO HWMB- LA -ENF. TIP FROM CO SANIT INSPECTOR FIRM ABANDONED CHEMICALS AT FORMER SITE

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

38
NE
1/2-1
0.756 mi.
3992 ft.

FRYE & SMITH, INC. **ENVIROSTOR** **S104582445**
150 E. BAKER STREET **N/A**
COSTA MESA, CA 92626

Relative:
Higher

Actual:
44 ft.

ENVIROSTOR:
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Cypress
Facility ID: 71002615

FRYE & SMITH, INC. (Continued) **S104582445**

Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	Not reported
Status:	Inactive - Needs Evaluation
Status Date:	Not reported
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.67967
Longitude:	-117.8772
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CAD084456581
Alias Type:	EPA Identification Number
Alias Name:	71002615
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	Not reported
Completed Sub Area Name:	Not reported
Completed Document Type:	Not reported
Completed Date:	Not reported
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

39
North
1/2-1
0.810 mi.
4276 ft.

SHELL OIL **LUST** **S100230416**
3045 BRISTOL ST **Notify 65** **N/A**
COSTA MEDIA, CA 92627

Relative:
Higher

Actual:
38 ft.

LUST:

Region:	STATE
Global Id:	T0605901151
Latitude:	33.6820635
Longitude:	-117.8857771
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/20/2004
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001510T
LOC Case Number:	90UT120
File Location:	Local Agency Warehouse

SHELL OIL (Continued) **S100230416**

Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605901151
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: cbernhardt@waterboards.ca.gov
Phone Number: 9517824495

Global Id: T0605901151
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Status History:
Global Id: T0605901151
Status: Open - Case Begin Date
Status Date: 04/25/1990

Global Id: T0605901151
Status: Open - Verification Monitoring
Status Date: 08/01/2002

Global Id: T0605901151
Status: Completed - Case Closed
Status Date: 05/20/2004

Regulatory Activities:
Global Id: T0605901151
Action Type: ENFORCEMENT
Date: 09/15/2004
Action: Closure/No Further Action Letter

Global Id: T0605901151
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605901151
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605901151
Action Type: ENFORCEMENT
Date: 05/09/1990

SHELL OIL (Continued) **S100230416**

Action: Notice of Responsibility

Global Id: T0605901151
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0605901151
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0605901151
Action Type: ENFORCEMENT
Date: 04/16/2003
Action: Staff Letter

Global Id: T0605901151
Action Type: ENFORCEMENT
Date: 08/18/2003
Action: Staff Letter

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 90UT120
Current Status: Certification (Case Closed)
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 09/15/2004
Case Type: Other Ground Water
Record ID: RO0002257

LUST REG 8:
Region: 8
County: Orange
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083001510T
Local Case Num: 90UT120
Case Type: Other ground water affected
Substance: Gasoline
Qty Leaked: 0
Abate Method: Not reported
Cross Street: Not reported
Enf Type: CLOS
Funding: Not reported
How Discovered: SA
How Stopped: New Tank
Leak Cause: Unknown
Leak Source: Tank
Global ID: T0605901151
How Stopped Date: 9/9/9999
Enter Date: Not reported
Date Confirmation of Leak Began: Not reported
Date Preliminary Assessment Began: Not reported
Discover Date: 4/25/1990

SHELL OIL (Continued) **S100230416**

Enforcement Date:	Not reported
Close Date:	5/20/2004
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	8/1/2002
Enter Date:	Not reported
GW Qualifies:	=
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.6820635
Longitude:	-117.8857771
MTBE Date:	1/9/2002
Max MTBE GW:	51
MTBE Concentration:	0
Max MTBE Soil:	6.9
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90220

---

40 **ORANGE COUNTY AIRPORT** **ENVIROSTOR** **S107736963**
East **N/A**
1/2-1 **NEWPORT BEACH, CA**
0.816 mi.
4306 ft.

Relative:
Higher

Actual:
53 ft.

ENVIROSTOR:

Site Type:	Military Evaluation
Site Type Detailed:	FUDS
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Douglas Bautista

ORANGE COUNTY AIRPORT (Continued) **S107736963**

Division Branch:	Cleanup Cypress
Facility ID:	80000829
Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	Not reported
Status:	Inactive - Needs Evaluation
Status Date:	07/01/2005
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	DERA
Latitude:	33.67166
Longitude:	-117.8719
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CA99799F994900
Alias Type:	Federal Facility ID
Alias Name:	J09CA7127
Alias Type:	INPR
Alias Name:	80000829
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Inventory Project Report (INPR)
Completed Date:	08/18/1998
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

L41 **SANTA ANA AAB** **ENVIROSTOR** **S107737267**
WSW **N/A**
1/2-1 **COSTA MESA, CA**
0.856 mi.
4519 ft. **Site 1 of 2 in cluster L**

Relative:
Higher

Actual:
62 ft.

ENVIROSTOR:

Site Type:	Military Evaluation
Site Type Detailed:	FUDS
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Douglas Bautista
Division Branch:	Cleanup Cypress

SANTA ANA AAB (Continued) **S107737267**

Facility ID:	80000467
Site Code:	Not reported
Assembly:	74
Senate:	37
Special Program:	Not reported
Status:	Inactive - Needs Evaluation
Status Date:	07/01/2005
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	DERA
Latitude:	33.66694
Longitude:	-117.9002
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED, NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CA99799F561600
Alias Type:	Federal Facility ID
Alias Name:	J09CA0614
Alias Type:	INPR
Alias Name:	80000467
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	Not reported
Completed Sub Area Name:	Not reported
Completed Document Type:	Not reported
Completed Date:	Not reported
Comments:	Not reported

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

L42 **SANTA ANA ARMY AIR BASE** **FUDS** **1009484289**
WSW **N/A**
1/2-1 **COSTA MESA, CA**
0.858 mi.
4530 ft. **Site 2 of 2 in cluster L**

Relative:
Higher

Actual:
62 ft.

FUDS:

Federal Facility ID:	CA9799F5616
FUDS #:	J09CA0614
INST ID:	53886
Facility Name:	SANTA ANA ARMY AIR BASE
City:	COSTA MESA
State:	CA
EPA Region:	09
County:	ORANGE
Congressional District:	46
US Army District:	Los Angeles District (SPL)

SANTA ANA ARMY AIR BASE (Continued) **1009484289**

Fiscal Year: 2011
Telephone: 213-452-3920
NPL Status: Not Listed
RAB: Not reported
CTC: 914.9
Current Owner: FEDERAL; PRIVATE
Current Prog: Not reported
Future Prog: Not reported
Description: The Santa Ana Army Air Base consisted of 1336.102 acres. This was made up of 909.453 acres acquired in fee, by condemnation and purchase, 420.74 acres acquired by lease, 5.771 acres acquired by easement, and 0.138 acres. The site is located In the City of Costa Mesa, Orange County, California. The site, at present, contains the Orange County Fairgrounds, Costa Mesa City Hall, Orange Coast College, Pacific Amphitheater, Southern California Bible College, Air National Guard Station, and several residential and retail tracts. Some of the original buildings were renovated and are being used by the present owners. The lease was terminated when the fee land was conveyed to the College.
The Army Air Corps used the site as a pilot training facility between March 1942 and October 1944. It then became a redistribution center and convalescent hospital and later was a discharge station for returning soldiers.The base was built to serve 20,000 personnel. Finally, before it closed in March 1946, it was a discharge station for soldiers returning from the Pacific. The former site was sold to various entities - Orange Coast College, 32nd Agricultural, and Southern California Bible College. The site currently consists of many residential and retail tracts with approximately 2,800 owners

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43
NE
1/2-1
0.883 mi.
4660 ft.

CERADYNE, INC.
3169 REDHILL AVENUE
COSTA MEDIA, CA 92626

ENVIROSTOR **1005775296**
WDS **N/A**

Relative:
Higher

Actual:
47 ft.

ENVIROSTOR:
Site Type: Tiered Permit
Site Type Detailed: Tiered Permit
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Not reported
Division Branch: Cleanup Cypress
Facility ID: 71002835
Site Code: Not reported
Assembly: 74
Senate: 37
Special Program: Not reported
Status: Inactive - Needs Evaluation
Status Date: Not reported
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: Not reported
Latitude: 33.64113
Longitude: -117.9186
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED

CERADYNE, INC. (Continued) **1005775296**

Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD981424229
Alias Type: EPA Identification Number
Alias Name: 71002835
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CA WDS:
Facility ID: Santa Ana River 30I012045
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 8
Facility Telephone: 7145490421
Facility Contact: FERNANDO HERNANDEZ
Agency Name: CERADYNE INC
Agency Address: 3169 REDHILL AVE
Agency City,St,Zip: COSTA MESA 92626
Agency Contact: FERNANDO HERNANDEZ
Agency Telephone: 7145490421
Agency Type: Private
SIC Code: 0
SIC Code 2: Not reported
Primary Waste Type: Not reported
Primary Waste: Not reported
Waste Type2: Not reported
Waste2: Not reported
Primary Waste Type: Not reported
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0

CERADYNE, INC. (Continued) **1005775296**

Reclamation: Not reported
POTW: Not reported
Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

44
SW
1/2-1
0.929 mi.
4907 ft.

COSTA MESA AIR NATIONAL GUARD
2651 NEWPORT BLVD
COSTA MESA, CA 92626

NPDES **S100179551**
LUST **N/A**
MCS
Notify 65

Relative:
Higher

Actual:
69 ft.

NPDES:

Npdes Number:	CAS000001
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	351161
Order No:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 30I021756
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	08/25/2008
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	06/24/2013
Discharge Name:	63d Regional Support Command
Discharge Address:	230 R T Jones Road
Discharge City:	Mountain View
Discharge State:	California
Discharge Zip:	94043

LUST:

Region:	STATE
Global Id:	T0605901234
Latitude:	33.6716369
Longitude:	-117.890061
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/17/1993
Lead Agency:	ORANGE COUNTY LOP
Case Worker:	DB
Local Agency:	ORANGE COUNTY LOP
RB Case Number:	083001626T
LOC Case Number:	92UT101
File Location:	Local Agency
Potential Media Affect:	Soil

COSTA MESA AIR NATIONAL GUARD (Continued) **S100179551**

Potential Contaminants of Concern: Diesel, Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0605901234
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: cbernhardt@waterboards.ca.gov
Phone Number: 9517824495

Global Id: T0605901234
Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
City: SANTA ANA
Email: dbaker@ochca.com
Phone Number: 7144336255

Status History:
Global Id: T0605901234
Status: Open - Case Begin Date
Status Date: 08/21/1992

Global Id: T0605901234
Status: Completed - Case Closed
Status Date: 06/17/1993

Regulatory Activities:
Global Id: T0605901234
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0605901234
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0605901234
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

ORANGE CO. LUST:
Region: ORANGE
Facility Id: 92UT101
Current Status: Certification (Case Closed)
Released Substance: Diesel fuel oil and additives, Nos.1-D, 2-D, 2-4
Date Closed: 06/17/1993

COSTA MESA AIR NATIONAL GUARD (Continued) **S100179551**

Case Type: Soil Only
Record ID: RO0002284

Region: ORANGE
Facility Id: 92UT101
Current Status: Not reported
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded
Date Closed: 06/17/1993
Case Type: Not reported
Record ID: RO0002284

LUST REG 8:

Region:	8
County:	Orange
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083001626T
Local Case Num:	92UT101
Case Type:	Soil only
Substance:	12034,800661
Qty Leaked:	0
Abate Method:	Not reported
Cross Street:	Not reported
Enf Type:	Not reported
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Close Tank
Leak Cause:	Unknown
Leak Source:	Unknown
Global ID:	T0605901234
How Stopped Date:	9/9/9999
Enter Date:	Not reported
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	8/21/1992
Enforcement Date:	Not reported
Close Date:	6/17/1993
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	Not reported
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	33.67068943
Longitude:	-117.8914304
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	0
MTBE Tested:	Not Required to be Tested.

COSTA MESA AIR NATIONAL GUARD (Continued) **S100179551**

MTBE Class:	*
Staff:	CAB
Staff Initials:	AR
Lead Agency:	Local Agency
Local Agency:	30000L
Hydr Basin #:	Not reported
Beneficial:	MUN
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

MCS:

Global Id:	T0605959838
Latitude:	33.67107
Longitude:	-117.8912
Case Type:	Military Cleanup Site
Status:	Open - Site Assessment
Status Date:	05/15/2012
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Caseworker:	PAH
Local Agency:	DEPARTMENT OF TOXIC SUBSTANCES CONTROL
RB Case Number:	Not reported
LOC Case Number:	30970004
File Location:	DTSC
Potential Media Affect:	Soil
EDR Link ID:	T0605959838
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating, Diesel
Site History:	not on Appendix A list.

Click here to access the California GeoTracker records for this facility:

Notify 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Incident Description:	90220

Count: 5 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
AGUANGO	U001577458	WARD RANCH	HWY. 79	92660	HIST UST
COSTA MESA	S106927785	JIFFY LUBE	375 S BRISTOL 110	92626	SWEEPS UST
COSTA MESA	S105023431	COSTA MESA AIR NATIONAL G	S. OF PRESIDIO DR & W. OF	92626	HIST CORTESE
SANTA ANA	1010562027	SHELL OIL PRODUCTS SAP 129410	510 N BRISTOL AVE	92707	RCRA-SQG
SANTA ANA	U001578332	PRESTIGE STATIONS INC #766	2100 S E BRISTOL RD	92707	HIST UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 01/21/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 01/09/2014
Next Scheduled EDR Contact: 04/21/2014
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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 01/09/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 02/28/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Quarterly

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: 05/31/2013
Date Data Arrived at EDR: 07/08/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 151

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/10/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 02/28/2014
Next Scheduled EDR Contact: 06/09/2014
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: 09/10/2013
Date Data Arrived at EDR: 10/02/2013
Date Made Active in Reports: 12/16/2013
Number of Days to Update: 75

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 04/14/2014
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: 09/10/2013
Date Data Arrived at EDR: 10/02/2013
Date Made Active in Reports: 12/16/2013
Number of Days to Update: 75

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 04/14/2014
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: 09/10/2013
Date Data Arrived at EDR: 10/02/2013
Date Made Active in Reports: 12/16/2013
Number of Days to Update: 75

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 04/14/2014
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: 09/10/2013
Date Data Arrived at EDR: 10/02/2013
Date Made Active in Reports: 12/16/2013
Number of Days to Update: 75

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 10/02/2013
Date Made Active in Reports: 12/16/2013
Number of Days to Update: 75

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

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: 12/17/2013
Date Data Arrived at EDR: 01/14/2014
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/17/2013
Date Data Arrived at EDR: 01/14/2014
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/20/2013
Date Data Arrived at EDR: 11/21/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 95

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/14/2014
Next Scheduled EDR Contact: 06/02/2014
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: 09/30/2013
Date Data Arrived at EDR: 10/01/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 66

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 02/07/2014
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Annually

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: 02/03/2014
Date Data Arrived at EDR: 02/06/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 05/19/2014
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: 02/03/2014
Date Data Arrived at EDR: 02/06/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 05/19/2014
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/14/2014
Date Data Arrived at EDR: 02/18/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 28

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/18/2014
Next Scheduled EDR Contact: 06/02/2014
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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 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: Varies

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: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
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: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/19/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Quarterly

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 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 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/16/2014
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/19/2014
Next Scheduled EDR Contact: 06/30/2014
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: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 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: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

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: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2014
Next Scheduled EDR Contact: 05/12/2014
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: 02/13/2014
Date Data Arrived at EDR: 02/14/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 10

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
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: 11/06/2013
Date Data Arrived at EDR: 11/07/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 29

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
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: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/21/2013
Date Data Arrived at EDR: 11/26/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 02/21/2014
Next Scheduled EDR Contact: 05/12/2014
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: 08/27/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 66
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Varies

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/07/2014
Number of Days to Update: 21
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/19/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 01/03/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
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: 01/29/2014
Date Data Arrived at EDR: 01/29/2014
Date Made Active in Reports: 03/12/2014
Number of Days to Update: 42
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Semi-Annually

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: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Quarterly

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: 11/21/2013
Date Data Arrived at EDR: 11/26/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2014
Next Scheduled EDR Contact: 05/12/2014
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: 07/29/2013
Date Data Arrived at EDR: 08/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 92

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 07/29/2013
Date Data Arrived at EDR: 07/30/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 129

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 02/13/2014
Date Data Arrived at EDR: 02/14/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 10

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/13/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 02/03/2014
Date Data Arrived at EDR: 02/06/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 05/19/2014
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: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/17/2013
Date Data Arrived at EDR: 10/01/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 66

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 01/03/2014
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Varies

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: 09/24/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/20/2014
Next Scheduled EDR Contact: 07/07/2014
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

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: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: No Update Planned

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: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/07/2014
Number of Days to Update: 21
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/18/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 11/20/2013
Date Data Arrived at EDR: 11/25/2013
Date Made Active in Reports: 12/31/2013
Number of Days to Update: 36
Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/14/2014
Next Scheduled EDR Contact: 06/02/2014
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: 11/04/2013
Next Scheduled EDR Contact: 02/17/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Hazardous waste / Contaminated Sites

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: 12/04/2013
Date Data Arrived at EDR: 12/10/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 65

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/04/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: Quarterly

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: 02/03/2014
Date Data Arrived at EDR: 02/06/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 05/19/2014
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

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: 12/31/2013
Date Data Arrived at EDR: 02/28/2014
Date Made Active in Reports: 03/20/2014
Number of Days to Update: 20

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/04/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

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

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 03/03/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

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

Local Land Records

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: 02/06/2013
Date Data Arrived at EDR: 04/25/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 01/17/2014
Date Data Arrived at EDR: 01/21/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/09/2013
Date Data Arrived at EDR: 12/10/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 24

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/11/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/03/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 52

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/03/2014
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

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: 10/14/2013
Date Data Arrived at EDR: 10/30/2013
Date Made Active in Reports: 12/03/2013
Number of Days to Update: 34

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/30/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 18

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/19/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/19/2014
Next Scheduled EDR Contact: 06/30/2014
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

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: 09/10/2013
Date Data Arrived at EDR: 10/02/2013
Date Made Active in Reports: 12/16/2013
Number of Days to Update: 75

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/06/2014
Next Scheduled EDR Contact: 05/19/2014
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: 01/15/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 15

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 12/26/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/11/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/25/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

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: 08/01/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 28

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/05/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/26/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/26/2013
Next Scheduled EDR Contact: 04/07/2014
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
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

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/28/2014
Next Scheduled EDR Contact: 05/12/2014
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: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/09/2014
Next Scheduled EDR Contact: 04/28/2014
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: 06/01/2013
Date Data Arrived at EDR: 07/17/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 107

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/28/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/09/2014
Date Data Arrived at EDR: 01/10/2014
Date Made Active in Reports: 03/12/2014
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/10/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/18/2013
Date Data Arrived at EDR: 02/27/2014
Date Made Active in Reports: 03/12/2014
Number of Days to Update: 13

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/14/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/01/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
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: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/28/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Biennially

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

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 09/25/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/07/2014
Number of Days to Update: 21

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/18/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/19/2013
Date Data Arrived at EDR: 11/21/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 42
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/18/2014
Next Scheduled EDR Contact: 06/02/2014
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/30/2013
Date Data Arrived at EDR: 12/31/2013
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 42
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/31/2013
Next Scheduled EDR Contact: 04/14/2014
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

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: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/24/2014
Next Scheduled EDR Contact: 07/07/2014
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 35
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Annually

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/26/2013
Next Scheduled EDR Contact: 04/14/2014
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: 02/25/2014
Date Data Arrived at EDR: 02/27/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 19

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/05/2014
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.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 08/26/2013
Number of Days to Update: 41

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/17/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/25/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 58

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/26/2013
Next Scheduled EDR Contact: 04/07/2014
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/15/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Semi-Annually

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: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 01/20/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Varies

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: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/15/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: N/A

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

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/03/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Varies

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: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/14/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Quarterly

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 07/03/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 72

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 01/02/2014
Next Scheduled EDR Contact: 04/14/2014
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: 06/30/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/07/2014
Number of Days to Update: 21

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/18/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Quarterly

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 01/28/2014
Date Data Arrived at EDR: 01/30/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/14/2014
Date Data Arrived at EDR: 02/18/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 28

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/14/2014
Next Scheduled EDR Contact: 06/02/2014
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: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 01/30/2014
Next Scheduled EDR Contact: 05/12/2014
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: 11/20/2013
Date Data Arrived at EDR: 12/03/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 02/14/2014
Next Scheduled EDR Contact: 06/02/2014
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/24/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/25/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/13/2014
Date Data Arrived at EDR: 01/14/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/14/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Quarterly

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: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/11/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Varies

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 12/26/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Annually

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: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 12/26/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Annually

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 01/13/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Varies

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: 09/20/2013
Date Data Arrived at EDR: 12/11/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 24

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Varies

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 US Hist Auto Stat: EDR Exclusive Historic Gas 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 US Hist Cleaners: EDR Exclusive Historic Dry 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 US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

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: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

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: N/A
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:

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: 01/22/2014
Date Data Arrived at EDR: 01/23/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 19

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/30/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/22/2014
Date Data Arrived at EDR: 01/23/2014
Date Made Active in Reports: 02/12/2014
Number of Days to Update: 20

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/30/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 12/05/2013
Date Data Arrived at EDR: 12/10/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 24

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 03/24/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 20

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 01/13/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 09/30/2013
Date Data Arrived at EDR: 10/01/2013
Date Made Active in Reports: 11/26/2013
Number of Days to Update: 56

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/30/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 12/05/2013
Date Data Arrived at EDR: 12/05/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 53

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 03/13/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/24/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 21

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 02/05/2014
Next Scheduled EDR Contact: 05/19/2014
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/09/2013
Date Data Arrived at EDR: 01/10/2013
Date Made Active in Reports: 02/25/2013
Number of Days to Update: 46

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 11/04/2013
Next Scheduled EDR Contact: 02/17/2014
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/20/2014
Date Data Arrived at EDR: 02/21/2014
Date Made Active in Reports: 03/20/2014
Number of Days to Update: 27

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 02/04/2014
Next Scheduled EDR Contact: 05/19/2014
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/14/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 28

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/13/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/07/2014
Number of Days to Update: 21

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 01/27/2014
Date Data Arrived at EDR: 01/28/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 14

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/25/2014
Date Data Arrived at EDR: 02/27/2014
Date Made Active in Reports: 03/20/2014
Number of Days to Update: 21

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/25/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/20/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/24/2014
Next Scheduled EDR Contact: 07/07/2014
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 12/06/2013
Date Data Arrived at EDR: 01/28/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 48
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/13/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/20/2014
Date Data Arrived at EDR: 01/21/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 21
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/21/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 01/20/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/30/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 32
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/20/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 02/10/2014
Date Data Arrived at EDR: 02/12/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 33
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 01/20/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/30/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 33
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/13/2014
Next Scheduled EDR Contact: 04/28/2014
Data Release Frequency: Semi-Annually

MADERA COUNTY:

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: 12/09/2013
Date Data Arrived at EDR: 12/10/2013
Date Made Active in Reports: 02/20/2014
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 01/03/2014
Date Data Arrived at EDR: 01/09/2014
Date Made Active in Reports: 02/12/2014
Number of Days to Update: 34

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/03/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 11/21/2013
Date Data Arrived at EDR: 11/25/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 91

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 12/02/2013
Date Data Arrived at EDR: 12/03/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 30

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 03/03/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/09/2014
Date Data Arrived at EDR: 01/10/2014
Date Made Active in Reports: 02/14/2014
Number of Days to Update: 35

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/03/2014
Next Scheduled EDR Contact: 06/06/2014
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/03/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 11/06/2013
Date Data Arrived at EDR: 11/07/2013
Date Made Active in Reports: 12/04/2013
Number of Days to Update: 27
Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 02/14/2014
Next Scheduled EDR Contact: 05/19/2014
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/01/2014
Date Data Arrived at EDR: 02/12/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 33
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/03/2014
Date Data Arrived at EDR: 02/13/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 33
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/01/2014
Date Data Arrived at EDR: 02/12/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 34
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Quarterly

PLACER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/09/2013
Date Data Arrived at EDR: 12/10/2013
Date Made Active in Reports: 01/07/2014
Number of Days to Update: 28
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/14/2014
Date Data Arrived at EDR: 01/15/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 27
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/02/2014
Next Scheduled EDR Contact: 07/07/2014
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/14/2014
Date Data Arrived at EDR: 01/15/2014
Date Made Active in Reports: 02/12/2014
Number of Days to Update: 28
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/24/2014
Next Scheduled EDR Contact: 07/07/2014
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/21/2013
Date Data Arrived at EDR: 01/09/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 33
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/06/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/21/2013
Date Data Arrived at EDR: 01/09/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 33
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/06/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/26/2013
Date Data Arrived at EDR: 11/27/2013
Date Made Active in Reports: 12/31/2013
Number of Days to Update: 34

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2013
Date Data Arrived at EDR: 11/19/2013
Date Made Active in Reports: 12/31/2013
Number of Days to Update: 42

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 02/14/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 03/10/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/18/2013
Date Data Arrived at EDR: 12/19/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 20

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/24/2014
Next Scheduled EDR Contact: 07/07/2014
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/21/2013
Date Data Arrived at EDR: 11/25/2013
Date Made Active in Reports: 02/27/2014
Number of Days to Update: 94

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 01/13/2014
Date Data Arrived at EDR: 01/14/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 28

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/17/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/12/2013
Date Data Arrived at EDR: 12/17/2013
Date Made Active in Reports: 01/07/2014
Number of Days to Update: 21

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/17/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 03/04/2014
Date Data Arrived at EDR: 03/06/2014
Date Made Active in Reports: 03/20/2014
Number of Days to Update: 14
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 03/03/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 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: 03/03/2014
Next Scheduled EDR Contact: 06/16/2014
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/07/2014
Date Data Arrived at EDR: 02/11/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 34
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/10/2014
Next Scheduled EDR Contact: 05/26/2014
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 02/24/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/20/2014
Number of Days to Update: 23
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 12/03/2013
Date Data Arrived at EDR: 12/04/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 29
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/18/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 21

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/17/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/16/2013
Date Data Arrived at EDR: 12/19/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 20

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/17/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/02/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 40

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/30/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/03/2014
Date Data Arrived at EDR: 01/03/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 39

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/30/2013
Next Scheduled EDR Contact: 04/14/2014
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/10/2013
Date Data Arrived at EDR: 12/11/2013
Date Made Active in Reports: 01/04/2014
Number of Days to Update: 24

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 03/24/2014
Next Scheduled EDR Contact: 06/23/2014
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/27/2014
Date Data Arrived at EDR: 01/28/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 48

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/27/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 01/28/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/20/2014
Number of Days to Update: 23

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/18/2014
Next Scheduled EDR Contact: 06/02/2014
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 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: 01/03/2014
Next Scheduled EDR Contact: 04/21/2014
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/17/2014
Next Scheduled EDR Contact: 06/02/2014
Data Release Frequency: Quarterly

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: 10/02/2013
Date Data Arrived at EDR: 10/30/2013
Date Made Active in Reports: 11/27/2013
Number of Days to Update: 28

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 03/21/2014
Next Scheduled EDR Contact: 05/12/2014
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/26/2013
Date Data Arrived at EDR: 12/18/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 21

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/17/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 12/18/2013
Date Data Arrived at EDR: 12/24/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 15

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/24/2014
Next Scheduled EDR Contact: 07/07/2014
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/11/2014
Date Data Arrived at EDR: 02/13/2014
Date Made Active in Reports: 03/17/2014
Number of Days to Update: 32

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 12/06/2013
Next Scheduled EDR Contact: 02/17/2014
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: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/21/2014
Next Scheduled EDR Contact: 06/02/2014
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/17/2014
Next Scheduled EDR Contact: 04/28/2014
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: 11/01/2013
Date Data Arrived at EDR: 11/07/2013
Date Made Active in Reports: 11/18/2013
Number of Days to Update: 11

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 03/12/2014
Next Scheduled EDR Contact: 05/19/2014
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/24/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/20/2014
Next Scheduled EDR Contact: 05/05/2014
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 08/05/2013
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/24/2014
Next Scheduled EDR Contact: 06/09/2014
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 08/09/2013
Date Made Active in Reports: 09/27/2013
Number of Days to Update: 49

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/17/2014
Next Scheduled EDR Contact: 06/30/2014
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

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, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

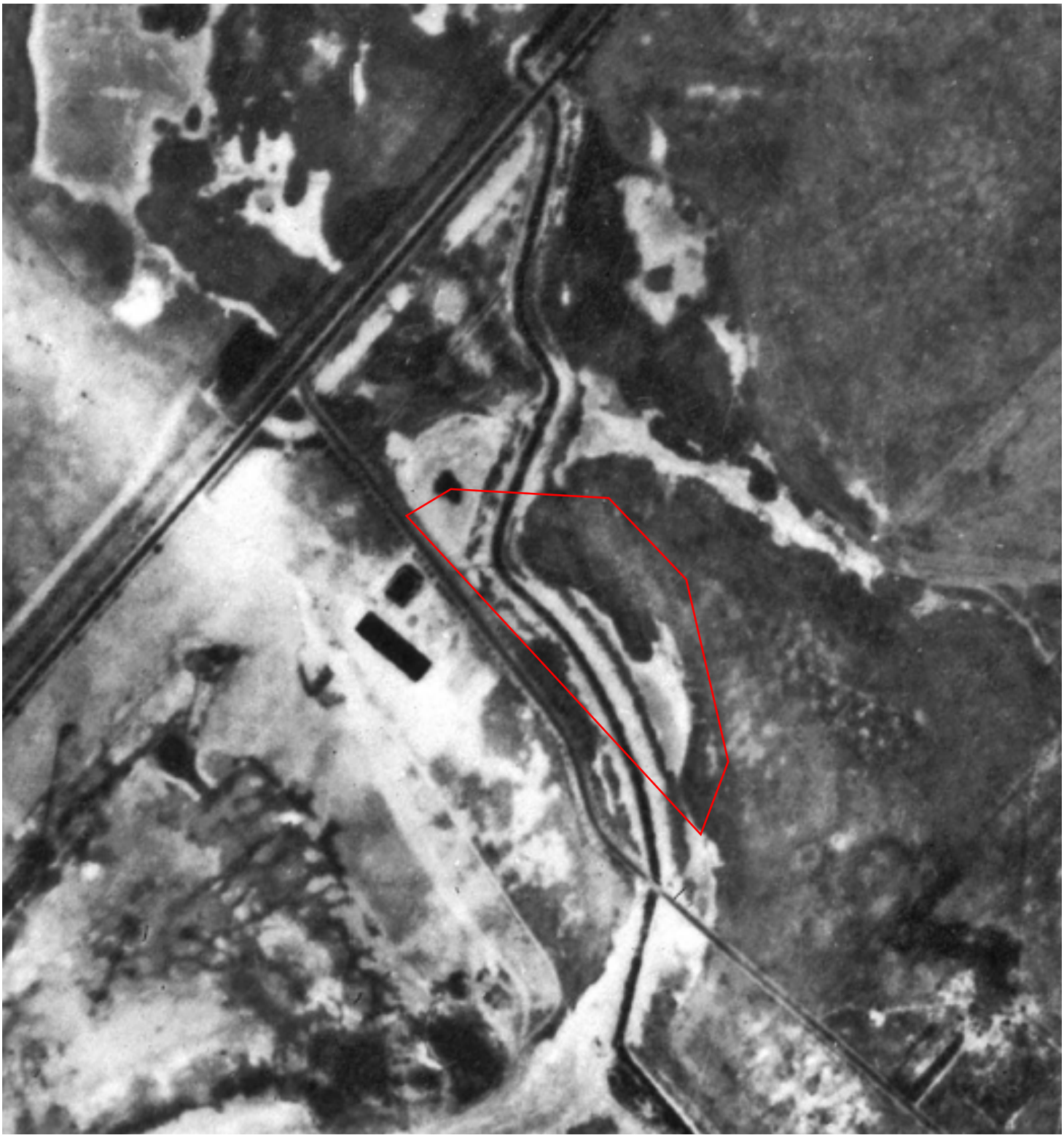
Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

APPENDIX C

HISTORICAL SOURCES



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

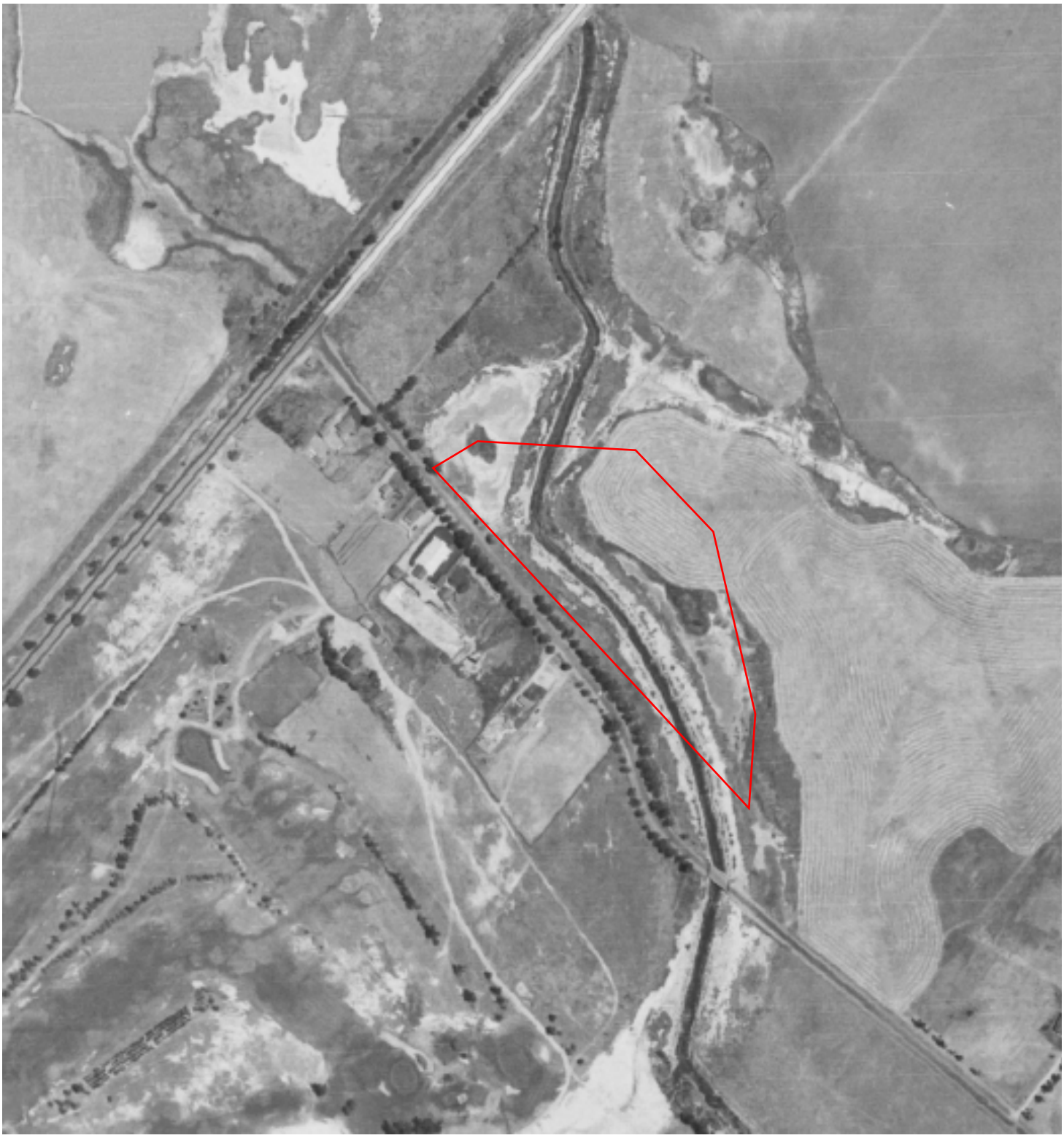
N

Approximate Property Boundary

Year: 1927

Project Number: 328646

AEI Consultants



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

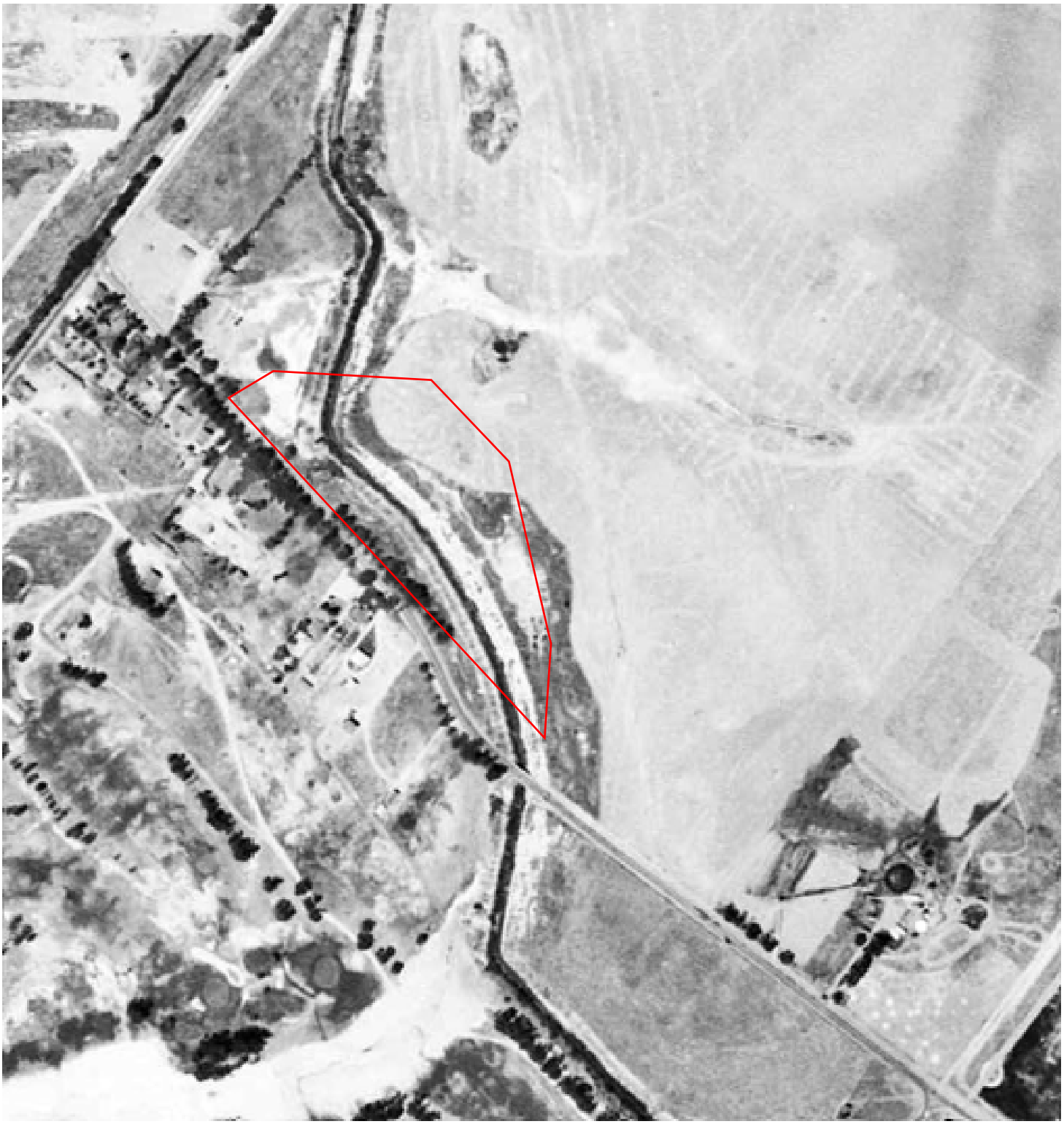
N

Approximate Property Boundary

Year: 1938

Project Number: 328646

AEI Consultants



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

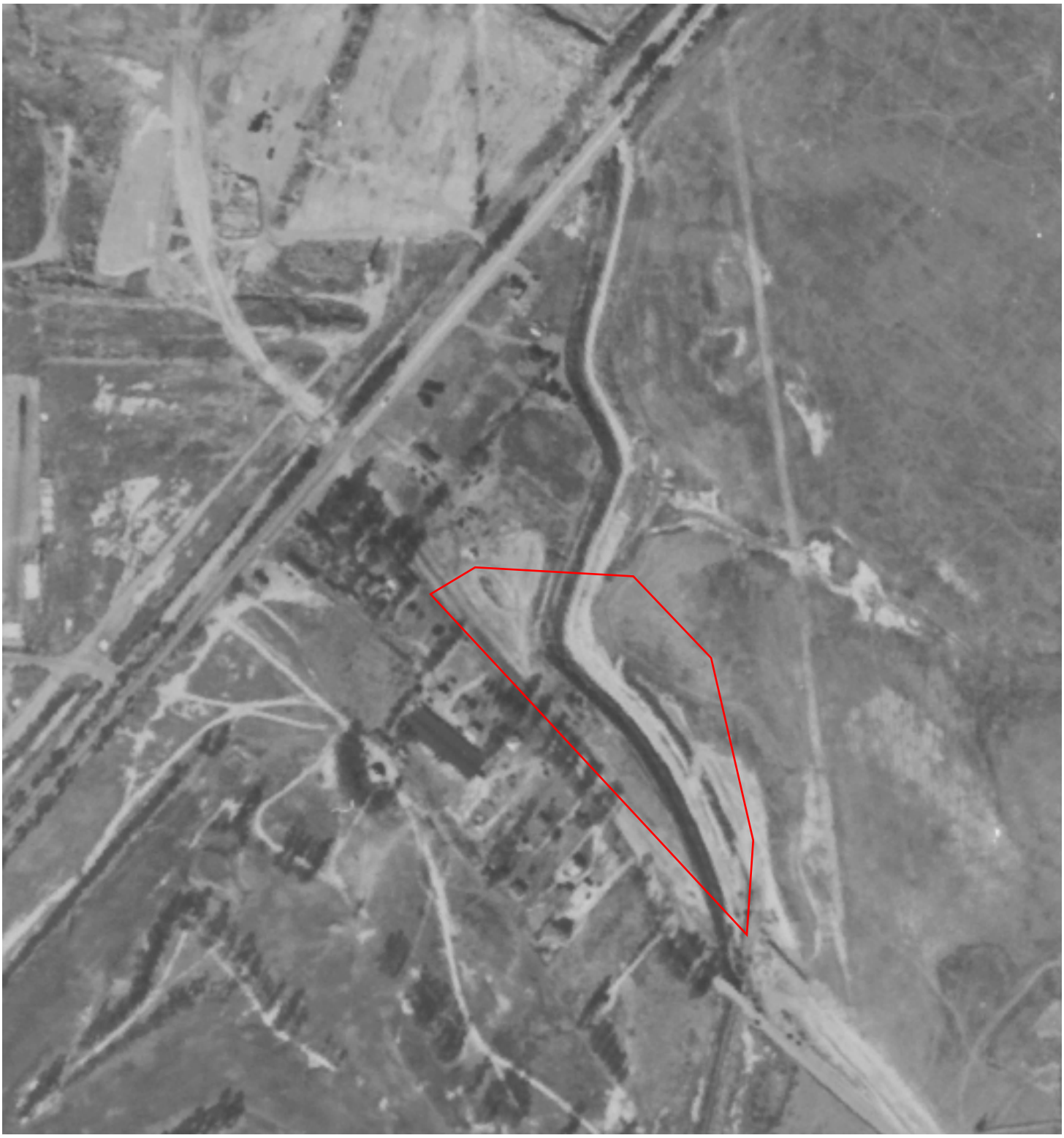
N

Approximate Property Boundary

Year: 1947

Project Number: 328646

AEI Consultants



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

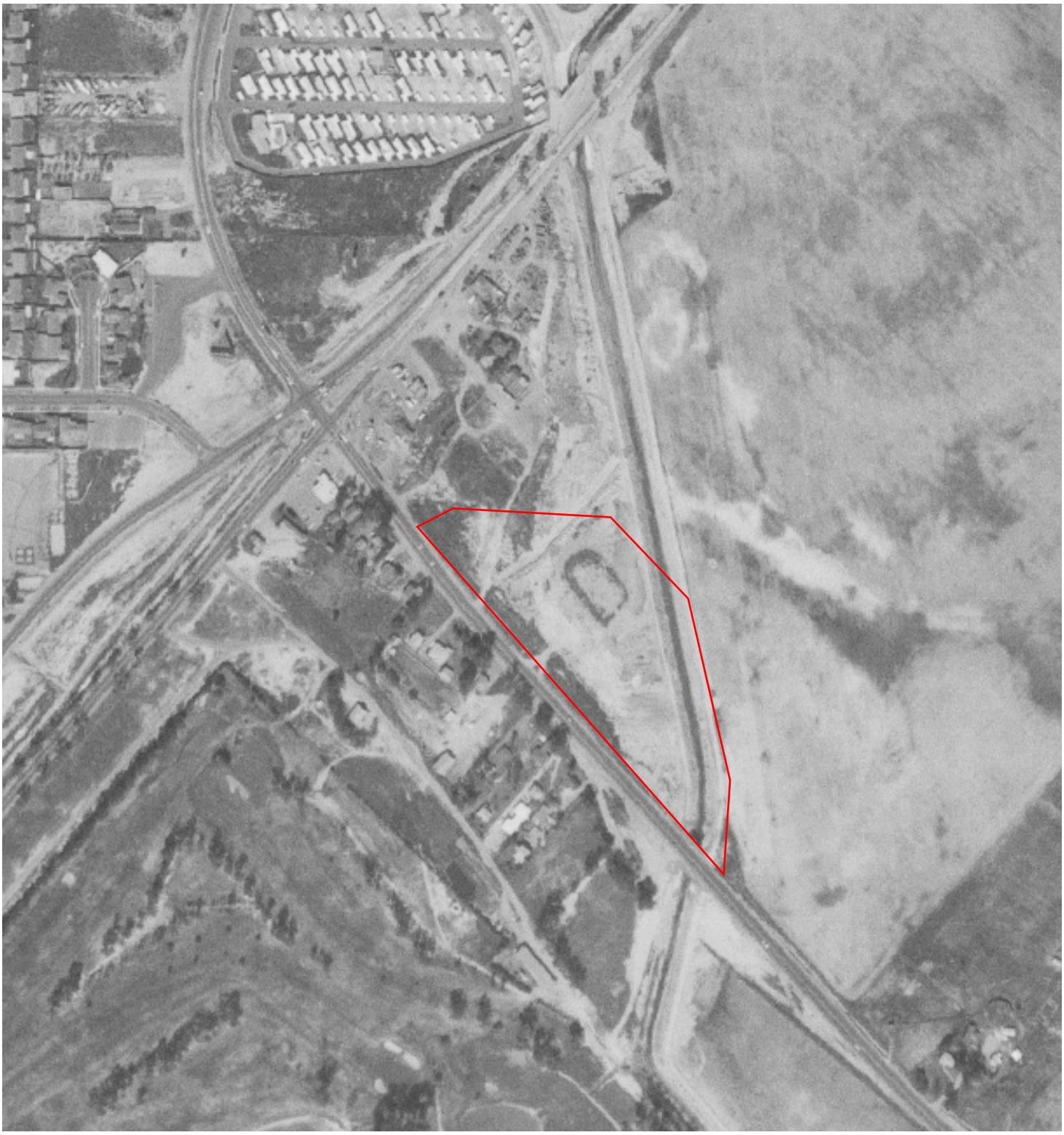
N

Approximate Property Boundary

Year: 1952

Project Number: 328646

AEI Consultants



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

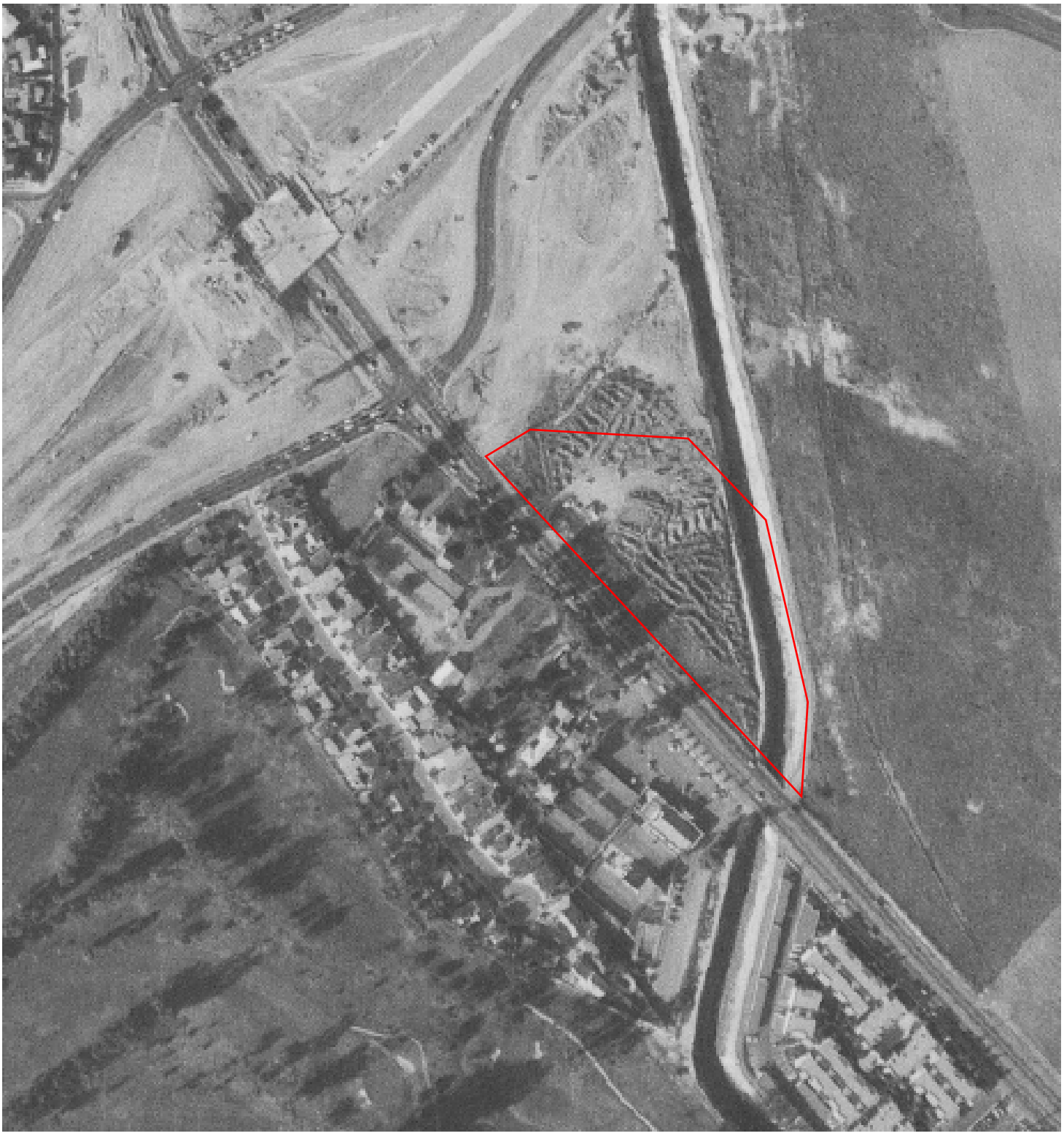
N

Approximate Property Boundary

Year: 1963

Project Number: 328646

AEI Consultants



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

N

Approximate Property Boundary

Year: 1972

Project Number: 328646

AEI Consultants

AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

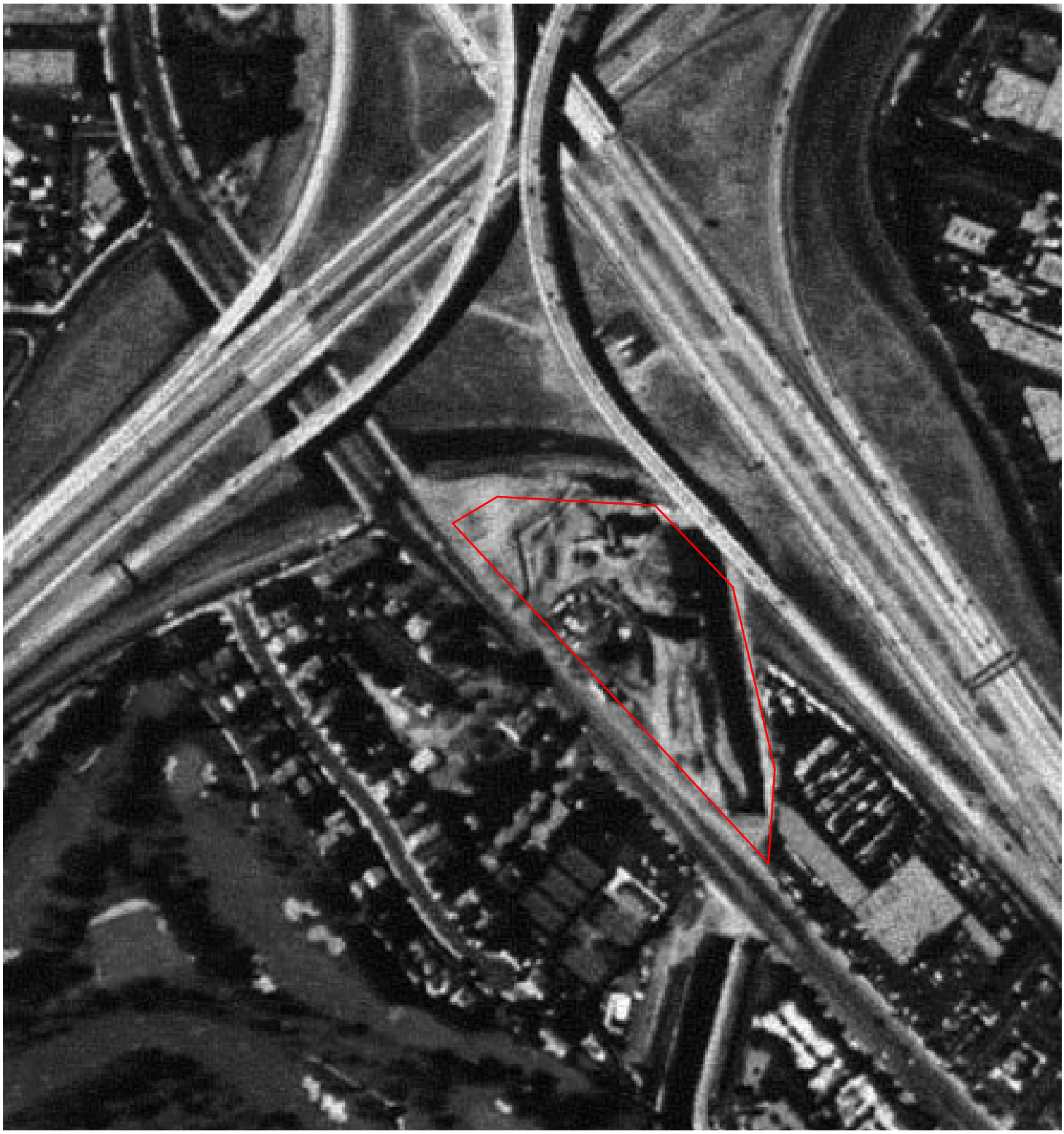
N

Approximate Property Boundary

Year: 1977

Project Number: 328646

AEI Consultants



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

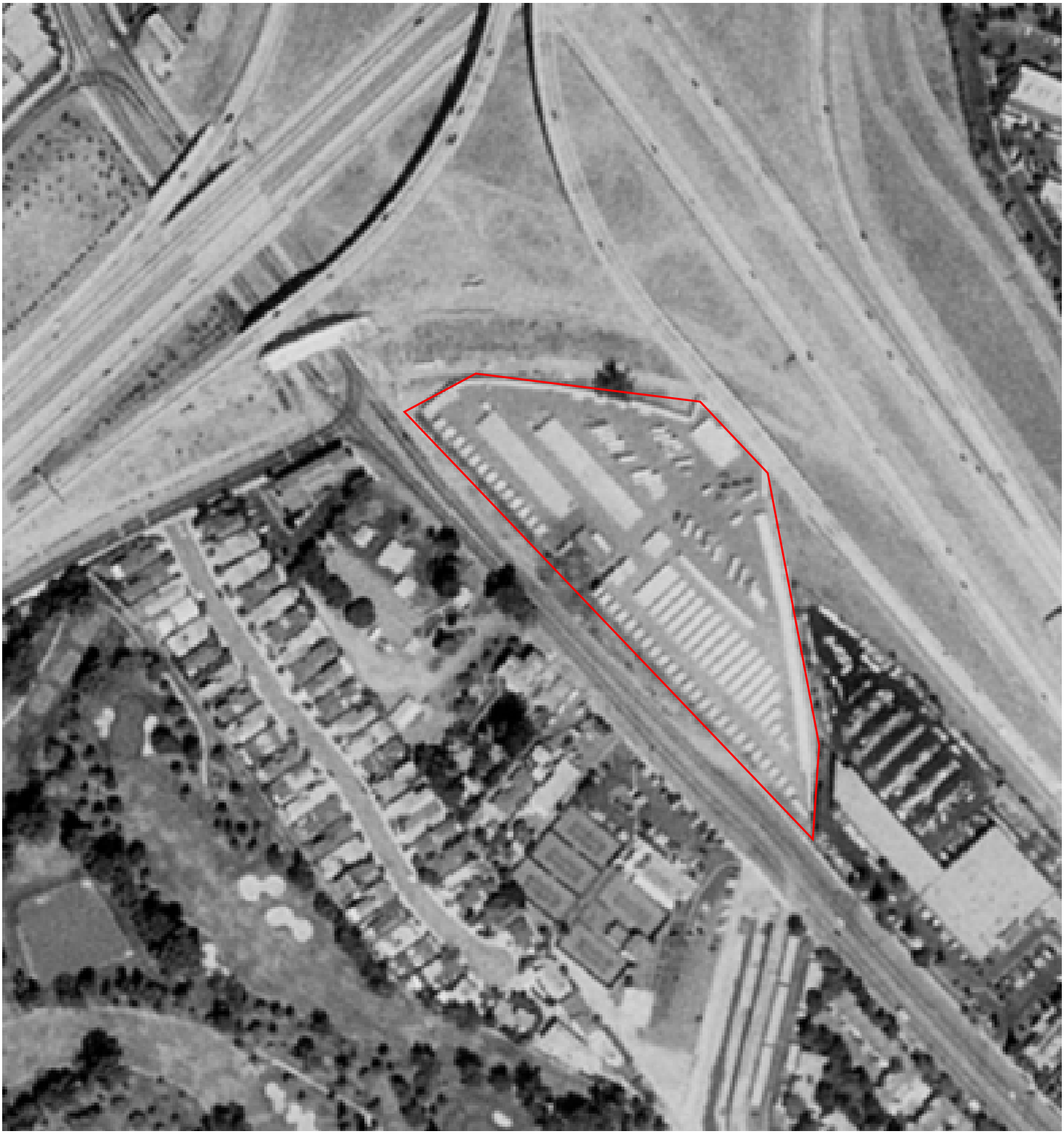
N

Approximate Property Boundary

Year: 1989

Project Number: 328646

AEI Consultants



AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

N

Approximate Property Boundary

Year: 1995

Project Number: 328646

AEI Consultants

AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

N

Approximate Property Boundary

Year: 2005

Project Number: 328646

AEI Consultants

AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

N

Approximate Property Boundary

Year: 2009

Project Number: 328646

AEI Consultants

AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

N

Approximate Property Boundary

Year: 2010

Project Number: 328646

AEI Consultants

AERIAL PHOTOGRAPH

1100 South East Bristol Street, Costa Mesa, California 92626

N

Approximate Property Boundary

Year: 2012

Project Number: 328646

AEI Consultants

328646
1100 Bristol Street
Costa Mesa, CA 92626

Inquiry Number: 3888392.6
March 21, 2014

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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 1920 through 2013. 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.

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
2013	Cole Information Services	-	X	X	-
2008	Cole Information Services	X	X	X	-
2003	Cole Information Services	X	X	X	-
2002	Haines Company	X	X	X	-
2001	Pacific Telephone	-	-	-	-
1997	Pacific Bell	-	-	-	-
1995	Pacific Bell	-	X	X	-
1992	Pacific Bell	-	-	-	-
1991	Pacific Bell	-	X	X	-
1986	Pacific Bell	-	X	X	-
1980	Pacific Telephone	-	X	X	-
1975	Luskeys Brothers & Co.	-	-	-	-
1971	Luskey Brothers Co., Inc.	-	-	-	-
1970	Luskeys Brothers & Co.	-	-	-	-
1966	Pacific Telephone	-	X	X	-
1965	Ross Publications, Inc.,	-	-	-	-
1961	Luskey Brothers & Co.,	-	-	-	-
1960	Luskey Brothers & Co.,	-	X	X	-
1956	Luskey Brothers	-	X	X	-
1955	The Pacific Telephone and Telegraph Co.	-	-	-	-
1952	Luskeys Directory Service Co.	-	-	-	-
1950	West Directory Co.	-	-	-	-
1946	Southern California Telephone Co.	-	-	-	-
1945	McCutcheon & Bragonier	-	-	-	-
1941	Southern California Telephone Co.	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1936	Western Directory Co.	-	-	-	-
1930	Western Directory Co.	-	-	-	-
1926	Pacific Telephone	-	-	-	-
1925	Western Directory Co.	X	X	X	-
1922	Kaasen Directory Co.	-	-	-	-
1921	Western Directory Co.	-	-	-	-
1920	Santa Ana Directory Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

1100 Bristol Street
Costa Mesa, CA 92626

FINDINGS DETAIL

Target Property research detail.

BRISTOL ST

1100 BRISTOL ST

Year	*Uses*	*Source*
2008	BRISTOL ST MINI STORAGE	Cole Information Services
2003	BRISTOL STREET MINI & RV STRG	Cole Information Services
2002	BRISTOL ST MINI	Haines Company
	STORAGE&RV	Haines Company
	XXXX	Haines Company
1925	Raitt Dairy Inc	Western Directory Co.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

BRISTOL

1000 BRISTOL

Year	Uses	Source
1995	Executive Gift Services 7768402	Pacific Bell

1009 BRISTOL

Year	Uses	Source
1966	Daniels Sue	Pacific Telephone

1122 BRISTOL

Year	Uses	Source
1995	Santa ANAHEIM Heights Water Co	Pacific Bell
	Santa ANAHEIM Heights Water Co	Pacific Bell

1204 BRISTOL

Year	Uses	Source
1995	BRISTOL ST R V & MINI	Pacific Bell

1212 BRISTOL

Year	Uses	Source
1980	Tapiseria Modelo Furniture & Carpet Co	Pacific Telephone
	Tapley E C	Pacific Telephone
1966	Linkletter Art Tots N Teens Dance Studio	Pacific Telephone
	Santa Ana Studio	Pacific Telephone

1220 BRISTOL

Year	Uses	Source
1995	Larlos Refrigeration Service	Pacific Bell

BRISTOL ST

1000 BRISTOL ST

Year	Uses	Source
1995	Busybody Inc	Pacific Bell
	Kitchen & Bath Design	Pacific Bell
	Pascal Wine & Wine Storage	Pacific Bell

FINDINGS

Year	Uses	Source
1995	Abbey Carpet Cleaning	Pacific Bell
	BACK BAY RUNNERS	Pacific Bell
	Busy Body Inc	Pacific Bell
	Case Del Sol Tanning Centers	Pacific Bell
	Direct One Hour Photo	Pacific Bell
	Executive Florist Newport Irvine	Pacific Bell
	Gourmet Deli Of Newport Beach The	Pacific Bell
	Kitchen Design	Pacific Bell
	Maria & Angla Custom Alterations & Designs	Pacific Bell
	Minuteman Press Of Newport Beach	Pacific Bell
	Mont Ro Skin Care	Pacific Bell
	Newport Copy & Color	Pacific Bell
	North Bristol Cleaners	Pacific Bell
	Pascal	Pacific Bell
	Pascal Prestige Catering	Pacific Bell
	Royal Khyber Restaurant Of Newport Beach	Pacific Bell
1991	EOURMETDELI OF NEWPORT BEACH T@Huntington Beach@	Pacific Bell
	Newport Beach	Pacific Bell
	BACK BAY RUNNERS	Pacific Bell
	Busy Body Inc	Pacific Bell
	Busybody Inc	Pacific Bell
	Casa Del Sol Tanning Centers	Pacific Bell
	Direct One Hour Photo	Pacific Bell
	Newport Beach	Pacific Bell
	Frontrunners	Pacific Bell
	HARTS RUGS & CARPETS	Pacific Bell
	Jewels Of Newport	Pacific Bell
	Jeweltone Enterprises	Pacific Bell
	Jewett B	Pacific Bell
	Kitchen Design	Pacific Bell
	Kitchen Design	Pacific Bell
	Nail Perfection	Pacific Bell
	Newport Audio	Pacific Bell
	North Bristol Cleaners	Pacific Bell
	One Hour Photo	Pacific Bell
	Pascal French Provencal Cuisine	Pacific Bell
	Rare Coin Investments	Pacific Bell

FINDINGS

Year	Uses	Source
1991	Royal Khyber Restaurant Of Newport Beach	Pacific Bell
	Video Depot	Pacific Bell
	Vogue Salon	Pacific Bell
	Executive Florist Newport Irvine	Pacific Bell
	Minuteman Press Of Newport Beach	Pacific Bell
1986	E UROBATH & TILE	Pacific Bell
	GOURME T DE U OF N E W PORT BE ACH T@Huntington Beach@	Pacific Bell
	Altmans See Eurobath & Tile	Pacific Bell
	CCI Rare Coin & Bullion	Pacific Bell
	Candy Ranch	Pacific Bell
	Collectors Corner Inc	Pacific Bell
	Direct One Hour Photo	Pacific Bell
	Ellen Willis Hair Care	Pacific Bell
	Fan Contemporary Furniture & Lighting	Pacific Bell
	Fari Interior Design	Pacific Bell
	Fan International	Pacific Bell
	Frontrunners	Pacific Bell
	GOW E R S TRE E T RE S TAURAN T	Pacific Bell
	HARTS RUGS & CARPE TS	Pacific Bell
	Home Computer Store	Pacific Bell
	Instead Of Spinach	Pacific Bell
	Irvine Lock & Key Service	Pacific Bell
	Kitchen Design Newport	Pacific Bell
	Minuteman Press Of Newport Beach	Pacific Bell
	Newport Audio	Pacific Bell
	One Hour Photo	Pacific Bell
	Royal Khyber Restaurant Of Newport Beach	Pacific Bell
	Spinach Instead Of	Pacific Bell
1980	Aga John Oriental Rugs	Pacific Telephone
	Agafuroff S	Pacific Telephone
	BURN S ROBT PHARMACY	Pacific Telephone
	Cheese Shop Of Newport Beach The	Pacific Telephone
	De Cut Hair Design	Pacific Telephone
	E UROBATH & TILE	Pacific Telephone
	Fan Contemporary Furnitnire & Lighting	Pacific Telephone
	Fan Interior Design	Pacific Telephone
	FRON TRUN N E RS	Pacific Telephone

FINDINGS

Year	Uses	Source
1980	GOW E R S TRE E T RE S TAURAN T	Pacific Telephone
	HARPS RUGS & CARPE TS	Pacific Telephone
	Plaza Newport Travel	Pacific Telephone
	ROE BURN S PHARMACY	Pacific Telephone
	Sierra Stationers	Pacific Telephone
	Newport Beach	Pacific Telephone
	Kitch On Design Newport	Pacific Telephone
	THIN N E RY T@Huntington Beach@	Pacific Telephone

1001 BRISTOL ST

Year	Uses	Source
2002	XXXX	Haines Company

1002 BRISTOL ST

Year	Uses	Source
1925	J E Johnson	Western Directory Co.

1003 BRISTOL ST

Year	Uses	Source
2002	LOPEZMargantlo	Haines Company
	BELTRANYolanda	Haines Company
1960	Gold JM Ki 2 a	Luskey Brothers & Co.,
1925	E B Jamison	Western Directory Co.
	G H Brader	Western Directory Co.

1005 BRISTOL ST

Year	Uses	Source
1960	Hubbard RE KI 2 a A 36 E	Luskey Brothers & Co.,

1006 BRISTOL ST

Year	Uses	Source
1925	C MW Thompson	Western Directory Co.

1007 BRISTOL ST

Year	Uses	Source
1956	Mc Call F C	Luskey Brothers
1925	Manuel Cordero	Western Directory Co.

1009 BRISTOL ST

Year	Uses	Source
1960	Rico Ezequiel XI 2 a	Luskey Brothers & Co.,

FINDINGS

Year	Uses	Source
1925	A M Bonner	Western Directory Co.

1010 BRISTOL ST

Year	Uses	Source
1925	H J Jordan	Western Directory Co.

1011 BRISTOL ST

Year	Uses	Source
1980	Heavews Thrift Shop	Pacific Telephone
1956	Under constr	Luskey Brothers
1925	H W Woodward	Western Directory Co.

1013 BRISTOL ST

Year	Uses	Source
1925	Vacant	Western Directory Co.

1015 BRISTOL ST

Year	Uses	Source
1960	Con Ine Sibyl Mrs Kl 3 a	Luskey Brothers & Co.,

1016 BRISTOL ST

Year	Uses	Source
1925	C R Mc Collum	Western Directory Co.

1017 BRISTOL ST

Year	Uses	Source
1925	Willard Lake	Western Directory Co.

1019 BRISTOL ST

Year	Uses	Source
1960	Frias RC Kl 3 a	Luskey Brothers & Co.,
1956	Keelers Union Serv Sta	Luskey Brothers

1022 BRISTOL ST

Year	Uses	Source
1925	Vacant	Western Directory Co.

1023 BRISTOL ST

Year	Uses	Source
1960	Dickman HA K 3 a	Luskey Brothers & Co.,
1925	E C Mc Kinstry	Western Directory Co.

FINDINGS

1024 BRISTOL ST

Year	Uses	Source
1995	Motherhood Shop Inc	Pacific Bell

1027 BRISTOL ST

Year	Uses	Source
1960	Gowe Clarence Kl 3 a	Luskey Brothers & Co.,
1925	Mrs Elizabeth Wahlberg	Western Directory Co.

1030 BRISTOL ST

Year	Uses	Source
1925	Joe Lemons	Western Directory Co.

1033 BRISTOL ST

Year	Uses	Source
1925	Mrs Irene Townsend	Western Directory Co.

1036 BRISTOL ST

Year	Uses	Source
1995	Florsheim Shoe Shops	Pacific Bell
	Westminster	Pacific Bell

1038 BRISTOL ST

Year	Uses	Source
1925	E G Jones	Western Directory Co.

1041 BRISTOL ST

Year	Uses	Source
1925	J C Rogers	Western Directory Co.

1045 BRISTOL ST

Year	Uses	Source
1925	M L Brothers	Western Directory Co.

1046 BRISTOL ST

Year	Uses	Source
1925	J R Nelson	Western Directory Co.

1050 BRISTOL ST

Year	Uses	Source
1925	E C Duckett	Western Directory Co.

FINDINGS

1061 BRISTOL ST

Year	Uses	Source
1925	EL Buffham	Western Directory Co.

1072 BRISTOL ST

Year	Uses	Source
2013	LERNER RICHARD S A A LAW CORPORATION	Cole Information Services
	FSG INC	Cole Information Services
	SHERMANDOUGLAS INC	Cole Information Services
	LAW OFFICES OF RAFFI K KEVORKIAN	Cole Information Services
	KODASH INC	Cole Information Services
	GOOD PLANT THE	Cole Information Services
	DON HUBER	Cole Information Services
	FARMERS INSURANCE GROUP	Cole Information Services
	PROFESSIONAL HOME REALTOR	Cole Information Services
2008	LIVINGWATER LENDING	Cole Information Services
	GREGOR GARRETT S LAW OFFICES	Cole Information Services
	BJ LOAN PROCESSING	Cole Information Services
	RICHARD S LERNER A LAW CORP	Cole Information Services
2002	CONSTRUCTION ULTIMA HEALTH CARE	Haines Company
	LAW CORP TRENCHERS WEST	Haines Company
	GROUP LERNER RICHARD S A	Haines Company
	HISPANICMARKTNG	Haines Company
	PROCESSING GAUTIER GARY DC	Haines Company
	REPORTNG CHARLOTTES WORLD	Haines Company
	AMER BUSINESS	Haines Company
	CONSULTANTS BARRISTERS	Haines Company

1080 BRISTOL ST

Year	Uses	Source
1991	Audio By Design Inc	Pacific Bell

1103 BRISTOL ST

Year	Uses	Source
1960	Kelley Fred Kl 3 a	Luskey Brothers & Co.,

1107 BRISTOL ST

Year	Uses	Source
1960	Davis AK	Luskey Brothers & Co.,

FINDINGS

1111 BRISTOL ST

Year	Uses	Source
1960	Harris Lydia K! 2 a	Luskey Brothers & Co.,
1956	Mc Cowans Mkt	Luskey Brothers

1117 BRISTOL ST

Year	Uses	Source
1956	Burgess J H	Luskey Brothers

1120 BRISTOL ST

Year	Uses	Source
2013	PLTC INC	Cole Information Services
	SHOREPOINT INSURANCE SERVICES	Cole Information Services
	BUNDYFINKEL ARCHITECTS	Cole Information Services
	ALLIANZ GLOBAL CORPORATE & SPECIALTY	Cole Information Services
2008	STEVE MADER	Cole Information Services
	DON FROSTFAX	Cole Information Services
	ELKOLL INVESTMENT CO INC	Cole Information Services
	INSURECARGO INSURANCE SERVICE INC	Cole Information Services

1122 BRISTOL ST

Year	Uses	Source
2013	ACS ARCHITECTURAL CONSTRUCTION SERVI	Cole Information Services
2008	ACS ARCHITECTURAL CONSTRUCTION SERVI	Cole Information Services
	ACTION SITE SERVICES INC	Cole Information Services
	NEWPORT REAL ESTATE SERVICES INC	Cole Information Services
2002	XXXX	Haines Company

1123 BRISTOL ST

Year	Uses	Source
1956	Nickey F P Jr	Luskey Brothers

1124 BRISTOL ST

Year	Uses	Source
2013	MLINK ENTERPERISE LLC	Cole Information Services
	MERIDIAN LINK INC	Cole Information Services
	KINECTA FEDERAL CREDIT	Cole Information Services
2008	MERIDIAN LINK INC	Cole Information Services

FINDINGS

1126 BRISTOL ST

Year	Uses	Source
2002	XXXX	Haines Company

1127 BRISTOL ST

Year	Uses	Source
1956	Barrett Marjorie Mrs	Luskey Brothers

1131 BRISTOL ST

Year	Uses	Source
1956	Crowder M R	Luskey Brothers

1135 BRISTOL ST

Year	Uses	Source
1956	Moritza J G	Luskey Brothers

1139 BRISTOL ST

Year	Uses	Source
1956	Lahodny G D	Luskey Brothers

1143 BRISTOL ST

Year	Uses	Source
1956	Sandern J R	Luskey Brothers

1147 BRISTOL ST

Year	Uses	Source
1956	Swisher W T	Luskey Brothers

1148 BRISTOL ST

Year	Uses	Source
1986	Carnation Ice Cream Land	Pacific Bell

1159 BRISTOL ST

Year	Uses	Source
1925	Vacant	Western Directory Co.

1175 BRISTOL ST

Year	Uses	Source
1986	Lamplighter	Pacific Bell

1182 BRISTOL ST

Year	Uses	Source
2013	OC NAIL & BEAUTY	Cole Information Services

FINDINGS

Year	Uses	Source
2002	CAMPBELL KATHLEEN	Haines Company
	MDC RICHARDSONNICOLE	Haines Company
	DC SLUSHERCHIRO	Haines Company
	CNTRS SLUSHER JAMES R 9 DC	Haines Company

1192 BRISTOL ST

Year	Uses	Source
2002	XXXX	Haines Company

1201 BRISTOL ST

Year	Uses	Source
1956	Vacant	Luskey Brothers

1202 BRISTOL ST

Year	Uses	Source
2013	CAPITOL DENTAL CARE THERESA NGUYENDU	Cole Information Services
	WOOD GREGORY DC QME	Cole Information Services
	AYZIN MICHAEL DDS	Cole Information Services
	FINAL INCHES	Cole Information Services
	KENNETH W WRIGHT MD	Cole Information Services
2008	PENSKE TRUCK RENTAL	Cole Information Services
2002	CHAMPION AUTO	Haines Company
	RENTAL	Haines Company

1205 BRISTOL ST

Year	Uses	Source
1956	Dietl E R	Luskey Brothers

1206 BRISTOL ST

Year	Uses	Source
2013	RADOVICH WM A DVM	Cole Information Services
	PANG KIM P DVM	Cole Information Services
	HALEY TARA L DVM	Cole Information Services
	SMITH WAYNE VMD	Cole Information Services
	RENEHAN GAIL E DVM	Cole Information Services
	AIRPORTIRVINE ANIMAL HOSPITAL	Cole Information Services
2008	PANG KIM P DVM	Cole Information Services
	GAIL E RENEHAN DVM	Cole Information Services
	WILLIAM RADOVICH DVM	Cole Information Services

FINDINGS

Year	Uses	Source
2002	ANIMAL HOSPITAL COURTNEY ANGELA	Haines Company
	ORADOVICHWMADVM	Haines Company
	DOM LITVAKJAY B DVM	Haines Company
	AIRPOBTIRVINE	Haines Company

1208 BRISTOL ST

Year	Uses	Source
2002	XXXX	Haines Company

1209 BRISTOL ST

Year	Uses	Source
1960	Schilling AF KI 3 a	Luskey Brothers & Co.,
1956	Kingsley Madaline Mrs	Luskey Brothers

1212 BRISTOL ST

Year	Uses	Source
2008	DESAI RAJIV N DDS INC	Cole Information Services

1215 BRISTOL ST

Year	Uses	Source
1960	Vacant	Luskey Brothers & Co.,
1956	Phillips D R	Luskey Brothers

1216 BRISTOL ST

Year	Uses	Source
1960	Carter Franklin	Luskey Brothers & Co.,

1217 BRISTOL ST

Year	Uses	Source
1960	Sou Calif Edison sub sta	Luskey Brothers & Co.,

1219 BRISTOL ST

Year	Uses	Source
1956	Klang Gilbert	Luskey Brothers

1220 BRISTOL ST

Year	Uses	Source
1960	Contour Bty Salon KI 3 a	Luskey Brothers & Co.,

FINDINGS

1221 BRISTOL ST

Year	Uses	Source
1960	Ware Bill Serv Ki 3 a	Luskey Brothers & Co.,

1223 BRISTOL ST

Year	Uses	Source
1956	Mc Laughlin H R	Luskey Brothers

1227 BRISTOL ST

Year	Uses	Source
1956	Elzea S R	Luskey Brothers

1231 BRISTOL ST

Year	Uses	Source
1956	Fisher C W pntr	Luskey Brothers

1235 BRISTOL ST

Year	Uses	Source
1956	Ruhl J G	Luskey Brothers

1239 BRISTOL ST

Year	Uses	Source
1956	Brenchley R L	Luskey Brothers

1243 BRISTOL ST

Year	Uses	Source
1956	Davis M M Mrs	Luskey Brothers

1247 BRISTOL ST

Year	Uses	Source
1956	Pearson T T	Luskey Brothers

1250 BRISTOL ST

Year	Uses	Source
2013	EXTRA STORAGE NEWPORT MESA	Cole Information Services
2008	EXTRA STORAGE NEW PORT MESA	Cole Information Services
	U HAUL CO	Cole Information Services
2003	U HAUL CO	Cole Information Services
2002	EXTRA STORAGE	Haines Company
	EXTRA STORAGE	Haines Company
1960	No return	Luskey Brothers & Co.,

FINDINGS

1262 BRISTOL ST

Year	Uses	Source
2013	NASBU	Cole Information Services
	ACAPULCO RESTAURANTS	Cole Information Services
2008	ACAPULCO	Cole Information Services
	ACAPULCO MEXICAN RESTAURANT Y CANTIN	Cole Information Services
2003	ACAPULCO MEXICAN RSTRNT Y CNTN	Cole Information Services
2002	ACAPULCOMEXCN	Haines Company

SE BRISTOL ST

1206 SE BRISTOL ST

Year	Uses	Source
1980	Airport Irvine Anim Hospitatl	Pacific Telephone

1262 SE BRISTOL ST

Year	Uses	Source
1995	Costa Mesa	Pacific Bell
	ACAPULCO MEXICAN RESTAURANTS	Pacific Bell
1980	Ramons Acapulco Mexican Restaurant And Cantina	Pacific Telephone
	Acapulco Mexican	Pacific Telephone

THE MASTERS CIR

101 THE MASTERS CIR

Year	Uses	Source
2008	ALL COAST ROOFING	Cole Information Services
2002	SHOGLAND Dennis	Haines Company

102 THE MASTERS CIR

Year	Uses	Source
2002	STERRY Paul	Haines Company
1991	Terry Paul	Pacific Bell

105 THE MASTERS CIR

Year	Uses	Source
2002	KRISMANWiliam	Haines Company

FINDINGS

106 THE MASTERS CIR

Year	Uses	Source
2002	SLOPEZ Elizabelh	Haines Company
1980	Warren Wm C	Pacific Telephone

109 THE MASTERS CIR

Year	Uses	Source
2002	DRAIN Foresl	Haines Company

110 THE MASTERS CIR

Year	Uses	Source
2002	DUBBERLYHugh DOe R	Haines Company
1991	Barnett Ben	Pacific Bell
1986	Barnett Ben	Pacific Bell
1980	Barnett Ben	Pacific Telephone

113 THE MASTERS CIR

Year	Uses	Source
2002	BLAIRAIan	Haines Company
	BLAIRAIam	Haines Company
1991	Blair Alvin	Pacific Bell
1986	Blair Alvin	Pacific Bell
1980	Blair Alvin	Pacific Telephone

114 THE MASTERS CIR

Year	Uses	Source
2002	TEBBSClaudia	Haines Company
1991	Smith Percifor M	Pacific Bell
1986	Smith Percifor M	Pacific Bell
1980	Smith Percifor M	Pacific Telephone

117 THE MASTERS CIR

Year	Uses	Source
2002	KEEEJames O	Haines Company
1991	Conley John Co	Pacific Bell
1986	Conley John Co	Pacific Bell

118 THE MASTERS CIR

Year	Uses	Source
2002	DICKERSONHarold	Haines Company

FINDINGS

121 THE MASTERS CIR

Year	Uses	Source
2002	SMONTAPERTAnthony	Haines Company
1991	Bows Dave	Pacific Bell

122 THE MASTERS CIR

Year	Uses	Source
2002	ORIVERARudy	Haines Company

125 THE MASTERS CIR

Year	Uses	Source
2003	CLASSIC CARDS & GAMES	Cole Information Services
2002	WOLCOTTMargee	Haines Company
1991	Wolcott Jerry & Margee	Pacific Bell

126 THE MASTERS CIR

Year	Uses	Source
2002	STAYLORDan	Haines Company

129 THE MASTERS CIR

Year	Uses	Source
2002	SCURCIRobert	Haines Company
1991	Kubat Larry	Pacific Bell
1986	Kubat Larry	Pacific Bell
1980	Kubat Larry	Pacific Telephone

130 THE MASTERS CIR

Year	Uses	Source
2002	SNEWLANDWilliam	Haines Company
1991	Smith Geo Whitman	Pacific Bell
	Roy Vergenia	Pacific Bell
1986	Smith Geo Whitman	Pacific Bell
1980	Smith Geo Whitman	Pacific Telephone

133 THE MASTERS CIR

Year	Uses	Source
2002	WARDDon	Haines Company
	WARDDon	Haines Company
1991	Mc Carter Dana	Pacific Bell
1986	Colas Tom	Pacific Bell
1980	Gordon Robt H	Pacific Telephone

FINDINGS

134 THE MASTERS CIR

Year	Uses	Source
2002	MIRACLEJoseph DO	Haines Company
1986	Rice Gene	Pacific Bell
	Philpott Sharon	Pacific Bell
1980	Aunger Jerry	Pacific Telephone
	Aune Michael	Pacific Telephone

137 THE MASTERS CIR

Year	Uses	Source
2002	ROBINSONBE	Haines Company
1991	Robinson B E	Pacific Bell
1986	Robinson B E	Pacific Bell
1980	Gerth Marc	Pacific Telephone

138 THE MASTERS CIR

Year	Uses	Source
2002	ROY Vlrgima	Haines Company
	DOEHRERJJ	Haines Company
1986	Roy Virginia	Pacific Bell
1980	Roy Virginia	Pacific Telephone

141 THE MASTERS CIR

Year	Uses	Source
2002	HOAGLANDNancy	Haines Company
1991	Ryness Geo A Jr	Pacific Bell
1986	Ryness Geo A Jr	Pacific Bell
1980	Ryness Geo A Jr	Pacific Telephone

142 THE MASTERS CIR

Year	Uses	Source
2002	SOLSTADArthur C	Haines Company
1991	Olstad Arthur C	Pacific Bell
1986	Ofc	Pacific Bell
	Olstad Arthur C	Pacific Bell
1980	Olstead B	Pacific Telephone
	Olstad Arthur C	Pacific Telephone
	Ofc	Pacific Telephone

FINDINGS

145 THE MASTERS CIR

Year	Uses	Source
2002	CRANK ODna	Haines Company
1980	Lemm Willys T	Pacific Telephone

146 THE MASTERS CIR

Year	Uses	Source
2002	HDCHDERFFERW illard	Haines Company
1991	Hochderffer Willard H	Pacific Bell
1986	Hochderffer Willard H	Pacific Bell
1980	Hochderffer Willard H	Pacific Telephone

149 THE MASTERS CIR

Year	Uses	Source
2002	VANRossem WJ	Haines Company
1991	Van Rossem W Jack	Pacific Bell

150 THE MASTERS CIR

Year	Uses	Source
2002	DEANBey B	Haines Company
1986	Dean B M Dr	Pacific Bell
1980	Larsen Hazel	Pacific Telephone

153 THE MASTERS CIR

Year	Uses	Source
2002	DEMILLE Leslie	Haines Company
1991	Kinzie Freeman X	Pacific Bell
1980	IKinzie Freeman X	Pacific Telephone

154 THE MASTERS CIR

Year	Uses	Source
2002	SJOHNSTON Denas	Haines Company
1986	Kelley Hiro & Helata	Pacific Bell
1980	Welch Jas W	Pacific Telephone

157 THE MASTERS CIR

Year	Uses	Source
2002	CAIN David	Haines Company
	DUNGAN Donald	Haines Company
1991	Dungan Donald	Pacific Bell
1986	Dungan Donald	Pacific Bell

FINDINGS

158 THE MASTERS CIR

Year	Uses	Source
2002	SCHAULIS Robert	Haines Company

161 THE MASTERS CIR

Year	Uses	Source
2002	SPEELOR Rober	Haines Company

162 THE MASTERS CIR

Year	Uses	Source
2008	PACIFIC PRINT	Cole Information Services
2002	BISHOPJeanne	Haines Company
1991	James Sterling W	Pacific Bell
1980	Hogan Vince	Pacific Telephone

165 THE MASTERS CIR

Year	Uses	Source
2002	MCCOYDD	Haines Company
1991	Mc Coy D Dickerson	Pacific Bell
1986	Mc Coy Douglas D	Pacific Bell
1980	Mc Coy Douglas D	Pacific Telephone

166 THE MASTERS CIR

Year	Uses	Source
2002	ZILLPeggy	Haines Company

169 THE MASTERS CIR

Year	Uses	Source
2002	ARNOLD Philp B	Haines Company
1986	Arnold Philip E	Pacific Bell
1980	Arnold Philip E	Pacific Telephone

170 THE MASTERS CIR

Year	Uses	Source
2002	BENTLEYWiiam	Haines Company
1991	Seuthe K	Pacific Bell
	Bentley Wm A	Pacific Bell
	Bentley Wm A	Pacific Bell
1986	Bentley Wm A	Pacific Bell
1980	Bentley Wm A	Pacific Telephone

173 THE MASTERS CIR

Year	*Uses*	*Source*
2002	HOYTRober	Haines Company

174 THE MASTERS CIR

Year	*Uses*	*Source*
1991	Orr Jim	Pacific Bell
1980	Sato Toshiaki	Pacific Telephone

177 THE MASTERS CIR

Year	*Uses*	*Source*
2002	GENTRY Russell	Haines Company

181 THE MASTERS CIR

Year	*Uses*	*Source*
1986	Hegwer Raymond R	Pacific Bell
1980	Hegwer Raymond R	Pacific Telephone

THE MASTERS DR

162 THE MASTERS DR

Year	*Uses*	*Source*
1986	Gibson Clark	Pacific Bell

THE MISTERS CIR

154 THE MISTERS CIR

Year	*Uses*	*Source*
1986	Mc Callum Donald & Martine	Pacific Bell

THE MOUNT ISNERS CIR

141 THE MOUNT ISNERS CIR

Year	*Uses*	*Source*
1995	Thacker Nancy	Pacific Bell

FINDINGS

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
1100 Bristol Street	2013, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920

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
1000 BRISTOL	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1000 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1001 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1002 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1003 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1005 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1006 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1007 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1009 BRISTOL	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1009 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
101 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
101 THE MASTERS CIR	2013, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1010 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1011 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1013 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1015 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1016 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1017 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1019 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
102 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1022 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1023 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1024 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1027 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1030 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1033 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1036 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1038 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1041 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1045 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1046 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
105 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1050 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
106 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1061 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
1072 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1072 BRISTOL ST	2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1080 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
109 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
110 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1103 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1107 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1111 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1117 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1120 BRISTOL ST	2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1122 BRISTOL	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1122 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1122 BRISTOL ST	2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1123 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1124 BRISTOL ST	2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1126 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1127 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
113 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1131 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1135 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1139 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
114 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1143 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1147 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1148 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1159 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1922, 1921, 1920
117 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1175 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
118 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1182 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1182 BRISTOL ST	2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1192 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1201 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1202 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1202 BRISTOL ST	2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1204 BRISTOL	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1205 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1206 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1206 BRISTOL ST	2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1206 SE BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1208 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1209 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
121 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1212 BRISTOL	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1975, 1971, 1970, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1212 BRISTOL ST	2013, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1215 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1216 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1217 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1219 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
122 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1220 BRISTOL	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1220 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1221 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1223 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1227 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1231 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1235 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1239 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1243 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1247 BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
125 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
125 THE MASTERS CIR	2013, 2008, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1250 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1250 BRISTOL ST	2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
126 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1262 BRISTOL ST	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1262 BRISTOL ST	2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
1262 SE BRISTOL ST	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
129 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
130 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
133 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
134 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
137 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
138 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
141 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
141 THE MOUNT ISNERS CIR	2013, 2008, 2003, 2002, 2001, 1997, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
142 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
145 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
146 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
149 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
150 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
153 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
154 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
154 THE MISTERS CIR	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
157 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
158 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
161 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
162 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
162 THE MASTERS CIR	2013, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
162 THE MASTERS DR	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
165 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
166 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
169 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
170 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
173 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
174 THE MASTERS CIR	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1986, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
177 THE MASTERS CIR	2013, 2008, 2003, 2001, 1997, 1995, 1992, 1991, 1986, 1980, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920
181 THE MASTERS CIR	2013, 2008, 2003, 2002, 2001, 1997, 1995, 1992, 1991, 1975, 1971, 1970, 1966, 1965, 1961, 1960, 1956, 1955, 1952, 1950, 1946, 1945, 1941, 1936, 1930, 1926, 1925, 1922, 1921, 1920

328646
1100 Bristol Street
Costa Mesa, CA 92626

Inquiry Number: 3888392.3
March 21, 2014

Certified Sanborn® Map Report

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Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

3/21/14

Site Name:
328646
1100 Bristol Street
Costa Mesa, CA 92626

Client Name:
AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597

EDR Inquiry # 3888392.3

Contact: Solange

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City, State, Zip: Costa Mesa, CA 92626
Cross Street:
P.O. # 54287
Project: 328646
Certification # 5737-49E2-8D14

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APPENDIX D

REGULATORY AGENCY RECORDS

1" = 200'

Subject Property

FREEWAY

NEWPORT

CORONA DEL MAR FREEWAY

(SANTA ANA-DELHI CHANNEL)

35

STA. 2
STA. 3
STA. 5
STA 4
STA. 6
STA. 7
STA. 8
STA. 9
STA. 10
STA 11
STA. 12

437/231 DEEDS

R.S. 115-20

1
1.11 AC.
TRACT NO. 456 POR. LOT 4

363

BRISTOL

(PALISADE RD.)

439-32

439-31

IRVINE

R. S. 88-15

361

P.M. 100-48
PAR. 2
1
8.307AC.

POR. LOT 142

BLK. 6

SUB.

AVENUE

CLINTON ST.

IRVINE

1
5.15 AC.

BLK. 6

362

POR. LOT 142

P.M. 110-19
PAR. 1
2
1.19AC.

PAR. 2
3

PAR. 3
4

PAR. 4
5

PAR. 5
7
1.10AC.
SUB

PAR. 6
6

RED HILL

STREET

1-306--294/271 DEED-
41-28 R.D.11-356-1677/96-
NO.31906-1949-14-132
1912/90-93-1950 MAP

℄ PER O.R. 2352/390
℄ PER ORD.1308, P.M.12-44

418-18

16

1100 BRISTOL STREET

DUPLICATE JACKET
1100 BRISTOL STREET

B68252 11/22/94 PC#2828-94A

GRA68254 (B68252) 11/22/94 PC#2831-94L

B68328 11/24/94 PC#2907-94A

E68475 (B68252 & B68473 10/20/94

B68473 11/23/94 PC#2999-94A

SB68904 PC#3495-94L (Sign) 11/22/94

P69044 (B-68252 STORAGE) 10/3/94

B69137 PC#3740-94L (Trash Enclosure) 11/22/94

B69415 PC#4030-94L (Flag Pole) 11/22/94

CITY OF COSTA MESA

BUILDING DIVISION

77 FAIR DRIVE, COSTA MESA, CA 92626 • (714) 754-5273 • Fax (714) 754-4856 • www.ci.costa-mesa.ca.us

FOR INSPECTIONS CALL: (714) 754-5626

PERMIT NUMBER: E08-00099

PERMIT TYPE ELEC
APN: 42736301

STATUS: ISSUED
DATE ISSUED: 03/20/2008
ISSUED BY:

JOB ADDRESS: 1100 BRISTOL ST CM
Vicinity:

Suite/Unit:

SCOPE OF WORK: ELECTRICAL PERMIT FOR A TEMPORARY POWER POLE FOR IRRIGATION.

OWNER: ORANGE COUNTY FLOOD CONTROL DIST
Unit:BAKERSFIELD, CA
PHONE:

Address: %INSTANT STORAGE ATTN: BECKY ULLMAN
City/State/Zip: 3101 STATE ROAD

APPLICANT: OCONNELL, THOMAS
PHONE: 714-585-1315

Address: 19312 SLEEPING OAK Unit:
City/State/zZip: TRABUCO CANYON, CA

CONTRACTOR: LAKE FOREST ELECTRIC
Address: 19312 SLEEPING OAKUnit:
City/State: TRABUCO CANYON, CA ZipCode: 92679

License No. 584190
PHONE: 714-585-1315
CELL:

ELECTRICAL PERMIT FEES

Electrical Plan Check Fee:	$0.00
Electrical Permit Fee:	$47.00
Reinspection Fee	$0.00
TOTAL FEES	**$47.00**

NOTICE: The work authorized by this permit shall comply with all applicable handicap access requirements under California statutes and related regulations. (Ord. No. 92-28, § 1, 12-21-92)

EXPIRATION: PERMIT EXPIRES 180 DAYS FROM DATE OF ISSUE OR DATE OF LAST INSPECTION.

INSPECTIONS: In order for the work authorized under this permit to be considered legal, such work must comply with all applicable codes, and all **required inspections and final approval** must be obtained. Failure to obtain inspections and final approval will result in the expiration of this permit.

CODE #.	INSPECTION TYPE	DATE	INITIALS	CODE #	INSPECTION TYPE	DATE	INITIALS
1616	Fixed System Final Fire Prevention			206	Final Mechanical		
1266	Pool Spa Final			208	Final Plumbing		
200	Final Re-Roof			210	Final Electrical	3-26-08	
201	Final Block/Retaining Wall			212	Final Fire Prevention		
202	Final Factory Fire Place			220	Final Planning Approval		
203	Final Sign			222	Final Site		
204	Final Demolition			250	Final Building/Occupancy		

CITY OF COSTA MESA

BUILDING DIVISION

77 FAIR DRIVE, COSTA MESA, CA 92626 • (714) 754-5273 • Fax (714) 754-4856 • www.ci.costa-mesa.ca.us

FOR INSPECTIONS CALL: (714) 754-5626

PERMIT NUMBER: E08-00099

PERMIT TYPE ELEC
APN: 42736301

STATUS: ISSUED
DATE ISSUED: 03/20/2008
ISSUED BY:

JOB ADDRESS: 1100 BRISTOL ST CM **Suite/Unit:**
Vicinity:

SCOPE OF WORK: ELECTRICAL PERMIT FOR A TEMPORARY POWER POLE FOR IRRIGATION.

OWNER: ORANGE COUNTY FLOOD CONTROL DIST
Unit:BAKERSFIELD, CA
PHONE:

Address: %INSTANT STORAGE ATTN: BECKY ULLMAN
City/State/Zip: 3101 STATE ROAD

APPLICANT: OCONNELL, THOMAS
PHONE: 714-585-1315

Address: 19312 SLEEPING OAK Unit:
City/State/zZip: TRABUCO CANYON, CA

CONTRACTOR: LAKE FOREST ELECTRIC
Address: 19312 SLEEPING OAKUnit:
City/State: TRABUCO CANYON, CA ZipCode: 92679

License No. 584190
PHONE: 714-585-1315
CELL:

ELECTRICAL PERMIT FEES

Electrical Plan Check Fee:	$0.00
Electrical Permit Fee:	$47.00
Reinspection Fee	$0.00
TOTAL FEES	**$47.00**

NOTICE: The work authorized by this permit shall comply with all applicable handicap access requirements under California statutes and related regulations. (Ord. No. 92-28, § 1, 12-21-92)

EXPIRATION: PERMIT EXPIRES 180 DAYS FROM DATE OF ISSUE OR DATE OF LAST INSPECTION.

INSPECTIONS: In order for the work authorized under this permit to be considered legal, such work must comply with all applicable codes, and all **required inspections and final approval** must be obtained. Failure to obtain inspections and final approval will result in the expiration of this permit.

DIVISION OF INDUSTRIAL SAFETY PERMIT CERTIFICATION:

☐ I hereby certify that no excavation five (5) or more feet in depth into which a person is required to descend, will be made in connection with work authorized by this permit, and that no building structure, scaffolding, falsework, or demolition or dismantling thereof, will be more than thirty-six (36) feet high. (Chap. 3.2, Grp 2, Art 2, Sec. 341, Title 8, California Administrative Code).

☐ As owner-builder, I will not employ anyone to do work which would require a permit from the Division of Industrial Safety, as noted at... person has a permit to do such work from the...

ADDRESS OF BUILDING: 1100 BRISTOL ST UNIT:
OWNER'S NAME IF KNOWN: ORANGE COUNTY FLOOD FLOOD: X 47
ADDRESS: CONTROL P.O. BOX 4048
SANTA ANA 92702
APPL. MAILING ADDRESS:

ARCHITECT OR ENGINEER: ROBIN HAMERS LIC. NO.: C-31720
ARCH. OR ENG.'S ADDRESS: 234 E 17TH ST UNIT: 205
C.M. CA 92627
CONTRACTOR'S NAME: COAST ROOTER AND PLUMBING (714)241-1414
CONTRACTOR'S MAILING ADDRESS: 2737 S CRODDY
SANTA ANA CA LIC. NO.: 529127
92704 UNIT: 0000

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

CITY LIC. NO: 045140 LIC. CLASS: C 36 LIC. NO.: 529127 EXP: 06/98

Date: 10/9/97 Contractor: Coast Rooter

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the Contractors License Law for the following reason (Section 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she licensed pursuant to the provisions of the Contractors License Law [Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code] or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars [$500]).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving he or she did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

☐ I am exempt under Section: B. & P.C., for this reason:

Date: Owner:

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534, and that I or any future building occupant will / will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: Applicant:

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

☐ I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☒ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier: CAL COMP EXPIRES
Policy Number: G971112844 01/01/98

(This section need not be completed if the permit is for one hundred dollars [$100] or less.)

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date: 10/9/97 Applicant:

Warning: Failure to secure workers' compensation coverage is unlawful, and shall subject an employer to criminal penalties and civil fines up to one hundred thousand dollars ($100,000), in addition to the cost of compensation, damages as provided for in Section 3706 of the Labor Code, interest, and attorney's fees.

CONSTRUCTION LENDING AGENCY: I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).

LENDER'S NAME:
LENDER'S ADDRESS:

I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

CONSTRUCT 1 CARPORT & ENCLOSE PORTION FOR MOVE IN TO...

Print Name: ERNIE ROOKS

Signature of Owner/Agent/Applicant/Contractor: Date: 10/9/97

(5151-46.WP) White-Building & Safety; Green-File; Canary-Applicant; Pink-Revenue; Goldenrod-Assessor

CITY OF COSTA MESA - BUILDING PERMIT

P97-00120

PERM NO: P 085141

PERMIT NO: P 085141 PLAN CHECK NO: N GOVT: N SUPP: N
CONSTRUCTION TYPE: UNKNOWN PERMIT TYPE: PLU PURPOSE: OTH
JOB DESCRIPTION : WATER HEATER CHANGE OUT SQ FT:
CLAIM VALUE: CALC-VALUE: GROUP OCC: B /
COMMENTS: X

****

ZONING REQUIREMENTS

SETBACKS

	MAIN BUILDING				ACCESSORY BUILDING			
FRNT:	FT	IN REAR:	FT	IN	FRNT:	FT	IN REAR:	FT	IN
LEFT:	FT	IN RGHT:	FT	IN	LEFT:	FT	IN RGHT:	FT	IN

PARKING REQ: PROV: PARCEL: 42736301 ZNE: REF NO:
PLANNING NOTES>
>

****

DEVELOPMENT SERVICES REQUIREMENTS

ZONING APPROVED BY : DATE:
BUILDING APPROVED BY : DATE:
APPLICATION ISSUED BY: DLondon DATE: 10/9/97

****

LEGALIZATION:N FEE SUMMARY STRUCTURAL SEGMENT:N

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT		11.00				SMIP/NON-RES	
PLAN		25%					
ISSUE FEE		22.00					

	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
BUILDING-DIV->	11.00	22.00	0.00	33.00	33.00	.00
TOTALS---->						

REVENUE DIVISION TOTALS--> COLLECTED: 33.00 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
	33.00						

****

INDIVIDUAL FEE BREAKDOWN

TYPE	QTY	DESCRIPTION	UNIT COST	TOTAL COST
PLU	1	WATER HEATER AND/OR VENT	11.00	11.00
		END OF FEES		

EXPIRED
DATE 10/9/00
NO INSP HISTORY

10-09-1997/01:12 PM/$33.00
RCPT#:01-0013643
PERMIT:085141

1100 BRISTOL ST.

DIVISION OF INDUSTRIAL SAFETY PERMIT CERTIFICATION:

☐ I hereby certify that no excavation five (5) or more feet in depth into which a person is required to descend, will be made in connection with work authorized by this permit, and that no building structure, scaffolding, falsework, or demolition or dismantling thereof, will be more than thirty-six (36) feet high (Chap. 3.2, Grp 2, Art 2, Sec. 341, Title 8, California Administrative Code).

☐ As owner-builder, I will not employ anyone to do work which would require a permit from the Division of Industrial Safety, as noted above, unless such person has a permit to do such work from the

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTR
ADDRESS: & COUNTU OF ORANGE
P.O. BOX 4048 SANTA ANA
CA 92702

ARCH/ENGINEER: ROBIN HAMERS REG NO.: 31720
ADDRESS: 234 E. 17TH ST UNIT: 205
C.M. CA 92627
PERMITTEE: NSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC.: 061923 STATE LIC.: CLASS: EXP: 04/95
Date: Signature:

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).
POLICY NO. EXP. DATE:
COMPANY: INDUSTRIAL IND.
☒ Certified copy is hereby furnished. ☐ Certified copy is filed with the city Building Division.
Date: Applicant:

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less).
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Date: 7-28-94 Signature:
NOTICE: If, after making this declaration, you should become subject to Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city of county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section B. & P. C. for this reason

Date: 7-28-94 Owner:

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: Applicant:

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date: 7-28-94 Signature:

Driver's License or Social Security #: N4672329

1645-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: GRA 068254

PERMIT NO: GRA 068254 PLAN CHECK NO: 02831-94 A GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: GRA PURPOSE: OTH
JOB DESCRIPTION : RV & MINI STORAGE " SEE COMMENTS " SQ FT:
CLAIM VALUE: 2,000.00 CALC-VALUE: GROUP OCC: B-2 /B-3
COMMENTS: GRADING PERMIT FOR NEW RV & MINI STORAGE FACILITY / RE: B68252

****
Z O N I N G R E Q U I R E M E N T S
S E T B A C K S

MAIN BUILDING						ACCESSORY BUILDING					
FRNT:	FT	IN REAR:	FT	IN		FRNT:	FT	IN REAR:	FT	IN	
LEFT:	FT	IN RGHT:	FT	IN		LEFT:	FT	IN RGHT:	FT	IN	

PARKING REQ: PROV: PARCEL: 42736301 ZNE: REF NO:
PLANNING NOTES>
>
****
D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : DATE:
BUILDING APPROVED BY : DATE:
APPLICATION ISSUED BY: DATE: 7/28/94
****
LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:N

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT							33.00
						SMIP/NON-RES	
							5.63
PLAN							3.00
ISSUE FEE							DUE
BUILDING-DIV->	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID		.00
TOTALS---->	33.00	3.00	5.63	41.63	41.63		

REVENUE DIVISION TOTALS--> COLLECTED: 41.63 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
						36.00	5.63

****
I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST

NO FEES WERE SELECTED FOR THIS PERMIT

01 00164921-00164922 TOT 41.63
DATE: 07/29/94 TIME: 16:58

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTR
ADDRESS: & COUNTU OF ORANGE
P.O. BOX 4048 SANTA ANA
CA 92702

ARCH/ENGINEER: ROBIN HAMERS REG.NO: 31720
ADDRESS: 234 E. 17TH ST UNIT: 205
C.M. CA 92627
PERMITTEE: NSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

CITY LIC.: 061923 STATE LIC.: CLASS: EXP: 04/95

Date: Signature:

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).

POLICY NO.: EXP. DATE:
COMPANY: INDUSTRIAL IND.
[X] Certified copy is hereby furnished. [ ] Certified copy is filed with the city Building Division.

Date: Applicant:

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Date: 7-28-94 Signature:

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).

LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city of county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

[ ] I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

[X] I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

[ ] I am exempt under Section B. & P. C. for this reason:

Date: 7-28-94 Owner:

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25507, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: Applicant:

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date: 7-28-94 Signature:

Driver's License or Social Security # N4672329

1641-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: GRA 068254

PERMIT NO: GRA 068254 PLAN CHECK NO: 02831-94 A GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: GRA PURPOSE: OTH
JOB DESCRIPTION : RV & MINI STORAGE " SEE COMMENTS " SQ FT:
CLAIM VALUE: 2,000.00 CALC-VALUE: GROUP OCC: B-2 /B-3
COMMENTS: GRADING PERMIT FOR NEW RV & MINI STORAGE FACILITY / RE: B68252

****
Z O N I N G R E Q U I R E M E N T S
S E T B A C K S

	MAIN BUILDING				ACCESSORY BUILDING			
FRNT:	FT	IN REAR:	FT	IN	FRNT:	FT	IN REAR:	FT	IN
LEFT:	FT	IN RGHT:	FT	IN	LEFT:	FT	IN RGHT:	FT	IN

PARKING REQ: PROV: PARCEL: 42736301 ZNE: REF NO:
PLANNING NOTES>
>
****
D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : DATE:
BUILDING APPROVED BY : DATE:
APPLICATION ISSUED BY: DATE: 7-28
****
****
LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:N

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT							33.00
						SMIP/NON-RES	
PLAN							5.63
ISSUE FEE							3.00
BUILDING-DIV->	PERMIT	ISSUE	PLAN-CHECK		TOTAL	PAID	DUE
TOTALS---->	33.00	3.00	5.63		41.63	41.63	.00

REVENUE DIVISION TOTALS--> COLLECTED: 41.63 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
						36.00	5.63

****
I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST

NO FEES WERE SELECTED FOR THIS PERMIT

01 00164921-00164922 TOT 41.63
DATE: 07/29/94 TIME: 16:58

1100 BRISTOL ST.

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: COUNTY OF ORANGE
ADDRESS: SAME

ARCH/ENGINEER: REG.NO:
ADDRESS: UNIT:

PERMITTEE: INSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 commencing with Section 7000 of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC: 061923 STATE LIC: CLASS: EXP: 04/95
Date 8-2-94 Signature

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).
POLICY NO.: EXP. DATE:
COMPANY: INDUSTRIAL, LHD.
[X] Certified copy or number number ( ) Certified copy is filed with the city Building Division.
Date 8-2-94 Applicant

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Date Signature
NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

[ ] I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

[X] I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

[ ] I am exempt under Section B & P C for this reason

Date Owner:

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date Applicant

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above mentioned property for inspection purposes.

Date 8-2-94 Signature

Driver's License or Social Security #: N4672329

1641-40 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: B 068328

PERMIT NO: B 068328 PLAN CHECK NO: 02907-94 A GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: STR PURPOSE: NEW
JOB DESCRIPTION : 1000LS-8FT HIGH BLOCK WALL SQ FT: 1,000
CLAIM VALUE: 20,000.00 CALC-VALUE: 20,000.00 GROUP OCC: B-2 /
COMMENTS: BLOCK WALL FOR RV STORAGE YARD

****
Z O N I N G R E Q U I R E M E N T S
S E T B A C K S

	MAIN BUILDING				ACCESSORY BUILDING			
FRNT:	FT	IN REAR:	FT	IN	FRNT:	FT	IN REAR:	FT	IN
LEFT:	FT	IN RGHT:	FT	IN	LEFT:	FT	IN RGHT:	FT	IN

PARKING REQ: PROV: PARCEL: 427236301 ZNE: C1 REF NO: PA-94-24
PLANNING NOTES> CONSTRUCT LINEAR FEET OF BLOCK WALL.
>
****
D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : CoE DATE: 8/2/94
BUILDING APPROVED BY : DATE:
APPLICATION ISSUED BY: VCK | CLH DATE: 8/2/94
****
****
LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:Y

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT	207.00						
PLAN	33.64					SMIP/NON-RES 4.20	

ISSUE FEE

BUILDING-DIV->	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
TOTALS---->	211.20	0.00	33.64	244.84	244.84	.00

REVENUE DIVISION TOTALS--> COLLECTED: 244.84 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
207.00					4.20		33.64

****
I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST
SFC	1000	RES-CONCRETE BLOCK WALL / FT.	20.00	20,000.00

END OF FEES

01 00165222-00165224 TOT 244.84
DATE: 08/03/94 TIME: 16:23

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTR DISTRICT
ADDRESS: P.O. BOX 1807 BAKERSFIELD 93303
ARCH/ENGINEER: HEATHER GIDDENS REG NO: 48283
ADDRESS: 19311 NEW HAVEN LN H.B. CA 92646 (805)393-7005
PERMITTEE: INSTANT STORAGE
ADDRESS: 1807 P.O. BOX BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 commencing with Section 7000 of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC 061923 STATE LIC 0000000 CLASS EXP: 04/95

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).
POLICY NO EXP. DATE:
COMPANY: INDUSTRIAL IND.
☒ Certified copy is hereby furnished ☐ Certified copy is filed with the city Building Division
Date 8-15-94 Applicant

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred dollars ($100) or less.) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Date 8-15-94 Signature

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500):

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section B. & P. C. for this reason

Date Owner

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I (or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date Applicant

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date 8-15-94 Signature

Owner's License or Social Security # N4672329

1641-46 White—Building Green—Code Enforcement Canary—Applicant Pink—Revenue Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: B 068473

PERMIT NO: B 068473 PLAN CHECK NO: 02999-94 A GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: STR PURPOSE: NEW
JOB DESCRIPTION : FOUNDATION FOR OFFICE,& H.C. PRKG SQ FT: 22,500
CLAIM VALUE: 22,500.00 CALC-VALUE: 22,500.00 GROUP OCC: B-3 /
COMMENTS: OFFICE FOUNDATIONS & H.C. PARKING

****
ZONING REQUIREMENTS
SETBACKS

MAIN BUILDING					ACCESSORY BUILDING				
FRNT:	FT	IN REAR:	FT	IN	FRNT: 10 FT	IN REAR: 10 FT	IN
LEFT:	FT	IN RGHT:	FT	IN	LEFT: 500 FT	IN RGHT: 500 FT	IN

PARKING REQ: PROV: PARCEL: 42736301 ZNE: C1 REF NO:
PLANNING NOTES> INSTALL A 224 SQ.FT. MODULAR OFFICE BUILDING ON STORAGE SITE
> PLANNING INSPECTION REQD.

****
DEVELOPMENT SERVICES REQUIREMENTS

ZONING APPROVED BY : CG DATE: 8/15/94
BUILDING APPROVED BY : VCA DATE: 8/12/94
APPLICATION ISSUED BY: CG DATE: 8/15/94

****
FEE SUMMARY STRUCTURAL SEGMENT:Y
LEGALIZATION:N

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT	234.00					SMIP/NON-RES 4.73	
PLAN	38.03						

ISSUE FEE	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
BUILDING-DIV->	238.73	0.00	38.03	276.76	276.76	.00
TOTALS---->						.00

REVENUE DIVISION TOTALS--> COLLECTED: 238.73 OVER/SHORT:

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
234.00					4.73		

****
INDIVIDUAL FEE BREAKDOWN

TYPE	QTY	DESCRIPTION	UNIT COST	TOTAL COST
SFC	22500	ALTER BY VALUE COMMERCIAL NOZONE	1.00	22,500.00

END OF FEES

01 00165942-00165943 TOT 238.73
DATE: 08/15/94 TIME: 13:51

1100 BRISTOL ST.

UNIT:

D CONTR FLOOD: X 47

REG.NO.:

UNIT:

(805)393-7005

CA 93303

ed under provisions of Chapter 9 (commencing with Section
is in full force and effect.

LASS: B EXP: 04/95

ertificate of consent to self-insure or a certificate of Workers'
).

5/01/95

e city Building Division.

not be completed if the permit is for one hundred ($100) or less).
hall not employ any person in any manner so as to become

the Workers' Compensation provisions of the Labor
hall be deemed revoked.

ction lending agency for the performance of the work for

Contractors' State License Law for the following reason
quires a permit to construct, alter, improve, demolish, or
permit to file a signed statement that he/she is licensed
mmencing with Section 7000) of Division 3 of the Business
e alleged exemption. Any violation of Section 7031.5 by
e than five hundred dollars ($500).

their sole compensation, will do the work, and the
Professional Code: The Contractors' State License Law
on, and who does such work himself/herself or through
ntended or offered for sale. If, however the building or
e the burden of proving he/she did not build or improve

tractors to construct the project (Section 7044, Business
y to an owner of property who builds or improves thereon
mt to the Contractors' State License Law). I am aware
d to me.

nia Health and Safety Code Sections 25505, 25533, and
comply with said state codes and the requirements for a
Residential construction applications are exempt from

on is correct. I agree to comply with all city and county
esentatives of this city to enter upon the above-mentioned

Pink—Revenue, Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT

PERM NO: B 069137

PERMIT NO: B 069137 PLAN CHECK NO: 03740-94 L GOVT: N SUPP: N

CONSTRUCTION TYPE: PERMIT TYPE: STR PURPOSE: CON

JOB DESCRIPTION : CONST. 144SF TRASH ENCLOSURE SQ FT: 144

CLAIM VALUE: 1,000.00 CALC-VALUE: 2,880.00 GROUP OCC: B-2 /B-3

COMMENTS: CONST. 18'X 8' TRASH ENCLOSURE

****

Z O N I N G R E Q U I R E M E N T S

S E T B A C K S

MAIN BUILDING					ACCESSORY BUILDING				
FRNT:	FT	IN REAR:	FT	IN	FRNT:	FT	IN REAR:	FT	IN
LEFT:	FT	IN RGHT:	FT	IN	LEFT:	FT	IN RGHT:	FT	IN

PARKING REQ: PROV: PARCEL: 42736301 ZNE: C1 REF NO:

PLANNING NOTES> CONSTRUCT TRASH ENCLOSURE AS INDICATED ON PLANS.

****

D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : CE DATE: 10/5/94

BUILDING APPROVED BY : CM DATE: 10/5/94

APPLICATION ISSUED BY: CA DATE: 10/5/94

****

LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:Y

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT	54.00					SMIP/NON-RES .60	
PLAN	35.10						

ISSUE FEE

BUILDING-DIV->	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
TOTALS---->	54.60	0.00	35.10	89.70	89.70	.00

REVENUE DIVISION TOTALS--> COLLECTED: 89.70 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
54.00					.60		35.10

****

I N D I V I D U A L F E E B R E A K D O W N

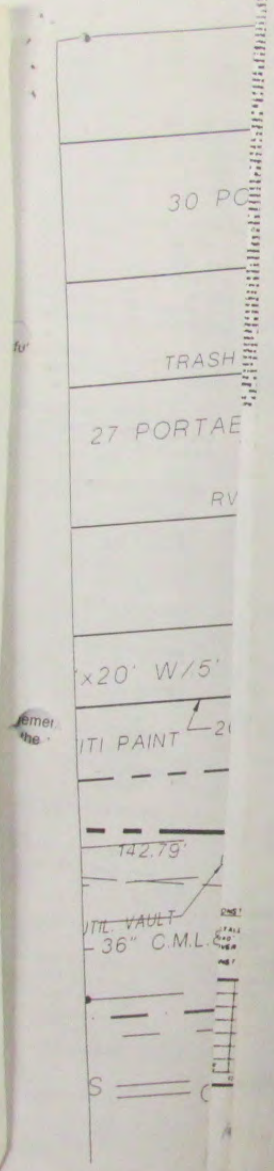
TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST
SFC	144	RES-CONCRETE BLOCK WALL / FT.	20.00	2,880.00

END OF FEES

01 00169009-00169011 TOT 89.70
DATE: 10/05/94 TIME: 14:00

such work from the division.

Applicant's Signature



CONSTRUCTION AND PLANNING APPROVALS Permit #

PROJECT ADDRESS: UNIT:

OWNER'S NAME: 1100 BRISTOL ST

ADDRESS: ORANGE COUNTY FLOOD CONTR FLOOD: X 47
DISTRICT.
PO. BOX 4048
S.A 92702

ARCH/ENGINEER: REG.NO.:

ADDRESS: UNIT:

PERMITTEE:

ADDRESS: INSTANT STORAGE (805)393-7005
1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

CITY LIC.: 061923 STATE LIC.: 177938 CLASS: B EXP: 04/95

Date: 10-5-94 Signature: [signature]

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).

POLICY NO.: RI9048076 EXP. DATE: 05/01/95

COMPANY: INDUSTRIAL IND.

☒ Certified copy is hereby furnished. ☐ Certified copy is filed with the city Building Division.

Date: 10-5-94 Applicant: [signature]

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Date _____ Signature _____

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).

LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city of county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section: B. & P. C.
for this reason:

Date: _____ Owner: _____

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: _____ Applicant: _____

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date: 10-5-94 Signature: [signature]

Driver's License or Social Security #: N4672329

1641-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA ME

PERMIT NO: B 069137 PLAN

CONSTRUCTION TYPE: PER

JOB DESCRIPTION : CONST. 144SF TRAS

CLAIM VALUE: 1,000.00 CALC-VA

COMMENTS: CONST. 18'X 8' TRASH ENCLO

****

Z O N I N G R

S E

---------- MAIN BUILDING ----------

FRNT: FT IN REAR: FT

LEFT: FT IN RGHT: FT

PARKING REQ: PROV: PA

PLANNING NOTES> CONSTRUCT TRASH ENC

>

****

D E V E L O P M E N T S E

ZONING APPROVED BY :

BUILDING APPROVED BY :

APPLICATION ISSUED BY:

****

****

LEGALIZATION:N F E E

	BLDG PMT	PLUMBING	ELE
PERMIT	54.00		
PLAN	35.10		
ISSUE FEE			
BUILDING-DIV->	PERMIT	ISSUE	P
TOTALS---->	54.60	0.00	

REVENUE DIVISION TOTALS--> COL

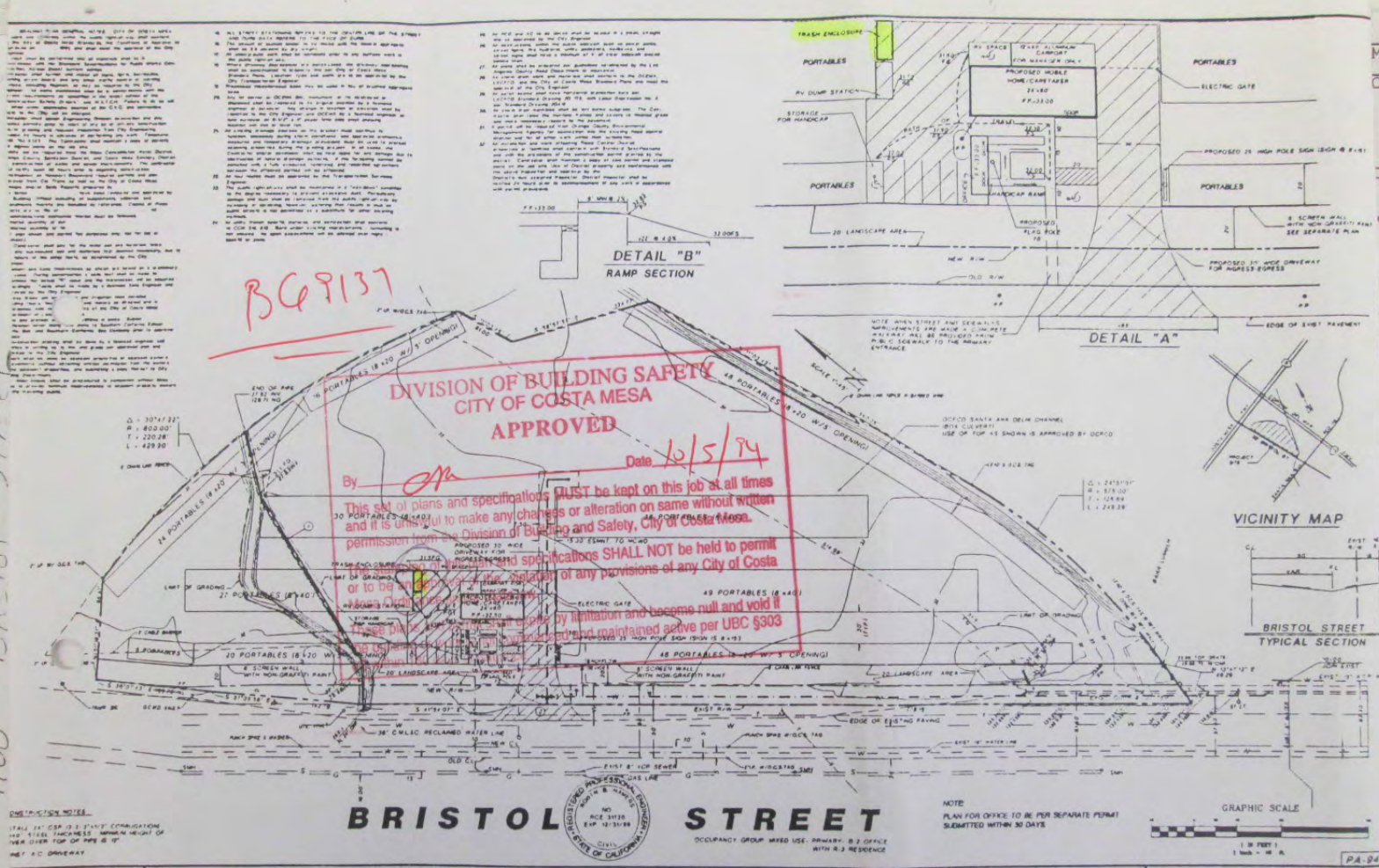
BLDG PMT PLUMBING ELECTRIC M

54.00

****

I N D I V I D U A

TYPE	QTY	D E S C R I P T I
SFC	144	RES-CONCRETE BLOC



DESCRIPTION BY / DATE	APPLICANT: INSTANT STORAGE 2101 STATE RD BAKERSFIELD, CA 93308 (805) 393-5583	PROPERTY OWNER: ORANGE COUNTY FLOOD CONTROL DISTRICT	PREPARED BY: ROBIN B. HAMERS & ASSOC., INC CIVIL ENGINEERS 334 E. 17TH STREET, SUITE 205 COSTA MESA, CA 92627 (714) 548-1982	SITE & GRADING PLAN 1100 BRISTOL STREET INSTANT RV & MINI STORAGE COSTA MESA

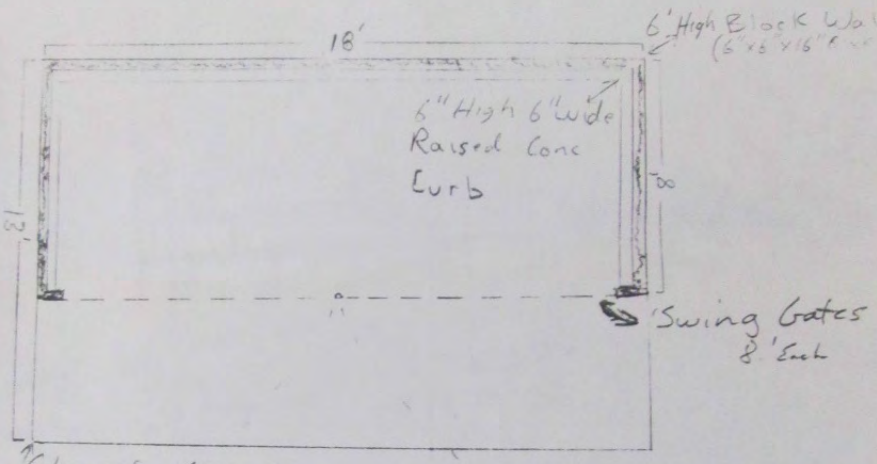
SHEET 1 OF 1

PA-94-24

APPROVED
CITY OF COSTA MESA
PLANNING DEPT.
PUBLIC WKS. DEPT.

1100 Bristol Street

Trash Enclosure



Cement Coping Optiona
Channel Block With 1-3
Horizontal Top of all
Fences

For Fences 5' or Less
Vert. Bars 3/8" ϕ at 4'

For Fences Higher Thar
Vert. Bars 3/8" ϕ at 32'

Fill Cells Solid With Gr
Where Steel Occurs

Reinforcing Steel Shall
Conform to Sec.A-15-
A.S.T.M.

All Steel to be Lappec
24" or to Code

NATURAL

TWO 3/8"
CONTINUC
& BOTTOM

HORIZ. STEEL MUST BE
PLACE AT TIME OF
INSPECTION.

City
Buildi

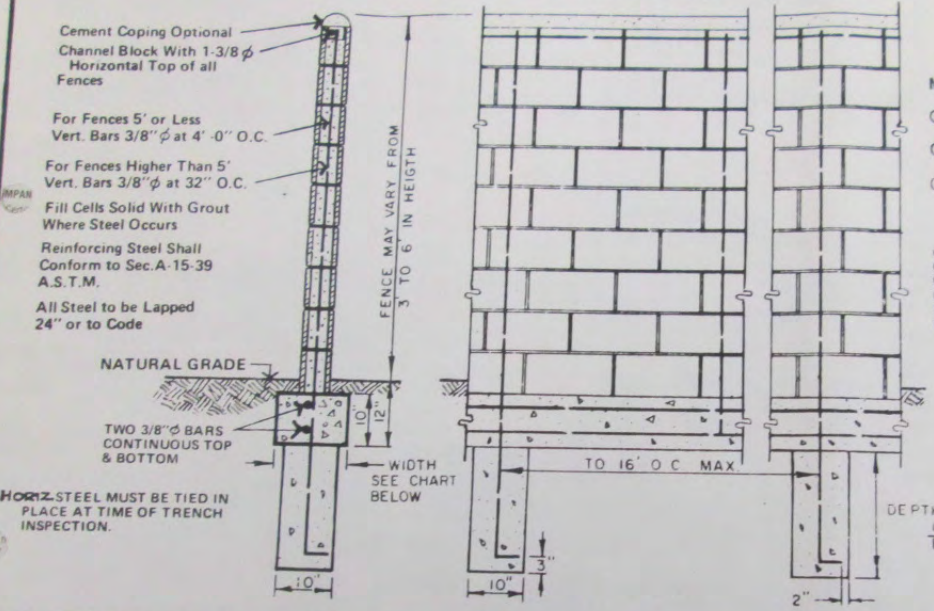
PRO
OF COSTA
PLANNING
CT TO BLDG.
DATE
OF PLANNIN

APPROVED
CITY OF COSTA MESA
PLANNING DEPT.
SUBJECT TO BLDG. DEPT. REQ.
BY CE DATE 10/5/94
DIRECTOR OF PLANNING

Trash enclosure

ID#925010

TYPICAL 6" CONCRETE BLOCK FENCE



GENERAL—NOTES

MORTAR: One Part Plastic Cement, and Three Parts Sand

GROUT: One Part Cement, Three and One Half Parts Sand

COPING: One Part Cement, Three Parts Sand

CONCRETE: Well Mixed 1:2-1/2:3-1/2 Max. of 7-1/2 Gallons of Water Per Sack of Cement

GROUT MAY BE POURED FROM THE TOP OF THE FENCE IN CELLS WHERE STEEL OCCURS.

CELLS AND AREAS OF HORIZONTAL REINFORCEMENT SHALL BE CLEAR, CLEAN & FREE OF ALL MORTAR DEBRIS, ETC.

SCALE: 1/2" = 1'

FOOTING REQUIREMENTS CHART

WALL HEIGHT	6'	5'	4'	3'
WIDTH	14"	14"	12"	12"
THICKNESS	10"	10"	8"	8"
DEPTH OF EARTHTOOTH	24"	20"	16"	12"
SPACING OF EARTHTOOTH	12'	14'	16'	16'

City of Costa Mesa, California
Building Department

REVISED NOV. 82

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTROL FLOOD: X 47
ADDRESS: PO BOX 4048 SA 92702

ARCH/ENGINEER: JESUS ESPARAZA REG.NO.: 19990
ADDRESS: 6107 YORK BL UNIT:
LA CA 90042 (805)393-7005
PERMITTEE: INSTANT STORAGE
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

CITY LIC.: 061923 STATE LIC.: 177938 CLASS: B EXP.: 04/95

10/20 Signature: [signature]

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation, or a copy thereof (Section 3800, Lab. [illegible]

POLICY NO.: RI9048076 INDUSTRIAL IND. EXP. DATE: 05/01/95

COMPANY:

☐ Certified copy is hereby furnished. ☐ Certified copy is filed with the city Building Division.

Applicant:

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Date: Signature:

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).

LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city of county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section B & P. C.
for this reason

Date 10/20 Owner [signature]

I hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25507, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: Applicant:

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date 10/20 Signature: [signature]
Driver's License or Social Security #: N4672329

1641-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT

PERM NO: B 069415
GOVT: N SUPP: N

PERMIT NO: B 069415 PLAN CHECK NO: 04030-94 L
CONSTRUCTION TYPE: PERMIT TYPE: STR PURPOSE: CON
JOB DESCRIPTION : CONST. 60' HIGH FLAG WALL SQ FT: 6,718
CLAIM VALUE: 6,718.00 CALC-VALUE: 6,718.00 GROUP OCC: B-2 /
COMMENTS: CONST. 60' HIGH FLAG POLE

****

Z O N I N G R E Q U I R E M E N T S
S E T B A C K S

MAIN BUILDING					ACCESSORY BUILDING				
FRNT:	FT	IN REAR:	FT	IN	FRNT:	FT	IN REAR:	FT	IN
LEFT:	FT	IN RGHT:	FT	IN	LEFT:	FT	IN RGHT:	FT	IN

PARKING REQ: PROV: PARCEL: 42736301 ZNE: C1 REF NO:
PLANNING NOTES> INSTALL 60' HIGH FLAG POLE WITH AMERICAN FLAG AT PROPERTY.
>

****

D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : DATE:
BUILDING APPROVED BY : SMR DATE:
APPLICATION ISSUED BY: one DATE: 12/2/94

****

LEGALIZATION;N STRUCTURAL SEGMENT;Y

F E E S U M M A R Y

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT	90.00						
PLAN	58.50					SMIP/NON-RES	
ISSUE FEE						1.41	

BUILDING-DIV->	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
TOTALS---->	91.41	0.00	58.50	149.91	149.91	.00

REVENUE DIVISION TOTALS--> COLLECTED: 149.91 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
90.00					1.41		58.50

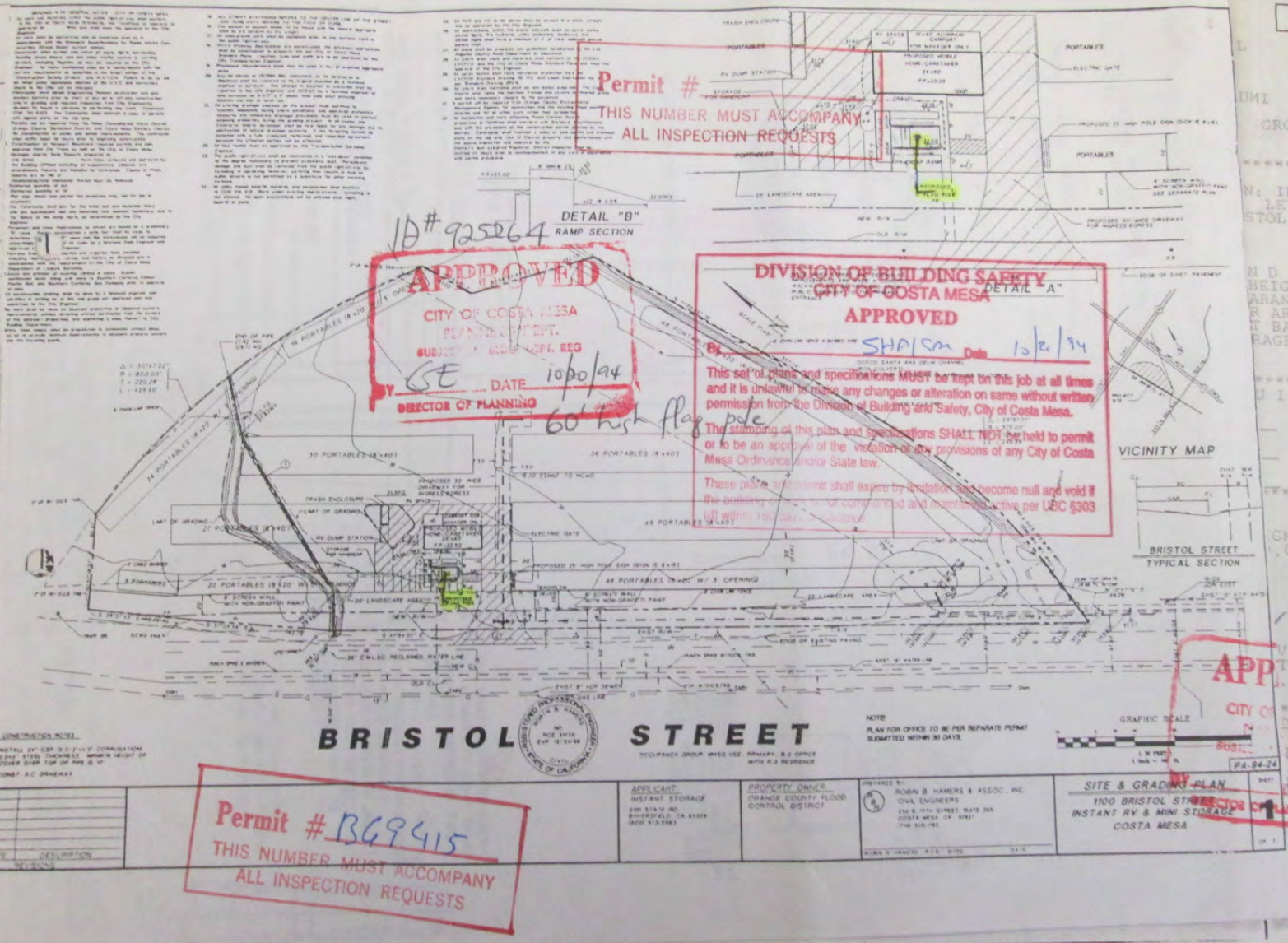
****

I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	DESCRIPTION	UNIT COST	TOTAL COST
SFC	6718	ALTER BY VALUE COMMERCIAL NOZONE	1.00	6,718.00

END OF FEES

01 B0170016-B0170018 TOT 149.91
DATE: 10/20/94 TIME: 15:05


Permit #
THIS NUMBER MUST ACCOMPANY
ALL INSPECTION REQUESTS
DETAIL "B"
RAMP SECTION
DETAIL "A"
APPROVED
CITY OF COSTA MESA
PLANNING DEPT.
DIRECTOR OF PLANNING
DATE 10/20/94
DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED
Date 10/20/94
This set of plans and specifications MUST be kept on this job at all times and it is unlawful to make any changes or alteration on same without written permission from the Division of Building and Safety, City of Costa Mesa.
The stamping of this plan and specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of any City of Costa Mesa Ordinance and/or State law.
These plans and permit shall expire by limitation and become null and void if the building work authorized is not commenced and maintained active per UBC §303 (d) within 180 days.
60' high flag pole
VICINITY MAP
BRISTOL STREET
TYPICAL SECTION
BRISTOL STREET
GRAPHIC SCALE
NOTE
PLAN FOR OFFICE TO BE PER SEPARATE PERMIT
SUBMITTED WITHIN 30 DAYS
SITE & GRADING PLAN
1100 BRISTOL STREET
INSTANT RV & MINI STORAGE
COSTA MESA
PA-94-24
Permit # BG9415
THIS NUMBER MUST ACCOMPANY
ALL INSPECTION REQUESTS

10" - 14 GA. SPUN ALUMINUM BALL

DOUBLE SHEAVE TRUCK, CAST ALUM, REVOLVING, NON-FOULING TYPE

4-BRONZE SWIVEL SNAPS

SET OF HALYARDS

6 VIZ FLAG

REGISTERED PROFESSIONAL ENGINEER
JESUS T. ESPARZA
No. 19990
Exp. 9-30-97
CIVIL
STATE OF CALIFORNIA

DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED
By _____ Date _____

This approval of plans and specifications MUST be kept on this job at all times and it is unlawful to make any changes or alteration on same without written permission from the Division of Building and Safety, City of Costa Mesa. The stamping of these plans and specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of any City or State law.

These plans and ... shall expire by limitation and become null and void if the building or ... not commenced and maintained active per UBC §303 (d) within 180 days ...

9" CAST ALUM CLEAT

ALUMINUM FLASH COLLAR

CONCRETE WATER PROOF

2000 PSI CONCRETE

CAULKING 2"

HARDWOOD WEDGES

DRY SAND TIGHTLY TAMPED AFTER ALIGNING POLE

BLACK ASPHALTUM PAINT INSIDE AND OUTSIDE SURFACES OF POLE BELOW GRADE

FOUNDATION SLEEVE - 16 GA.

STEEL CENTERING WEDGES

3/16 STEEL BASE PLATE

3/16 STEEL SUPPORT PLATE WELDED TO GROUND SPIKE

EXPOSED HEIGHT 60'0"

OVERALL LENGTH 66'0"

TAPERED PORTION 44'0" O. 188 WALL THICKNESS

CLEAT HEIGHT 5'0"

STRAIGHT PORTION 22'0" 0.25 WALL THICKNESS

FOUNDATION 7'0"

6'0"

3'0"

12"

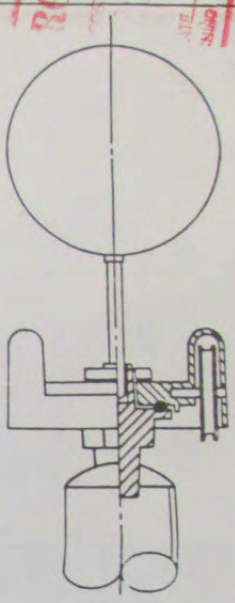
12"

6"

18"

3'0"

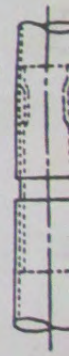
UNDISTURBED SOIL



REVOLVING, NON-FOULING TRUCK. CAST ALUMINUM BODY, STAINLESS STEEL BALL BEARINGS AND NYLON SHEAVES.

ALL SHAFTS WITH AN OVER-ALL LENGTH OF MORE THAN 38'-6" ARE SHIPPED IN TWO SECTIONS. EACH SECTION MATCH MARKED FOR FIELD ASSEMBLY. EXPOSED PORTION OF JAM SLEEVE MUST BE WELL LUBRICATED PRIOR TO ASSEMBLY.

1 1/2" MAX. SHOP GAP ALLOWED FOR FIELD FITTING (RAM FOR TIGHT JOINT)



PROJ	GRD SET TAPERED ALUM FLAGPOLE ALLOY 6063-T6	DATE
LOC:	EXP HT 60' OVERALL HT 66' SHIP IN 2 SEC	REV
ARCHT:	BUTT DIA 10" TOP DIA 4" WALL THICKN .250	
CONTR:	FINISH 180 GRIT HIGH POLISH	
CUST:		

So. Cal. Flagpole Co.
4551 York Blvd.
Los Angeles, Calif. 90
Cont. Lic. #176664

141 JOB

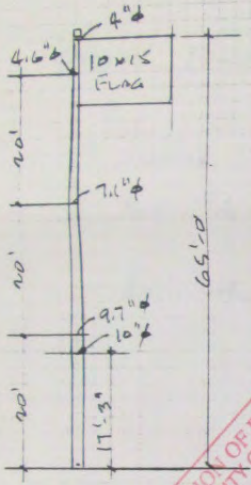
ASTM A 307

JESS ESPARZA & ASSOCIATES
6107 York Boulevard, Los Angeles, California 90042
(213) 256-8157

BY ____ DATE ____ SUBJECT ____ SHEET NO. ____ OF ____
CHKD. BY ____ DATE ____ JOB NO. ____

Wind Load 70 mph Exp C UBC 1985
$P = C_e C_q q_s I$ $C_q = 1.4$ $q_s = 13.0$ $I = 1.0$

C_e =	0-20 = 1.2	P = 21.8 #/ft²	Flag Dims
	20-40 = 1.3	= 23.7	= .001 × 70² √10×15
	40-60 = 1.5	= 27.3	= 60.0 #
	60-100 = 1.6	= 29.1	Nylon - NAAMM Spec 1986



Mom @ Base

	P		M
Flag	= 60.0	× 60.0 =	3600
Pole 4/12 × 29.6 × 5	= 42.5	× 62.5 =	3031
+ 6/24 × 29.6 × 5	= 3.6	× 61.7 =	222
4.6/12 × 27.3 × 20	= 209.3	× 50.0 =	10465
2.5/24 × 27.3 × 20	= 56.9	× 46.7 =	2657
7.1/12 × 23.7 × 20	= 280.5	× 30.0 =	8415
2.6/24 × 23.7 × 20	= 51.4	× 26.7 =	1372
10/12 × 21.5 × 20	= 215.3	× 10.0 =	3633
	1073.4 #		33,396 #"

$h = \frac{33,396}{1073.4} = 31.1'$

Section @ Base 10"ϕ × .25" Wall 6063-T6 Alloy
$E_{bx} = 30$ $F_{by} = 25$
$F_{ay} = 25$ $E = 10,100$

$F_b = \frac{1.17 \times 26.0}{1.65} \times 1.33 = 23.6$ #/in²

$S = \frac{\pi (10^4 - 9.5^4)}{32 \times 10} = 18.21$ in³

$f_b = \frac{33.4 \times 12}{18.21} = 22.0$ #/in² < 23.6 ok

REGISTERED PROFESSIONAL ENGINEER
JESUS L. ESPARZA
No. 19990
Exp. 9-30-97
CIVIL
STATE OF CALIFORNIA

Anchor Bolts (4) 16"ϕ Bolt Circle
Max Tens. $= \frac{33.4 \times 12}{16} = 25.1$ #

Use 4 - 1 1/4"ϕ × 4'-0" × 4' (3'-0" Embed)
ASTM A 307
Amom = 35.3 × 1.33 = 47 # ok

DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED
Approval of these plans and specifications MUST be signed on this sheet of all changes or alterations and specifications will void this approval. Permittee shall comply with all Building and Safety, City of Costa Mesa ordinances and specifications SHALL NOT be construed to be a permit for, nor an approval of any violation of any provisions of any City of Costa Mesa law. Permits by error or omission shall not be valid and become null and void if work is not started and maintained active per UBC 303.

JESS ESPARZA & ASSOCIATES
6107 York Boulevard, Los Angeles, California 90042
(213) 256-8157

BY _____ DATE _____ SUBJECT _____ SHEET NO. ___ OF ___

CHKD. BY ___ DATE _____ JOB NO. _____

CHECK FOOTING — ASSUME CLASS 5 SOILS TABLE 29B UBC

PASSIVE S.P. = 100 #/ft/ft

ASSUME 3'-0" ϕ x 7'-0" DEEP

$S_1 = 7/3 \times 2 \times 100 \times 4/3 = 622.2$ $A = \frac{2.34 \times 1009.6}{622.2 \times 3} = 1.26$

$d = 126/2 \times \left(1 + \sqrt{1 + \frac{4.36 \times 29.5}{1.26}}\right) = 7.0'$ OK

USE 3'-0" ϕ DIA. x 7'-0" DEEP

$f'_c = 2000$ #/in

TIE EMBEDDED IN CONC.

NO REINFORCING REQ'D

TRENCHING PLAN

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTR DISTRICT
ADDRESS: PO BOX 1807 BAKERSFIELD93303
ARCH/ENGINEER: HEATHER GIDDENS REG.NO: C48393
ADDRESS: 19311 NEW HAVEN LN UNIT:
H.B. CA 92646
PERMITTEE: INSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93302

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC: 061923 STATE LIC: 0000000 CLASS:
Signature: 9-15-94

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C.).
POLICY NO: EXP. DATE:
COMPANY: INDUSTRIAL IND.
☒ Certified copy is hereby furnished. ☐ Certified copy will be filed with the city upon demand.
Applicant: 9-15-94

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: This section need not be completed if the permit is for one hundred ($100) or less), I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Date: Signature:
NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Codes) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section B&PC for this reason.

Date: Owner:

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: Applicant:

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date: 9-15-94 Signature:

Driver's License or Social Security # N4672329

1847-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - SIGN PERMIT PERM NO: SB 068904

PERMIT NO: SB 068904 PLAN CHECK NO: 03495-94 L GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: STR SIG PURPOSE: OTH
JOB DESCRIPTION : INSTALL 25' HIGH MONUMENT SIGN " ILLUMI SQ FT:
CLAIM VALUE: 6,000.00 CALC-VALUE: 6,000.00 GROUP OCC: B-3 /
COMMENTS: " BRISTOL STREET STORAGE & MINI STORAGE "

S I G N I N F O R M A T I O N

DISTRICT: 1 TYPE: POLE ILLUMINATION: INT CATEGORY: NEW
DIMENSIONS: 15FT 00IN X 8FT 00IN AREA: 120.00SQFT LETTER HT: 14 INCH
STREET FRONTAGE 1: 1000.00 STREET 1: BRISTOL
STREET FRONTAGE 2: 0.00 STREET 2:
PARCEL: 427363O1 ZONE: C1 LOCATION > FRONT: X REAR:
BUSINESS NAME: BRISTOL STREET INSTANT RV> LEFT: RIGHT:

O T H E R T O T A L S
THIS ACTIVITY : 120.00SQFT
THIS SITE : 880.00SQFT
ITEMS OF INFO : 6
ITEMS FOR ACTIVITY: 1

G R O U N D S I G N
OVERALL HEIGHT: 25FT 0IN
GROUND CLEARANCE: 17FT 0IN
PLANTER AREA: 240.00SQFT
BLDG SET BACK: 20FT

COPY VERBIAGE : BRISTOL STREET INSTANT RV AND MINI STORAGE

PLANNING NOTES:

D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : GG DATE: 9/15/94
BUILDING APPROVED BY : SHA DATE: 9/15/94
APPLICATION ISSUED BY: DATE: 9/15/94

LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:Y

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	SIGN	SMIP/RES	GRADING
PERMIT	81.00				120.00		
						SMIP/NON-RES	
						1.26	
PLAN	52.65						

ISSUE FEE	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
BUILDING-DIV->		0.00	52.65	254.91	254.91	.00
TOTALS---->	202.26					

REVENUE DIVISION TOTALS--> COLLECTED: 254.91 OVER/SHORT: .00

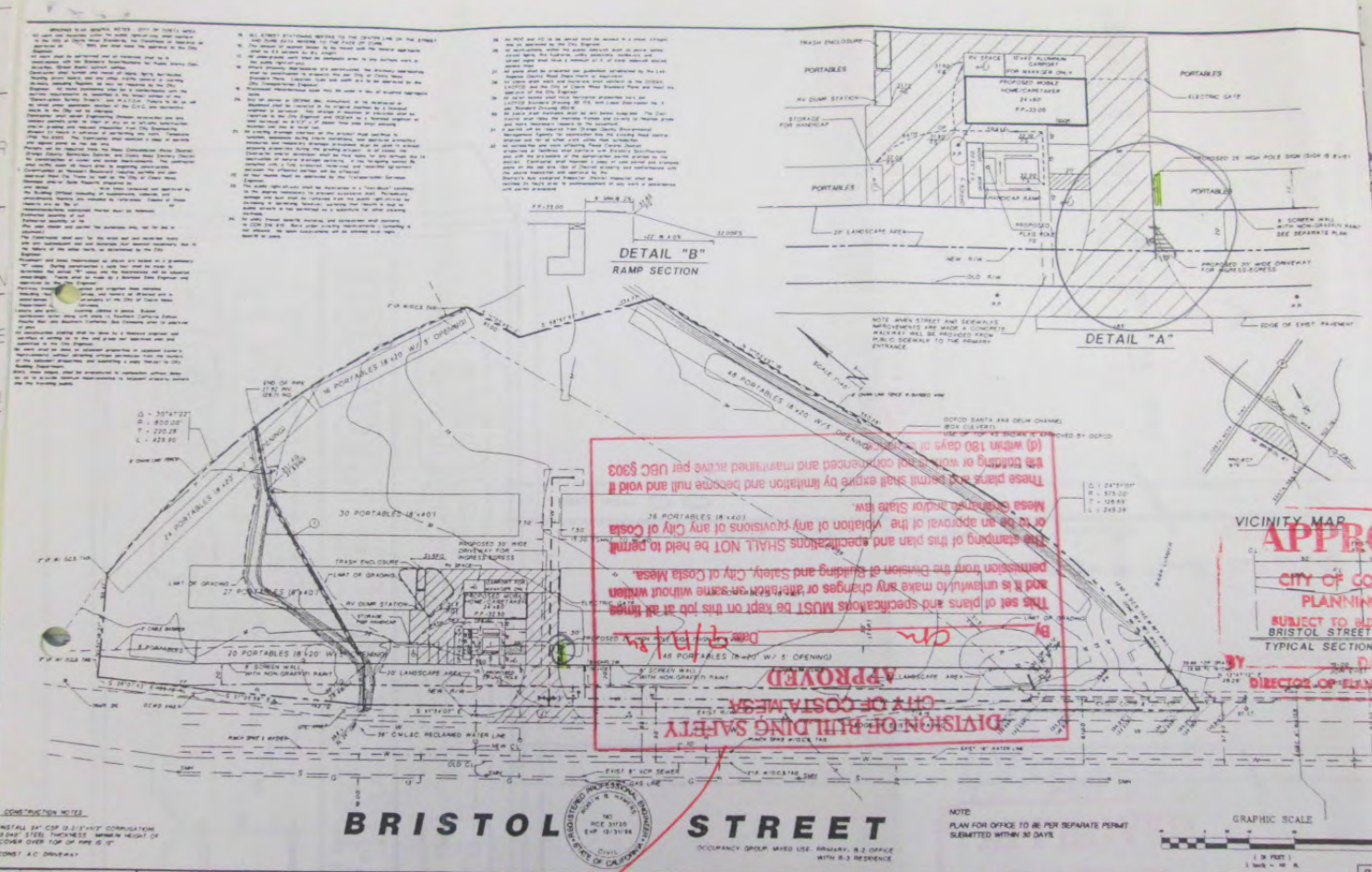
BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	SIGN	SMIP/TOT	GRADING	PLAN-CHECK
81.00				120.00	1.26		52.65

I N D I V I D U A L F E E B R E A K D O W N

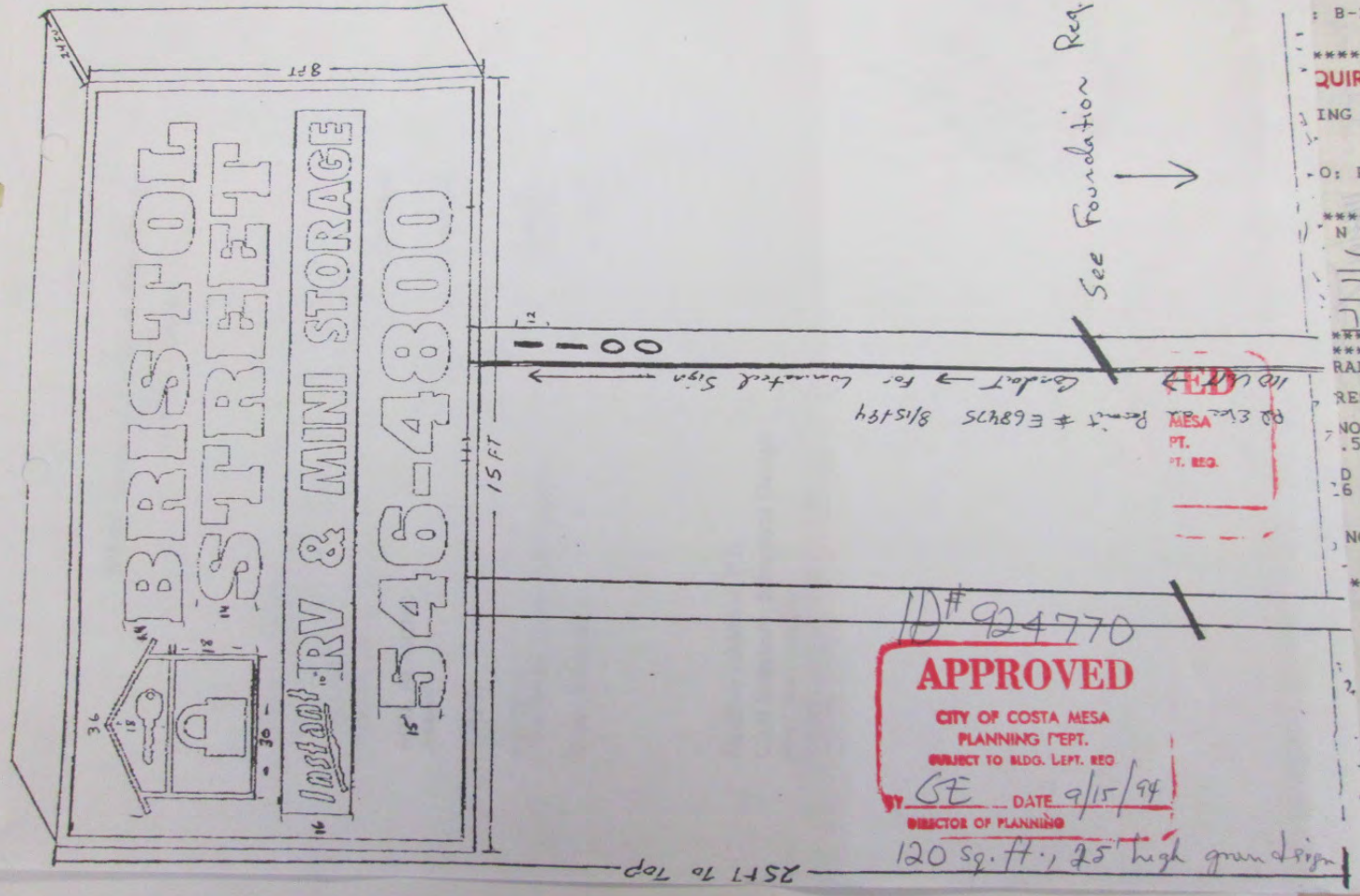
TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST
			01.00167846-00167849 TOT	254.91

NO FEES WERE SELECTED FOR THIS PERMIT DATE: 09/15/94 TIME: 14:31

1100 BRISTOL ST.



1100 BRISTOL ST.


BRISTOL STREET
546-4800
Indoor RV & MINI STORAGE
8Ft
15FT
See Foundation Req. & Design
ID# 924770
APPROVED
CITY OF COSTA MESA
PLANNING DEPT.
SUBJECT TO BLDG. DEPT. REQ.
DATE 9/15/94
DIRECTOR OF PLANNING
120 Sq. Ft., 25' high ground sign

Bristol Street Instant RV & Mini Storage
Bristol Street
Costa Mesa, California

DESIGN CRITERIA
Based on provisions of the 1991 UBC

CONCRETE
28-day strength — F'c=2500 psi

SOIL BEARING
Assumed — q=1000 psf

STEEL

Steel Tubes	Fy=46 ksi
Wide Flanges, pipe columns, base plates	Fy=36 ksi
#5 bars and smaller	Fy=40 ksi

Heather Giddens, P.E.
Civil Engineer, Structural Design
19311 New Haven Lane
Huntington Beach, California 92646
(714) 968-9764

8.11.94

REGISTERED PROFESSIONAL ENGINEER
HEATHER A. GIDDENS
No. C 48283
Exp. 6-30-96
CIVIL
STATE OF CALIFORNIA

INSTANT STORAGE

SIGNAGE

H = 25' TOP OF SIGN
AREA 8x15' W=700#

- SEISMIC LOADS

$V = Z I C_p W_p$
$= .4(1.0)(3.0)(700)$
$= 560\#$

- WIND LOADS

$P = C_e C_q Q_s I$ EXPOSURE "C" $20' < h < 25'$
$= 1.1(1.3)(.026 PSF)(10)$ BASIC WIND SPEED = 70 MPH
$= 19.5 PSF$ METHOD 2
$P = 19.5(8 \times 15) = 2340\#$

COLUMN

H=17'

$M = 2340(17') = 39780\#$

$S_{REQ} = \frac{39780(12)}{.66(36)(1.33)} = 15 IN^3$

$I_{REQ} = \frac{2340(17)^3(1728)}{3(29 \times 10^6)(1.02)} = .224 IN^4$

$\Delta = .005h$

COLUMN
TS 10x10x1/2
OR
TS 12x12x1/4
OR
(2) TS 8x8x3/8

FOOTING

$d = \frac{A}{2}\left(1 + \sqrt{1 + \frac{4.36h}{A}}\right)$

$= \frac{1.94}{2}\left(1 + \left[1 + \frac{4.36(17)}{1.94}\right]^{1/2}\right)$

$= 7.04'$

$A = \frac{2.34P}{S_1 b}$

$= \frac{2.24(2340)}{500(5.66)}$

$= 1.94$

$b = [2(4)^2]^{1/2} = 5.66$

$S_1 = 100(2)(2.5') = 500 PSF$

FOOTING
4'-0" SQ
7'-0" DEEP
#4 @ 18" O.C.
EA WAY
HORIZ. # VERT.

4'-0" SQ

INSTANT STORAGE

SIGNAGE

H = 25' TOP OF SIGN
AREA 8x15' W=700#

- SEISMIC LOADS
  $V = ZIC_p W_p$
  $= .4(1.0)(3.0)(700)$
  $= 3360\#$
- WIND LOADS
  $P = C_e C_q Q_s I$ EXPOSURE "C" $20' < h < 25'$
  $= 1.1(21.3)(1.26 PSF)(1.0)$ BASIC WIND SPEED = 70 MPH
  $= 19.5 PSF$ METHOD 2
  $P = 19.5(8x15) = 2340\#$

COLUMN

H=17'

$M = 2340(17') = 39780^{\#}$

$S_{REQ} = \frac{39780(12)}{.66(36)(1.33)} = 15 IN^3$

$I_{REQ} = \frac{2340(17)^2(1728)}{30,000,000(1.02)} = 224 IN^4$

$\Delta = .005h$

COLUMN
TS 10x10x1/2
OR
TS 12x12x1/4
OR
(2) TS 8x8x3/8

FOOTING

$d = \frac{A}{2}\left(1 + \sqrt{1 + \frac{4.36h}{A}}\right)$

$= \frac{1.94}{2}\left(1 + \left[1 + \frac{4.36(17)}{1.94}\right]^{1/2}\right)$

$= 7.04'$

$A = \frac{2.34P}{S_1 b}$

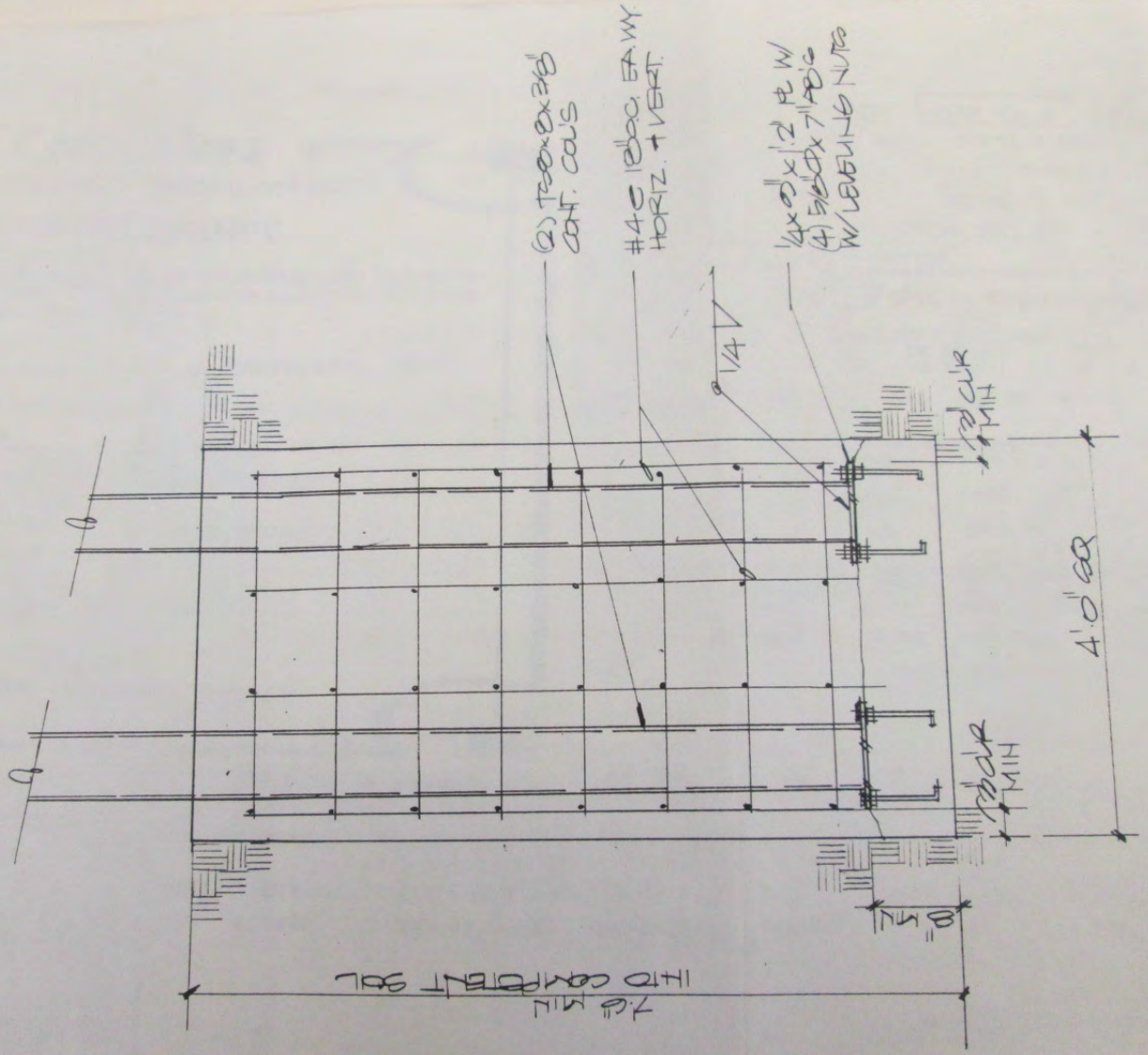
$= \frac{2.34(2340)}{500(5.66)}$

$= 1.94$

$b = \left[2(4)^2\right]^{1/2} = 5.66$

$S_1 = 100(2)(2.5') = 500 PSF$

FOOTING
4'-0" SQ
7'-6" DEEP
#4 @ 18" OC.
EA WAY
HORIZ. & VERT.



Revenue; Goldenrod---Assessor

City of Costa Mesa

Development Services, Division of Building and Safety

CERTIFICATE OF OCCUPANCY

This certificate is issued pursuant to the requirements of the Uniform Building Code, Section 308 adopted by the City of Costa Mesa certifies that at the time of its issuance the building structure herein below described was inspected and approved for occupancy as follows:

Building Address 1100 BRISTOL STREET Bldg. Permit No. B68252

Use RV & MINI STORAGE

Group B-2/B-3 Type of Construction VN Fire Zone _____ Use Zone _____

Owner of Building ORANGE COUNTY FDDOD CONTROL Tenant INSTANT STORAGE

Address P.O. BOX 4048, SANTA ANA, CA 92702

By _____

BUILDING OFFICIAL-Tony C'De Baca

Date 11/30/44

REQUIRED TO BE POSTED IN A CONSPICOUS PLACE

PC#2828-94 A

CITY OF COSTA MESA

DEVELOPMENT SERVICES/BUILDING SAFETY

RECORD PACKAGE FOR:

1100 BRISTOL STREET

PARCEL #427-363-01 B-2/B-3

STREET ADDRESS

RV & MINI STORAGE "INSTANT STORAGE"

WORK DONE

- [XX] Building Permit # B68252, B68473
- [XX] Certificate of Occupancy
- [XX] Electrical Release Form
- [X] Gas Release Form
- [XX] Sanitation Fixture Form
- [XX] Plumbing Permit # P69044
- [ ] Mechanical Permit #
- [XX] Electrical Permit # E68475
- [ ] Reinspection Permit #
- [ ] Health Department Approval
- [ ] Roofing Certification
- [ ] Insulation Certification
- [ ] Dry Chemical System Certification
- [ ] Flame Spread Certification
- [ ] Fire Sprinkler Certification
- [XX] Soils Certification
- [ ] Special Inspection Certification
- [ ] Other:

All Required Documents Included J.A. 11/28/94
Clerk

O.K. to Approve C.O.
Inspector

O.K. to Release C.O. 11/30/94
Building Official

CMF 1046-30

1100 BRISTOL ST.

1100 BRI

1100 Bristol Street

NUMBER | STREET | UNIT NUMBER

PC# 2302-2303-94A

PERMIT NUMBER | REFERENCE NUMBER

NOTES:

ENGINEERING	PLANNING	FIRE
✓	O.K. G.E. 4/18/94	✓ ok DH 11/21/94

1936-46

REF PC 2302-94 A

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTROL
ADDRESS: P.O. BOX 4048
SANTA ANA 92702
ARCH/ENGINEER: ROBIN HAMERS REG.NO.: C-31720
ADDRESS: 234 E 17TH ST UNIT: 205
C.M. CA 92627
PERMITTEE: INSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC.# [redacted] STATE LIC.# [redacted] CLASS: [redacted]
Date _____ Signature _____

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance or a certified copy thereof (Section 3800, Lab. C).
POLICY NO.: RI9048076 EXP. DATE: 05/01/95
COMPANY: INDUSTRIAL IND.
X Certified copy is hereby furnished ☐ Certified copy is filed with the city Building Division.
Date _____ Applicant: _____

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Date 7-28-94 Signature _____
NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

CONSTRUCT 1 CARPORT & FOOTINGS FOR MOBILE HOME

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code): Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

X I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section B & P C for this reason

Date 7-28-94 Owner _____

I certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date _____ Applicant: _____

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date 7-28-94 Signature _____
Owner's License or Social Security # N4672329

1641-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT

PERM NO: B 068252

PERMIT NO: B 068252 PLAN CHECK NO: 02828-94 A GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: STR PURPOSE: OTH
JOB DESCRIPTION : RV & MINI STORAGE " SEE COMMENTS " SQ FT: 150,000
CLAIM VALUE: 150,000.00 CALC-VALUE: 150,000.00 GROUP OCC: B-2 /B-3
COMMENTS: CONST. 1 CARPORT& FOOTINGS FOR MOBILE HOME & OFFICE

****
Z O N I N G R E Q U I R E M E N T S
S E T B A C K S HOLD FOR SPECIAL REQUIREMENTS

MAIN BUILDING						ACCESSORY BUILDING					
FRNT:	FT	IN REAR:	FT	IN		FRNT:	FT	IN REAR:	FT	IN	
LEFT:	FT	IN RGHT:	FT	IN		LEFT:	FT	IN RGHT:	FT	IN	

PARKING REQ: PROV: PARCEL: 42736301 ZNE: C1 REF NO: PA-94-24
PLANNING NOTES> SITE PLAN FOR RV AND MINI STORAGE
>
****
D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : ABA DATE: 7/28/94
BUILDING APPROVED BY : VCR DATE: 7/22/94
APPLICATION ISSUED BY: CR DATE: 7/28/94
****
****
LEGALIZATION:N F E E S U M M A R Y STRUCTURAL/SEGMENT:Y

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT	814.50					SMIP/NON-RES 31.50	
PLAN	132.36						
ISSUE FEE							

BUILDING-DIV->	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
TOTALS---->	846.00	0.00	132.36	978.36	978.36	.00

REVENUE DIVISION TOTALS--> COLLECTED: 978.36 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
814.50					31.50		132.36

****
I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST
SFC	150000	ALTER BY VALUE COMMERCIAL NOZONE	1.00	150,000.00

END OF FEES

01 00164923-00164925 TOT 978.36
DATE: 07/29/94 TIME: 16:59

DECLARATION OF AUTHORITY

FOR AGENTS OF PROPERTY OWNER TO APPLY FOR PERMITS

Bldg. Permit # B68252

This Permit # 11

1100 Bristol Street, Costa Mesa
Street Address

427-363-01
AP Number

1. I (~~we~~), Thomas J. Jamieson, declare that I am the ~~Owner of Title~~ tenant of the above referenced real property, and that I (~~we~~) hereby authorize:

Mr. Cap Prielipp, Manager
Name

(805)393-7005
Telephone No.

Instant Storage, A General Partnership
3101 State Road
Street Address

Bakersfield
City

CA
State

93308
Zip

to obtain permits in my behalf, as ~~owner/builder~~ tenant, for site improvements and buildings at the above referenced property.

2. Should **any person** become an **employee** engaged in the improvement of the property, I (we) shall immediately provide Worker's Compensation Insurance coverage and cause a certificate of that coverage to be filed with the Building Division of the City of Costa Mesa, as required by State of California laws.

3. As ~~owner/builder~~ tenant in fact, I understand and accept that my responsibilities do not transfer to any other person, company or corporation.

4. I agree to indemnify and hold the City of Costa Mesa and its employees or officers harmless from any claim resulting in damage or personal injury to myself or any other parties as a result of work authorized by the permits from the City of Costa Mesa.

5. I declare under the penalty of perjury that the foregoing is true and correct.

Executed this 27th day of July 1994, at Bakersfield, California.

Thomas J. Jamieson
Printed Name

July 27, 1994
Date

Signature

For: Instant Storage, A General Partnership

NOTE: This authorization does not grant authorization to perform the work as owner, it solely provides for limited power of attorney to secure this permit in any behalf.

NOTARIZATION REQUIRED

0779-46 (Rev. 2/91)

ALL-PURPOSE ACKNOWLEDGMENT

NO 209

State of California
County of Kern

On July 27, 1994 (DATE) before me, Janice L. Cosentino, Notary Public (NAME, TITLE OF OFFICER - E.G., "JANE DOE, NOTARY PUBLIC")

personally appeared Thomas Jamieson (NAME(S) OF SIGNER(S))

☒ personally known to me - **OR** - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

Witness my hand and official seal.

OFFICIAL NOTARY SEAL
JANICE L COSENTINO
Notary Public — California
KERN COUNTY
My Comm Expires DEC 09,1994

OFFICIAL NOTARY SEAL
JANICE L COSENTINO
Notary Public — California
KERN COUNTY
My Comm Expires DEC 09,1994

Janice L. Cosentino
SIGNATURE OF NOTARY

CAPACITY CLAIMED BY SIGNER

- ☐ INDIVIDUAL(S)
- ☐ CORPORATE OFFICER(S) _____ TITLE(S)
- ☒ PARTNER(~~S~~)
- ☐ ATTORNEY-IN-FACT
- ☐ TRUSTEE(S)
- ☐ SUBSCRIBING WITNESS
- ☐ GUARDIAN/CONSERVATOR
- ☐ OTHER: _____

SIGNER IS REPRESENTING:

NAME OF PERSON(S) OR ENTITY(IES)

Instant Storage, A General Partnership

ATTENTION NOTARY: Although the information requested below is **OPTIONAL**, it could prevent fraudulent attachment of this certificate to unauthorized document.

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED AT RIGHT:

Title or Type of Document _____

Number of Pages _____ Date of Document _____

Signer(s) Other Than Named Above _____

INSTANT STORAGE

P. O. Box 1807, Bakersfield, CA 93303
(805)393-7005 * FAX (805)393-8738

13850 N.W. 105th Ave., Hialeah, Florida 33016
(800)543-8430 * FAX (305)827-3713

July 27, 1994

TO WHOM IT MAY CONCERN:

This letter authorizes Mr. Cap Prielipp, Manager of Instant Storage Bakersfield, to represent the company and to sign any documents related to permits and/or licenses pertaining to the construction of Instant Storage Costa Mesa at the following address:

1100 Bristol Street, Costa Mesa

If you have any questions, please feel free to contact me.

Sincerely,

Thomas Jamieson
General Partner

Attachments

Charles W. West, Director
GSA/Real Estate

COUNTY OF ORANGE

R. A. SCOTT
Director, General Services Agency

ROBERT G. LOVE
Deputy Director, General Services Agency

CHARLES W. WEST
Director, GSA/Real Estate

GENERAL SERVICES AGENCY
REAL ESTATE
14 Civic Center Plaza, Third Floor
P.O. Box 4106
Santa Ana, California 92702
(714) 834-5503
FAX (714) 834-5658

F01-311.1, 311.2
SANTA ANA DELHI CHANNEL

March 21, 1994

City of Costa Mesa
77 Fair Drive
P.O. Box 1200
Costa Mesa, CA 92628-1200

SUBJECT: LETTER OF AUTHORIZATION

This is to certify that Instant Storage, a general partnership, has acquired an option to lease certain real property described on the attached Exhibit A, (Legal Description) and shown on Exhibit B (Map) from the Orange County Flood Control District (District) for the development and operation of a Recreational Vehicle/Container Storage Facility.

The District consents to any application by Instant Storage with respect to any conditional use permits, reclassification, or any other approvals related to the activities approved by District in accordance with the Option/Lease Agreements which may be required by any governmental or regulatory agency.

I hereby certify that I am authorized to act on behalf of the Orange County Flood Control District (legal property owner) in matters related to this Option/Lease agreement.

Thomas Galvin

for Charles W. West, Director
GSA/Real Estate

Attachments

LEGAL DESCRIPTION
SANTA ANA DELHI CHANNEL (F01)

PARCEL NO. 311.1:

PARCEL 1:

That portion of Lot 4 of Tract No. 456, in the city of Costa Mesa, county of Orange, state of California, as shown on a map recorded in book 17, page 9 of Miscellaneous Maps, in the office of the County Recorder of said county and that portion of Lot 142 in Block 6 of Irvine's Subdivision, per map recorded in book 1, page 88 of said Miscellaneous Maps, all as described in the deed to the Orange County Flood Control District, recorded February 24, 1975 in book 11344, page 1625 of Official Records, in the office of said County Recorder.

EXCEPT that portion thereof included within a strip of land, 122.00 feet wide, the easterly line of said strip of land being the easterly line of the land described in the deed to the Orange County Flood Control District recorded July 26, 1961 in book 5795, page 857 of said Official Records.

PARCEL 2:

That portion of Lot 142 in Block 6 of Irvine's Subdivision, in the city of Costa Mesa, county of Orange, state of California, per map recorded in book 1, page 88 of Miscellaneous Maps in the office of the County Recorder of said county, described in the deed to the Orange County Flood Control District, recorded July 26, 1961 in book 5795, page 857 of Official Records in the office of said County Recorder.

EXCEPT that portion thereof included within a strip of land, 122.00 feet wide, the easterly line of said strip of land being the easterly line of the land described in the deed to the Orange County Flood Control District recorded July 26, 1961 in book 5795, page 857 of said Official Records.

ALSO EXCEPT that portion thereof lying northerly of the following described line:

Beginning at the northwesterly terminus of Course (2) described in deed to the state of California recorded February 17, 1971 in book 9545, page 825 of said Official Records, as having a bearing of N.11°02'35"W. and a length of 75.00 feet; thence along the northwesterly prolongation of said Course (2) N.11°02'35"W., 76.00 feet; thence N.58°56'43"W., 134.78 feet to a line parallel with and distant southerly 100.00 feet, measured at right angles, from said Course (2); thence along said parallel line N.11°02'35"W., 61.00 feet; thence Westerly along a non-tangent curve concave southerly, having a radius of 800.00 feet, from a tangent which bears N.64°12'13"W., through an angle of 30°47'21", an arc distance of 429.90 feet.

APPROVED:

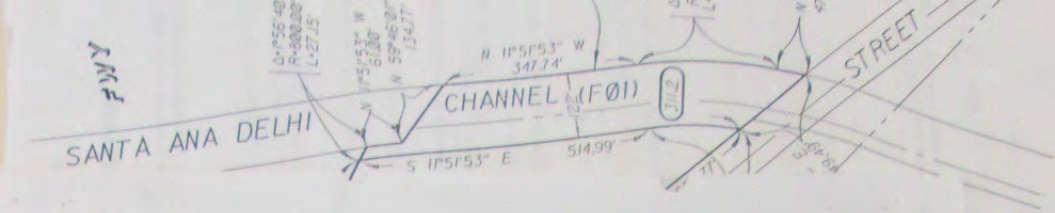
HAROLD I. SCOTT
Right-of-Way Engineer

JAMES W. WILLIAMS
Registered Civil Engineer
Certificate No. 13154
Expiration Date: March 31, 1996

EXHIBIT A

P2LAO:3110308242789

1100 BRISTOL ST.



LEGAL DESCRIPTION
SANTA ANA DELHI CHANNEL (F01)

PARCEL NO. 311.2:

PARCEL 1:

That portion of Lot 4 of Tract No. 456, in the city of Costa Mesa, county of Orange, state of California, as shown on a map recorded in book 17, page 9 of Miscellaneous Maps, in the office of the County Recorder of said county and that portion of Lot 142 in Block 6 of Irvine's Subdivision, per map recorded in book 1, page 88 of said Miscellaneous Maps, all as described in the deed to the Orange County Flood Control District, recorded February 24, 1975 in book 11344, page 1625 of Official Records, in the office of said County Recorder; that is included within a strip of land, 122.00 feet wide, the easterly line of said strip of land being the easterly line of the land described in the deed to the Orange County Flood Control District recorded July 26, 1961 in book 5795, page 857 of said Official Records.

PARCEL 2:

That portion of Lot 142 in Block 6 of Irvine's Subdivision, in the city of Costa Mesa, county of Orange, state of California, per map recorded in book 1, page 88 of Miscellaneous Maps in the office of the County Recorder of said county, described in the deed to the Orange County Flood Control District, recorded July 26, 1961 in book 5795, page 857 of Official Records in the office of said County Recorder, that is included within a strip of land, 122.00 feet wide, the easterly line of said strip of land being the easterly line of the land described in the deed to the Orange County Flood Control District recorded July 26, 1961 in book 5795, page 857 of said Official Records.

EXCEPT that portion thereof lying southwesterly of the northeasterly line of Bristol Street (former Palisades Road) described in the deed to the County of Orange recorded July 3, 1952 in book 2352, page 389 of said Official Records.

ALSO EXCEPT that portion thereof lying northerly of the following described line:

Beginning at the northwesterly terminus of Course (2) described in deed to the state of California recorded February 17, 1971 in book 9545, page 825 of said Official Records, as having a bearing of N.11°02'35"W. and a length of 75.00 feet; thence along the northwesterly prolongation of said Course (2) N.11°02'35"W., 76.00 feet; thence N.58°56'43"W., 134.78 feet to a line parallel with and distant southerly 100.00 feet, measured at right angles, from said Course (2); thence along said parallel line N.11°02'35"W., 61.00 feet; thence Westerly along a non-tangent curve concave southerly, having a radius of 800.00 feet, from a tangent which bears N.64°12'13"W., through an angle of 30°47'21", an arc distance of 429.90 feet.

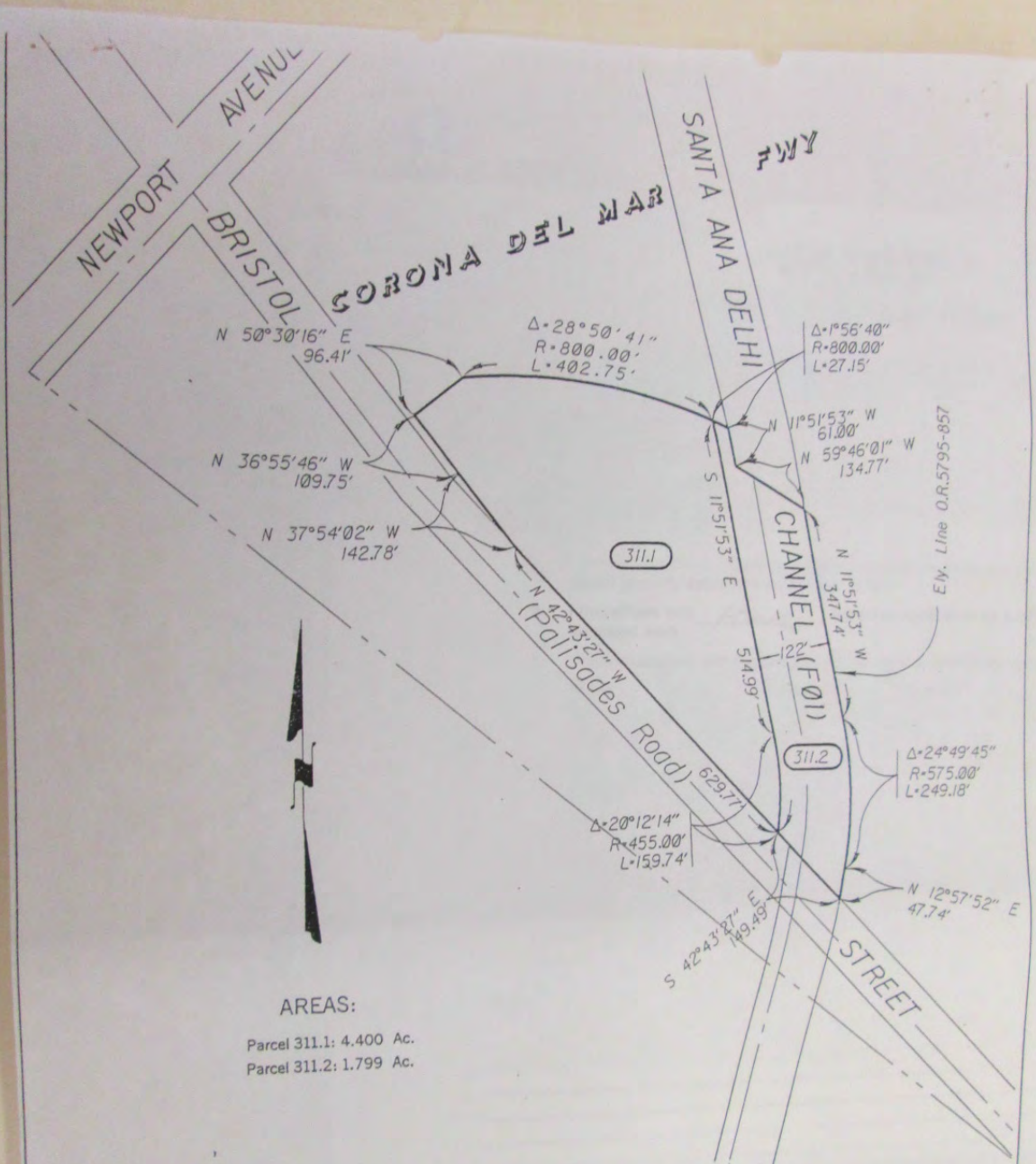
APPROVED:

HAROLD I. SCOTT
Right-of-Way Engineer

JAMES W. WILLIAMS
Registered Civil Engineer
Certificate No. 13154
Expiration Date: March 31, 1996

EXHIBIT A

P2LAO:3110308242789



AREAS:

Parcel 311.1: 4.400 Ac.
Parcel 311.2: 1.799 Ac.

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY – RIGHT OF WAY ENGINEERING
RIGHT OF WAY MAP – COMPILED FROM PUBLIC RECORDS

PROJECT: SANTA ANA DELHI CHANNEL (F01) | REC. DATE: | O.R. | SCALE 1" = 200'

PREP. BY: P2LAO | CHKD. BY: | DATE: 11-02-93 | EST.:

EXHIBIT B

754-5273

CITY OF COSTA MESA
BUILDING DIVISION

OWNER-BUILDER VERIFICATION

A city or county, which is required to give notice pursuant to Section 19830, shall attach to such notice, and, as a condition precedent to issuing a building permit, require the completion and require the return of, an owner-builder verification.

Attention Property Owner:

An 'owner-builder' building permit has been applied for in your name and bearing your signature.

Please complete and return this information in the envelope provided at your earliest opportunity to avoid unnecessary delay in processing and issuing your building permit. No building permit will be issued until this verification is received.

1. I personally plan to provide the major labor and materials for construction of the proposed property improvement. ☑ Yes ☐ No
2. I (have/have not) Have signed an application for a building permit for the proposed work.
3. I have contracted with the following person (firm) to provide the proposed construction:
   Name Ken Small Const
   Address 5024 Airport Dr City Bakersfield
   Phone (805) 393-6678 Contractor's Lic. No.
4. I plan to provide portions of the work, but I have hired the following person to coordinate, supervise and provide the major work:
   Name Instant Storage (Cap Prielipp)
   Address PO Box 1807 City Bakersfield
   Phone (805) 393-7015 Contractor's Lic. No. Owner/Builder
5. I will provide some of the work but I have contracted (hired) the following persons to provide the work indicated:

Name	Address	Phone	Type of Work

I hereby affirm that I have received a copy of the information set forth in Section 19830 of the State of California Health and Safety Code and have completed the above information to the best of my personal knowledge, in compliance with this State law.

Signed: [signature] Date: 7-28-94

Name: Cap Prielipp (Printed or Typed)

C.D.L. # or S.S. # N4672329

754-5273

1042-46

1100 BRISTOL ST.

FINAL GRADING CERTIFICATION

Project Address: 1100 Bristol Street, Costa Mesa

Lot Number: _____

Permit Number: _____

By Civil Engineer:

I certify to the satisfactory completion of grading in accordance with the approved plans, specifications, local and state codes. All drainage devices required by the grading permit, grading plan and grading ordinance have been installed. Adequate provisions have been made for drainage of surface water from each building site.

The minimums are:

2% Fall from structures within 5 feet from exterior walls.
1% Fall for asphalt surfaces and landscaped areas.
0.5% Fall for concrete surfaces to approved disposal areas.

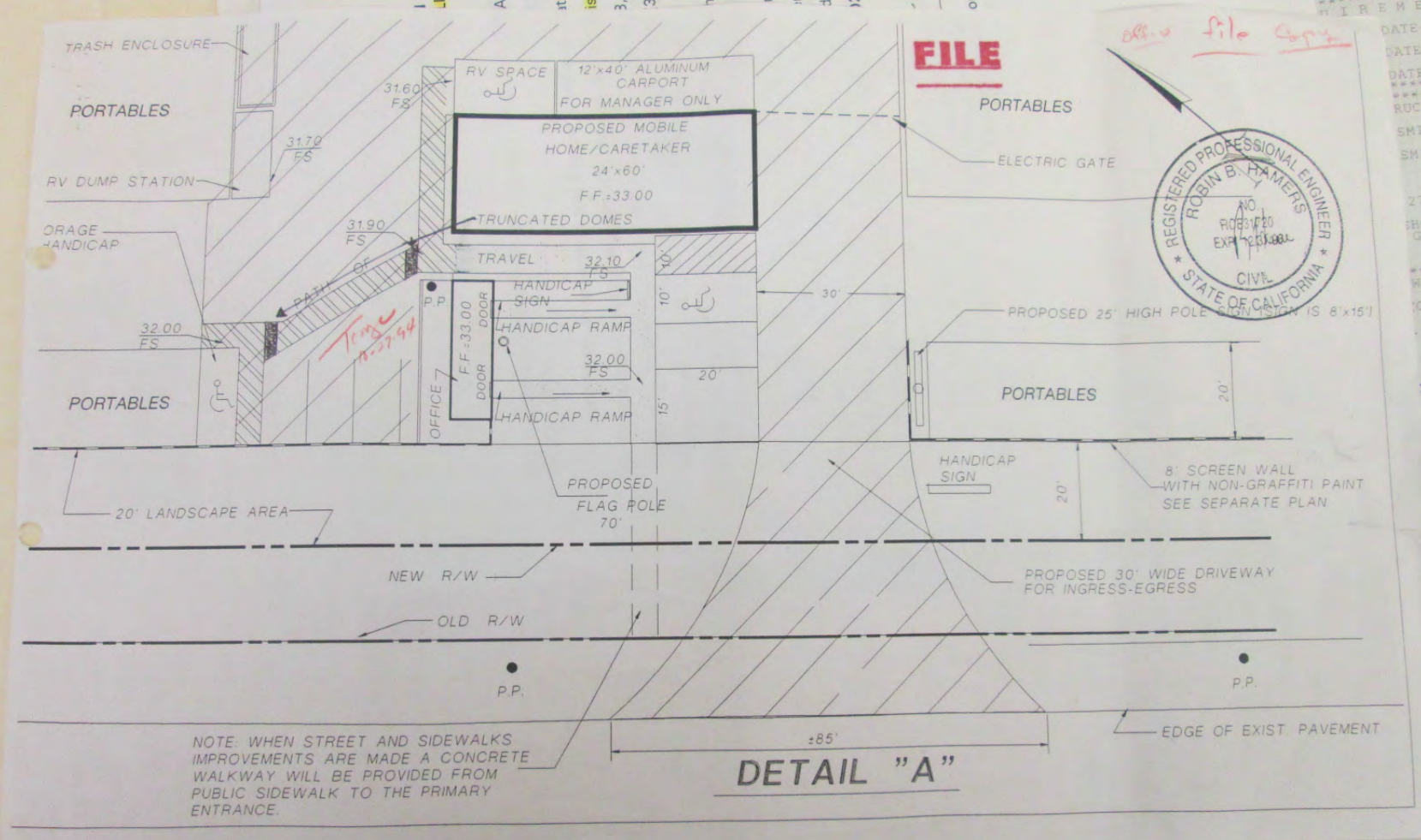
The final monuments as shown on the recorded tract map were set. All final grading elevations are within ± 1/10 of the designed elevations.

Supervising Civil Engineer _____ Reg. No. 31720
(Signature)

Date 12/31/96

REGISTERED PROFESSIONAL ENGINEER
ROBIN B. HAMERS
NO. 31720
EXP 12/31/96
CIVIL
STATE OF CALIFORNIA

STAMP and SIGN


FILE
TRASH ENCLOSURE
PORTABLES
RV DUMP STATION
RV SPACE
12'x40' ALUMINUM CARPORT FOR MANAGER ONLY
PROPOSED MOBILE HOME/CARETAKER 24'x60' F.F.=33.00
TRUNCATED DOMES
31.60 FS
31.70 FS
31.90 FS
32.00 FS
32.10 FS
TRAVEL
HANDICAP SIGN
HANDICAP RAMP
HANDICAP RAMP
PATH OF TRAVEL
P.P.
F.F.=33.00
DOOR
DOOR
OFFICE
10'
20'
15'
30'
PORTABLES
PORTABLES
ELECTRIC GATE
PROPOSED 25' HIGH POLE SIGN (SIGN IS 8'x15')
HANDICAP SIGN
8' SCREEN WALL WITH NON-GRAFFITI PAINT SEE SEPARATE PLAN
20' LANDSCAPE AREA
PROPOSED FLAG POLE 70'
NEW R/W
OLD R/W
PROPOSED 30' WIDE DRIVEWAY FOR INGRESS-EGRESS
P.P.
P.P.
EDGE OF EXIST. PAVEMENT
±85'
NOTE: WHEN STREET AND SIDEWALKS IMPROVEMENTS ARE MADE A CONCRETE WALKWAY WILL BE PROVIDED FROM PUBLIC SIDEWALK TO THE PRIMARY ENTRANCE.
DETAIL "A"
REGISTERED PROFESSIONAL ENGINEER
ROBIN B. HAMERS
NO.
EXP.
CIVIL
STATE OF CALIFORNIA

anning Commissio
esolution was pas
Commission held

, Davenport, Egan

ry, Costa Mesa
Planning Commission

RESOLUTION NO. PC-02-04

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF COSTA MESA DENYING PLANNING APPLICATION PA-01-37

THE PLANNING COMMISSION OF THE CITY OF COSTA MESA HEREBY RESOLVES AS FOLLOWS:

WHEREAS, an application was filed by Jonathan S. Matson, authorized agent for Dave Conant, owner of real property located at 1192 Bristol Street, requesting approval of a conditional use permit to construct a 2-story, 8,415 square foot auto storage building with a variance from required rear setbacks (36 feet required; 0 feet proposed); and

WHEREAS, a duly noticed public hearing was held by the Planning Commission on March 11, 2002.

BE IT RESOLVED that, based on the evidence in the record and the findings contained in Exhibit "A", the Planning Commission hereby **DENIES** Planning Application PA-01-37 with respect to the property described above.

PASSED AND ADOPTED this 11th day of March, 2002.

Chair, Costa Mesa
Planning Commission

STATE OF CALIFORNIA)
)ss
COUNTY OF ORANGE)

I, Perry L. Valantine secretary to the Planning Commission of the City of Costa Mesa, do hereby certify that the foregoing Resolution was passed and adopted at a meeting of the City of Costa Mesa Planning Commission held on March 11, 2002, by the following votes:

AYES: COMMISSIONERS Foley, Garlich, Davenport, Egan, Perkins

NOES: COMMISSIONERS None

ABSENT: COMMISSIONERS None

ABSTAIN: COMMISSIONERS None

Secretary, Costa Mesa
Planning Commission

1100 BRISTOL ST.

EXHIBIT "A"

FINDINGS

A. The information presented does not substantially comply with Costa Mesa Municipal Code Section 13-29(g)(1) in that there are no special circumstances applicable to the property, such as unusual lot size, lot shape, topography, or similar features, where strict application of the zoning ordinance would deprive the property owner of privileges enjoyed by owners of other properties in the vicinity under the C1 zoning classification. Specifically, the property exceeds the minimum lot size and lot width for a C1 zoned property; therefore, there is insufficient justification for the variance. The variance request constitutes a grant of special privileges inconsistent with other properties in the vicinity and zone in which the property is situated.

B. The proposed development does not comply with Costa Mesa Municipal Code section 13-29(g)(2) in that the proposed use is not compatible with developments in the same general area. Granting the conditional use permit will be detrimental to the health, safety and general welfare of the public or other properties or improvements within the immediate vicinity. Specifically, the design and placement of the commercial building is not compatible with the adjacent residences nor with the newer projects being developed along Bristol Street.

C. The proposed project does not comply with Costa Mesa Municipal Code Section 13-29(e) because:
   1. The proposed development and use is not compatible or harmonious with uses both on-site as well as with those on surrounding properties.
   2. The proposed project does not comply with applicable performance standards prescribed in the Zoning Code.
   3. The cumulative effects of all past and present planning applications have been considered for both the subject property and surrounding properties.

D. The project has been reviewed for compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines, and the City environmental procedures, and has been found to be exempt from CEQA.

E. The project, as conditioned, is consistent with Chapter XII, Article 3, Transportation System Management, of Title 13 of the Costa Mesa Municipal Code in that if the project were approved the development project's traffic impacts will be mitigated by the payment of traffic impact fees.

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTR FLOOD; X 47
ADDRESS: DISTRICT
P.O. BOX 1807
BAKERSFIELD 93303

ARCH/ENGINEER: HEATHER GIDDENS REG.NO.: 48283
ADDRESS: 19311 NEW HAVENLN UNIT:
H.B. CA 92646
PERMITTEE: INSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC.: 061923 STATE LIC.: 0000000 CLASS: EXP: 04/95

Date _____ Signature _____

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).
POLICY NO.: INDUSTRIAL IND. EXP. DATE:
COMPANY:
☐ Certified copy is hereby furnished ☐ Certified copy is filed with the city Building Division

Date _____ Applicant _____

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Date _____ Signature _____

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city of county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section: B. & P. C.
for this reason

COPY

Date _____ Owner _____

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date _____ Applicant _____

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date _____ Signature _____

Driver's License or Social Security #: N4672329

1641-46 White--Building, Green--Code Enforcement, Canary--Applicant, Pink--Revenue, Goldenrod--Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: B 95847

PERMIT NO: B 068473 PLAN CHECK NO: 02999-94 A COVT: N SUPP: N

CONSTRUCTION TYPE: PERMIT TYPE: STR PURPOSE: NEW

JOB DESCRIPTION : FOUNDATION FOR OFFICE & H.C. PRKG SQ FT: 22,500

CLAIM VALUE: 22,500.00 CALC-VALUE: 22,500.00 GROUP OCC: B-3 /

COMMENTS: OFFICE FOUNDATIONS & H.C. PARKING

****

Z O N I N G R E Q U I R E M E N T S

S E T B A C K S

MAIN BUILDING				ACCESSORY BUILDING			
FRNT: FT	IN REAR: FT	IN		FRNT: 10 FT	IN REAR: 10 FT	IN	
LEFT: FT	IN RGHT: FT	IN		LEFT: 500 FT	IN RGHT: 500 FT	IN	

PARKING REQ: PROV: PARCEL: 42736301 ZNE: C1 REF NO:

PLANNING NOTES> INSTALL A 224 SQ.FT. MODULAR OFFICE BUILDING ON STORAGE SITE

> PLANNING INSPECTION REQD.

****

D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : _____ DATE: _____

BUILDING APPROVED BY : _____ DATE: _____

APPLICATION ISSUED BY: _____ DATE: _____

COPY

****

LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:Y

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT	234.00					SMIP/NON-RES 4.73	
PLAN	38.03						

ISSUE FEE	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
BUILDING-DIV-> TOTALS---->	238.73	0.00	38.03	276.76	276.76	.00

REVENUE DIVISION TOTALS--> COLLECTED: 238.73 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
234.00					4.73		

****

I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	DESCRIPTION	UNIT COST	TOTAL COST
SFC	22500	ALTER BY VALUE COMMERCIAL NOZONE	1.00	22,500.00

END OF FEES

COPY

EXIST GAS LINE

11:58 11:53 28.00 INV.

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTR
ADDRESS: DISTRICT
P.O. BOX 1807
BAKERSFIELD 93303

ARCH/ENGINEER: HEATHER GIDDENS REG.NO.: 48283
ADDRESS: 19311 NEW HAVENLN UNIT:
CA 92646
PERMITTEE: H.B.
ADDRESS: INSTANT STORAGE (805)393-7005
1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC.: 061923 STATE LIC.: 0000000 CLASS: EXP: 04/95
Date: Signature:

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).
POLICY NO.: EXP. DATE:
COMPANY: INDUSTRIAL IND.
☒ Certified copy is hereby furnished. ☐ Certified copy is filed with the city Building Division.
Date: 8-15-94 Applicant:

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Date: 8-15-94 Signature:

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section B & P. C. for this reason

Date: Owner:

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: Applicant:

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date: 8-15-94 Signature:

Driver's License or Social Security # N4672329

1081-40 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: B 068473

PERMIT NO: B 068473 PLAN CHECK NO: 02999-94 A GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: STR PURPOSE: NEW
JOB DESCRIPTION : FOUNDATION FOR OFFICE,& H.C. PRKG SQ FT: 22,500
CLAIM VALUE: 22,500.00 CALC-VALUE: 22,500.00 GROUP OCC: B-3 /
COMMENTS: OFFICE FOUNDATIONS & H.C. PARKING

****
Z O N I N G R E Q U I R E M E N T S
S E T B A C K S

	MAIN BUILDING			ACCESSORY BUILDING		
FRNT:	FT	IN REAR: FT	IN	FRNT: 10 FT	IN REAR: 10 FT	IN
LEFT:	FT	IN RGHT: FT	IN	LEFT: 500 FT	IN RGHT: 500 FT	IN

PARKING REQ: PROV: PARCEL: 42736301 2NE: C1 REF NO:
PLANNING NOTES> INSTALL A 224 SQ.FT. MODULAR OFFICE BUILDING ON STORAGE SITE
> PLANNING INSPECTION REQD.

****
D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : CC DATE: 8/15/94
BUILDING APPROVED BY : VCA DATE: 8/15/94
APPLICATION ISSUED BY: CC DATE: 8/15/94

****
LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:Y

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT	234.00					SMIP/NON-RES 4.73	
PLAN	38.03						

ISSUE FEE

BUILDING-DIV->	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
TOTALS---->	238.73	0.00	38.03	276.76	276.76	.00

REVENUE DIVISION TOTALS--> COLLECTED: 238.73 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
234.00					4.73		

****
I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	DESCRIPTION	UNIT COST	TOTAL COST
SFC	22500	ALTER BY VALUE COMMERCIAL NOZONE	1.00	22,500.00

END OF FEES

01 00165942-00165943 TOT 238.73
DATE: 08/15/94 TIME: 13:51

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTROL
ADDRESS: P.O. BOX 4048
SANTA ANA 92702
FLOOD: X 47
CAP PHILIPP 714-546-4800

ARCH/ENGINEER: ROBIN HAMERS REG.NO.: C-14720
ADDRESS: 234 E 17TH ST UNIT: 205
PERMITTEE: C.M.
ADDRESS: INSTANT STORAGE CA 92627
1807 P.O. BOX (805)393-7005

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: P 069044
PERMIT NO: P 069044 PLAN CHECK NO: N
CONSTRUCTION TYPE: PERMIT TYPE: PLU
JOB DESCRIPTION : RV & MINI STORAGE " SEE COMMENTS "
CLAIM VALUE:

GOVT: N
SQ FT:
GROUP OCC: B-

R B 1100 BRISTOL ST. 0011

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTROL FLOOD: X 47
ADDRESS: P.O. BOX 4048 SANTA ANA 92702 Cap Prielipp (714) 546-4800
ARCH/ENGINEER: ROBIN HAMERS REG.NO.: C-17720
ADDRESS: 234 E 17TH ST UNIT: 205
C.M. CA 92627
PERMITTEE: INSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
FAIRFIELD CA 94303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.
CITY LIC: 061927 STATE LIC: 177968 CLASS: EXP: 04/95
Date: 9-29-94 Signature: Cap Prielipp

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).
POLICY NO.: RI9048076 EXP. DATE: 05/01/95
COMPANY: INDUSTRIAL IND.
☐ Certified copy is hereby furnished. ☐ Certified copy will be filed with the city Building Division.
Date: 9-29-94 Applicant: Cap Prielipp

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.
Date: _____ Signature: _____

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

CONSTRUCTION LENDING AGENCY: I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civ. C).
LENDER:
ADDRESS:

OWNER BUILDER DECLARATION: I hereby affirm that I am exempt from the Contractors' State License Law for the following reason (Section 7031.5 Business and Professional Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he/she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he/she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).

☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon and who contracts for such projects with a contractor(s) license pursuant to the Contractors' State License Law). I am aware that proof of their Worker's Compensation insurance should be provided to me.

☐ I am exempt under Section B & P C
for this reason:

Date: _____ Owner: _____

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: _____ Applicant: _____

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of the city to enter upon the above-mentioned property for inspection purposes.

Date: 9-29-94 Signature: Cap Prielipp

Driver's License or Social Security #: N4672329

1641-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: P 069044

PERMIT NO: P 069044 PLAN CHECK NO: N GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: PLU PURPOSE: OTH
JOB DESCRIPTION : RV & MINI STORAGE " SEE COMMENTS " SQ FT:
CLAIM VALUE: CALC-VALUE: GROUP OCC: S-2 /S-3
COMMENTS: REF: B-68252

****
Z O N I N G R E Q U I R E M E N T S
S E T B A C K S

MAIN BUILDING						ACCESSORY BUILDING					
FRNT:	FT	IN REAR:	FT	IN		FRNT:	FT	IN REAR:	FT	IN	
LEFT:	FT	IN RGHT:	FT	IN		LEFT:	FT	IN RGHT:	FT	IN	

PARKING REQ: PROV: PARCEL: 42736301 INE: REF NO:
PLANNING NOTES>

****
D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : _____ DATE: _____
BUILDING APPROVED BY : _____ DATE: _____
APPLICATION ISSUED BY: CR DATE: 9/29/94

****
LEGALIZATION:N F E E S U M M A R Y STRUCTURAL SEGMENT:N

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT		178.00				SMIP/NON-RES	
PLAN		25%					
ISSUE FEE		20.00					

	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
BUILDING-DIV->						
TOTALS---->	178.00	20.00	0.00	198.00	198.00	.00

REVENUE DIVISION TOTALS--> COLLECTED: 198.00 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
	198.00						

****
I N D I V I D U A L F E E B R E A K D O W N

TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST
PLU	2	BATHTUB	7.00	14.00
PLU	1	DISHWASHER	7.00	7.00
PLU	1	LAUNDRY TUB OR WASHER	7.00	7.00
PLU	2	SHOWER	7.00	14.00
PLU	2	SINK, KITCHEN	7.00	14.00
PLU	3	WASH BASIN	7.00	21.00
PLU	3	WATER CLOSET (TOILET)	7.00	21.00
PLU	1	WATER HEATER AND/OR VENT	7.00	7.00
PLU	1	WATER SERVICE	7.00	7.00
PLU	1	GAS SERVICE	7.00	7.00
PLU	1	BACKFLOW PREVENTER	7.00	7.00

TOT 198.00

01 00[illegible]-0018[illegible] DATE: 9/29/94 TIME: 11:56

PROJECT ADDRESS: UNIT:

OWNER'S NAME:

ADDRESS:

REG.NO.:

ARCH/ENGINEER: UNIT:

ADDRESS:

PERMITTEE:

ADDRESS:

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

CITY LIC.: STATE LIC.: CLASS:

Date: Signature:

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).

POLICY NO.: EXP. DATE:

COMPANY:

☐ Certified copy is hereby furnished. ☐ Certified copy is filed with the city Building Division.

Date: Applicant:

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred ($100) or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Date: Signature:

NOTICE: If, after making this declaration, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

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LENDER:

ADDRESS:

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☐ I, as owner of the property or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Section 7044, Business and Professional Code: The Contractors' State License Law does not apply to an owner of a property who builds or improves thereon, and who does such work himself/herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however the building or improvement is sold within one year of completion, the owner will have the burden of proving he/she did not build or improve for the purpose of sale).

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☐ I am exempt under Section: B. & P. C.

for this reason:

Date: Owner:

I do hereby certify that I am aware of and understand the requirements of California Health and Safety Code Sections 25505, 25533, and 25534 and that I or any future building occupant will/will not (circle one) need to comply with said state codes and the requirements for a permit for construction or modification from the Air Quality Management District. Residential construction applications are exempt from these provisions.

Date: Applicant:

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date: Signature:

Driver's License or Social Security #:

1641-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

PERMIT NO: P 069044 PLAN CHECK NO: 03644-94 N PAGE: 2

TYPE	QTY	DESCRIPTION	UNIT COST	TOTAL COST
PLU	1	SEWER, BUILDING / TRAILER	15.00	15.00
PLU	2	SEWER, CONNECTION TO BUILDING EACH	15.00	30.00
PLU	1	INTERCEPTORS FOR GREASE, OIL, SOLIDS	7.00	7.00
		END OF FEES		

DUPLICATE RECEIPT
01 00168431-00168431 TOT 198.00
DATE: 09/29/94 TIME: 11:56

FROM POWER COMPANY

PROJECT ADDRESS: 1100 BRISTOL ST UNIT:
OWNER'S NAME: ORANGE COUNTY FLOOD CONTR
ADDRESS: DISTRICT
P.O. BOX 1807
BAKERSFIELD 93303

ARCH/ENGINEER: REG.NO.:
ADDRESS: UNIT:

PERMITTEE: INSTANT STORAGE (805)393-7005
ADDRESS: 1807 P.O. BOX
BAKERSFIELD CA 93303

LICENSED CONTRACTOR DECLARATION: I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

CITY LIC.: 061923 STATE LIC.: 0000000 CLASS: EXP: 04/95

Date _____ Signature _____

WORKERS' COMPENSATION DECLARATION: I hereby affirm that I have a certificate of consent to self-insure or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Section 3800, Lab. C).

POLICY NO.: EXP. DATE:
COMPANY: INDUSTRIAL IND.
☒ Certified copy is hereby furnished. ☐ Certified copy is filed with the city Building Division.

Date 8-15-94 Applicant _____

EXEMPTION FROM WORKERS' COMPENSATION DECLARATION: (This section need not be completed if the permit is for one hundred dollars or less). I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Date 8-15-94 Signature _____

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LENDER:
ADDRESS:

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☐ I am exempt under Section B. & P. C.
for this reason

Date _____ Owner: _____

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Date _____ Applicant _____

I hereby certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above-mentioned property for inspection purposes.

Date 8-15-94 Signature _____

Driver's License or Social Security #: N4672329

1641-46 White—Building; Green—Code Enforcement; Canary—Applicant; Pink—Revenue; Goldenrod—Assessor

CITY OF COSTA MESA - BUILDING PERMIT PERM NO: E 068475

PERMIT NO: E 068475 PLAN CHECK NO: N GOVT: N SUPP: N
CONSTRUCTION TYPE: PERMIT TYPE: ELE PURPOSE: NEW
JOB DESCRIPTION : ELECTRICAL WORK SQ FT:
CLAIM VALUE: CALC-VALUE: GROUP OCC: B-3 /
COMMENTS: REF: B-68252 & B-68473

****

Z O N I N G R E Q U I R E M E N T S
S E T B A C K S

MAIN BUILDING					ACCESSORY BUILDING				
FRNT:	FT	IN REAR:	FT	IN	FRNT:	FT	IN REAR:	FT	IN
LEFT:	FT	IN RGHT:	FT	IN	LEFT:	FT	IN RGHT:	FT	IN

PARKING REQ: PROV: PARCEL: 42736301 ZNE: REF NO:
PLANNING NOTES>

****

D E V E L O P M E N T S E R V I C E S R E Q U I R E M E N T S

ZONING APPROVED BY : _____ DATE: _____
BUILDING APPROVED BY : _____ DATE: _____
APPLICATION ISSUED BY: _____ DATE: 8/15/94

****

LEGALIZATION:N

F E E S U M M A R Y STRUCTURAL SEGMENT:N

	BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/RES	GRADING
PERMIT			170.20				
			50%			SMIP/NON-RES	
PLAN							
ISSUE FEE			15.00				

	PERMIT	ISSUE	PLAN-CHECK	TOTAL	PAID	DUE
BUILDING-DIV->	170.20	15.00	0.00	185.20	185.20	.00
TOTALS---->						

REVENUE DIVISION TOTALS--> COLLECTED: → 185.20 OVER/SHORT: .00

BLDG PMT	PLUMBING	ELECTRIC	MECHANIC	FIRE	SMIP/TOT	GRADING	PLAN-CHECK
		185.20					

****

I N D I V I D U A L F E E B R E A K D O W N

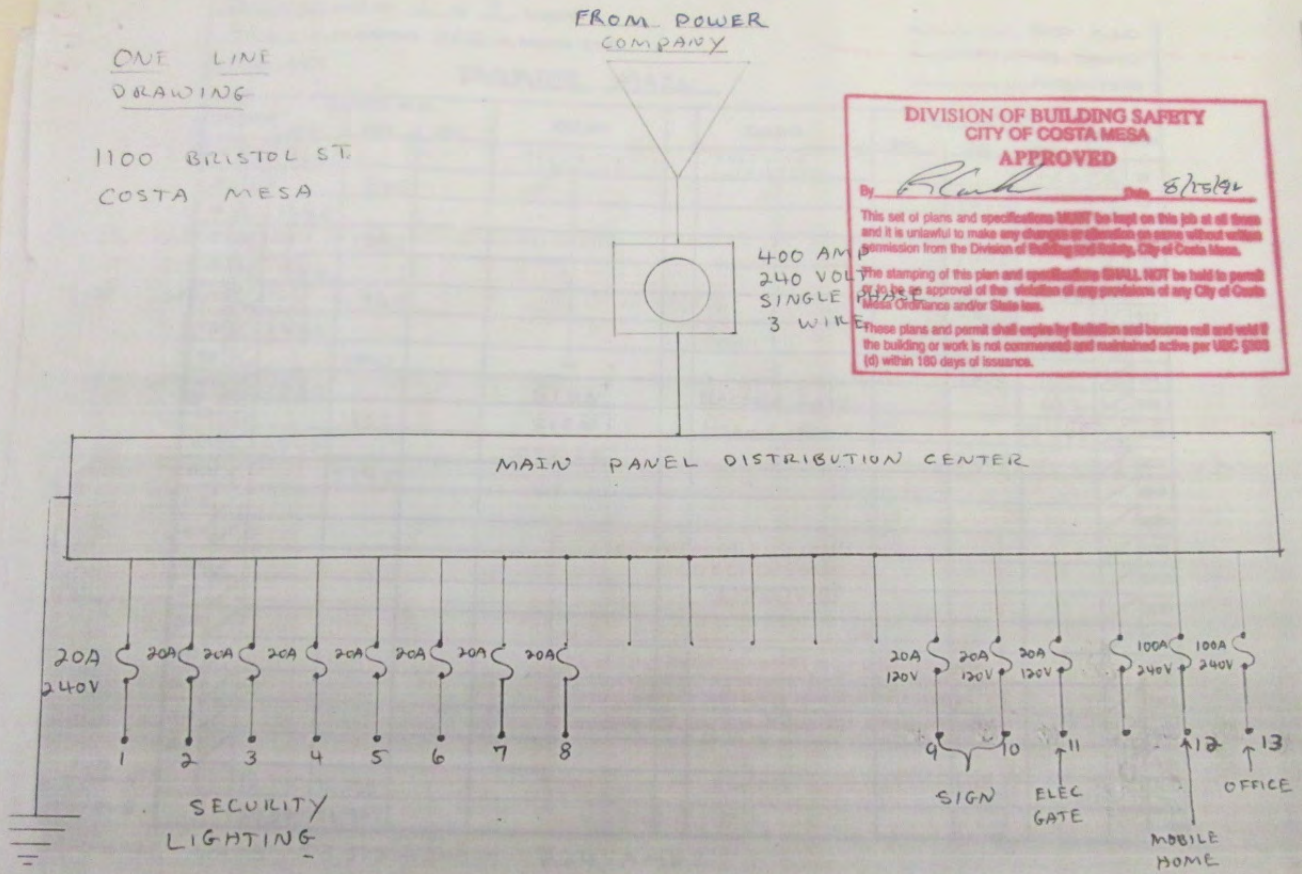
TYPE	QTY	D E S C R I P T I O N	UNIT COST	TOTAL COST
ELE	20	FIXTURES, LIGHTING 1 ST 20 EA.	.75	15.00
ELE	26	FIXTURES, LIGHTING ADDITIONAL EA.	.45	11.70
ELE	1	SERVICES BELOW 600 V & 201- 1000 AMP	37.50	37.50
ELE	3	SUB-PANEL	11.00	33.00
ELE	2	MOTOR/POWR APPARATUS 1.1 - 10.0 HP	7.50	15.00
ELE	1	SIGN/ADDTN'L BR CIRC WITHIN SAME EA.	3.00	3.00
ELE	2	MISC APPARATUS NOT LISTED REQ PERMIT	11.00	22.00
ELE	1	MISC CONDUCTOR NOT LISTED REQ PERMIT	11.00	11.00
ELE	1	MISC CONDUIT NOT LISTED REQ PERMIT	11.00	11.00
ELE	1	STANDING SECTION	11.00	11.00

END OF FEES

01 00165941-00165941 TOT 185.20
DATE: 08/15/94 TIME: 13:49

ONE LINE
DRAWING

1100 BRISTOL ST.
COSTA MESA



DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED
By _____ Date 8/25/92

This set of plans and specifications MUST be kept on this job at all times and it is unlawful to make any changes or alteration on same without written permission from the Division of Building and Safety, City of Costa Mesa.

The stamping of this plan and specifications SHALL NOT be held to permit or be an approval of the violation of any provisions of any City of Costa Mesa Ordinance and/or State law.

These plans and permit shall expire by limitation and become null and void if the building or work is not commenced and maintained active per UBC 3308 (d) within 180 days of issuance.

EXIST GAS LINE

120/240 VOLTS 1 Ø 3 WIRE

400 A. BUSSING 400 A. MAIN BKR.

42 CKT

_____ BKR A.I.C.

_____ MAX ENCL. DEPTH

_____ MOUNTING

PANEL MAIN

CIR	BKR	LOAD V.A. ØA	ØB	ØC	DESC	DESC	LOAD V.A. ØC	ØB	ØA	BKR	CIR
1	2/20	960			SECURITY LIGHTING	SECURITY LIGHTING			1200	2/20	2
3	2/20		960					1200		2/20	4
5	2/20	1680							1440	2/20	6
7	2/20		1680					1440		2/20	8
9	2/20	960							960	2/20	10
11	2/20		960					960		2/20	12
13	2/20	1440							1200	2/20	14
15	2/20		1440		↓	↓		1200		2/20	16
17	1/20	1560			SIGN	ELECTRIC GATE			456	1/20	18
19	1/20		1800		SIGN	MOBILE HOME			9448	2/100	20
21	2/100	5740			OFFICE	↓		9448		↓	22
23	↓		5740		↓						24
25											26
27											28
28											30
31											32
33											34
35											36
37											38
39											40
41											42
SUB TOTALS		12,340	12580				9448	14704			
TOTALS		20,044	26,828								

DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED

By _____ Date _____

This set of plans and specifications MUST be kept on this job at all times and it is unlawful to make any changes or alteration on same without written permission from the Division of Building and Safety, City of Costa Mesa.

The stamping of this plan and specifications SHALL NOT be held to permit or be an approval of the violation of any provisions of any City of Costa Mesa ordinance and/or State law.

These plans and permit shall expire by limitation and become null and void if the building or work is not commenced and maintained active per UBC 304 (d) within 180 days of issuance.

TOTAL WATTS 53,872 ÷ 240 = 224 AMPS

TOTAL LOAD

EXIST GAS LINE

...UIT AND TRENCHING PLAN

MOBILE HOME

120/240 VOLTS 1 Ø 3 WIRE
100 A. BUSSING 100 A. MAIN BKR.
16 CKT

PANEL MOBILE

_____ BKR A.I.C.
____ MAX ENCL. DEPTH
_____ MOUNTING

CIR	BKR	LOAD V.A. ØA	ØB	ØC	DESC	DESC	LOAD V.A. ØC	ØB	ØA	BKR	CIR
1	2/100	—	—	—	MAIN	kitchen			1500	1/20	2
3	2/100	—	—	—	MAIN	kitchen		1500		1/20	4
5	2/30	2640			A/C UNIT	Laundry			1200	1/20	6
7	2/30		2640		A/C UNIT	Lights (6)		600		1/15	8
9	2/30	2520			DRYER	Lights (5)			500	1/15	10
11	2/30		2520		DRYER	RECPTS (10)		1000		1/15	12
13						RECPTS (9)			900	1/15	14
15											16
17											18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39											40
41											42
SUB TOTALS		5160	5160					3100	4100		
TOTALS		8260	9260								

DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED

By _____ Date _____

This set of plans and specifications MUST be kept on the job at all times and it is unlawful to make any changes or alteration on same without written permission from the Division of Building and Safety, City of Costa Mesa.

The issuance of this plan and specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of any City of Costa Mesa Ordinance.

These plans and specifications become null and void if the building or work is not commenced and maintained active per UBC 3003 (h) within 180 days of issuance.

LCL = 1100 x 125% = 1375 + 17520 = 18895 ÷ 240V = 79 AMPS
TOTAL LOAD

OFFICE TRAILER
PANEL SCHEDULE

VOLTS: 120/240		PHASE: SINGLE			PANEL: A (SERIAL #17019)						FEED: Bottom
MAIN: 125		BUSS: 125			LOCATION: EXTERIOR						MOUNTING: Surface
WATTS					LEGS			WATTS			
LOAD	A	B	BRK	POLE	CKT #	A	B	CKT #	POLE	BRK	A	B	LOAD
HVAC UNIT (1 1/2 TON)	3960		40	2	1	X		2	1	20	1260		RECEPTS 7 @ 180W
HVAC UNIT (1 1/2 TON)		3960	1	1	3		X	4	1	15		800	LTS 5 @ 100W, MISC 3 @ 100W
					5	X		6	1	30	1500		WATER HEATER @ 1500W
					7		X	8					
					9	X		10					
					11		X	12					
					13	X		14					
					15		X	16					
					17	X		18					
					19		X	20					
					21	X		22					
					23		X	24					
LEG TOTALS	3960	3960									2760	800	LEG TOTALS

LCL=800x125%=1000+10460=11460

TOTAL WATTS=11460

TOTAL AMPS: 47.83

DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED

By _____ Date _____

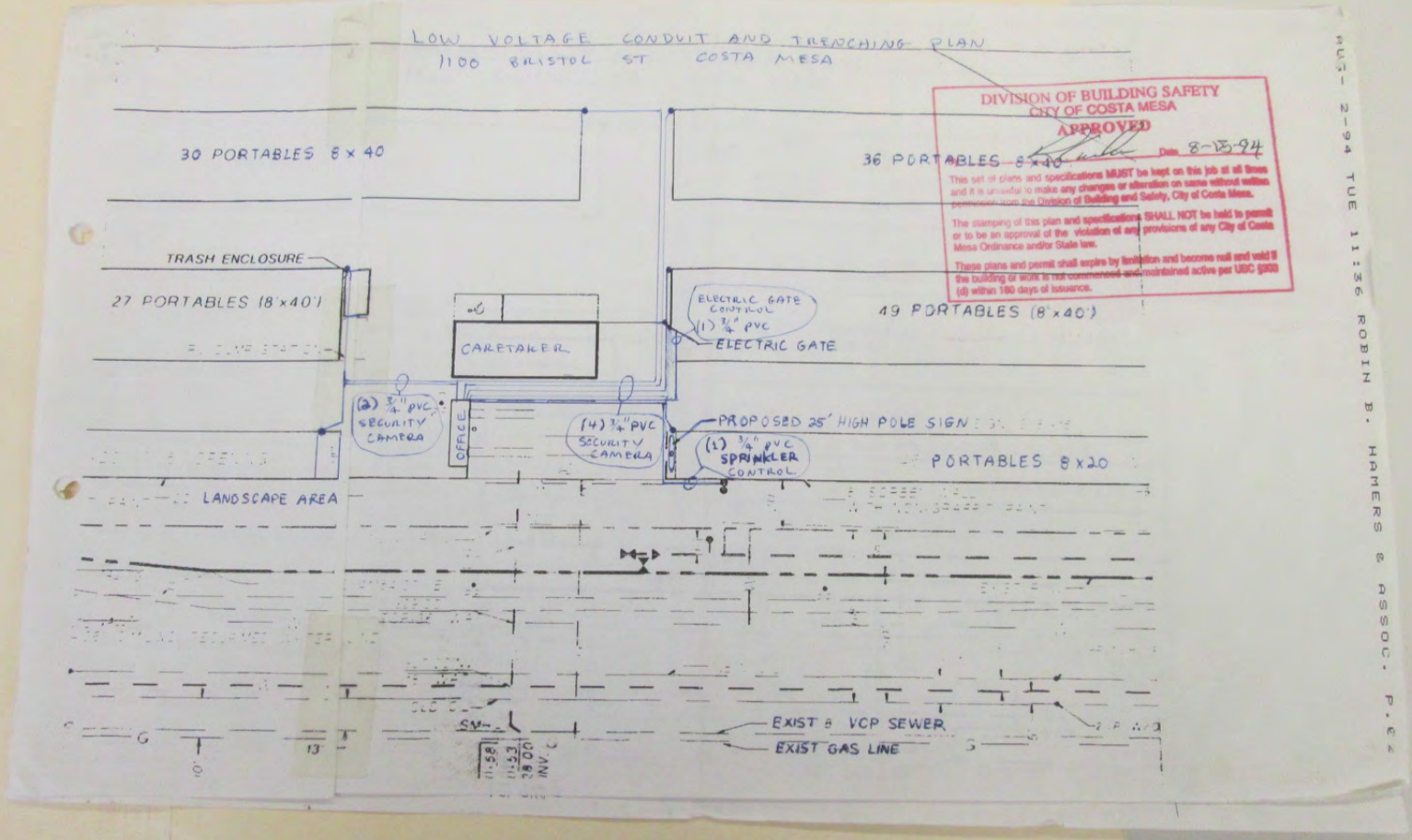
This set of plans and specifications MUST be kept on the job at all times

The issuance of a permit based on plans, specifications shall not be held to permit or to be an approval of the violation of any provisions of any City of Costa Mesa Ordinance or State law.

These plans and permit shall expire by limitation and become null and void if the building or work is not commenced and maintained active per UBC §303 (d) within 180 days of issuance.

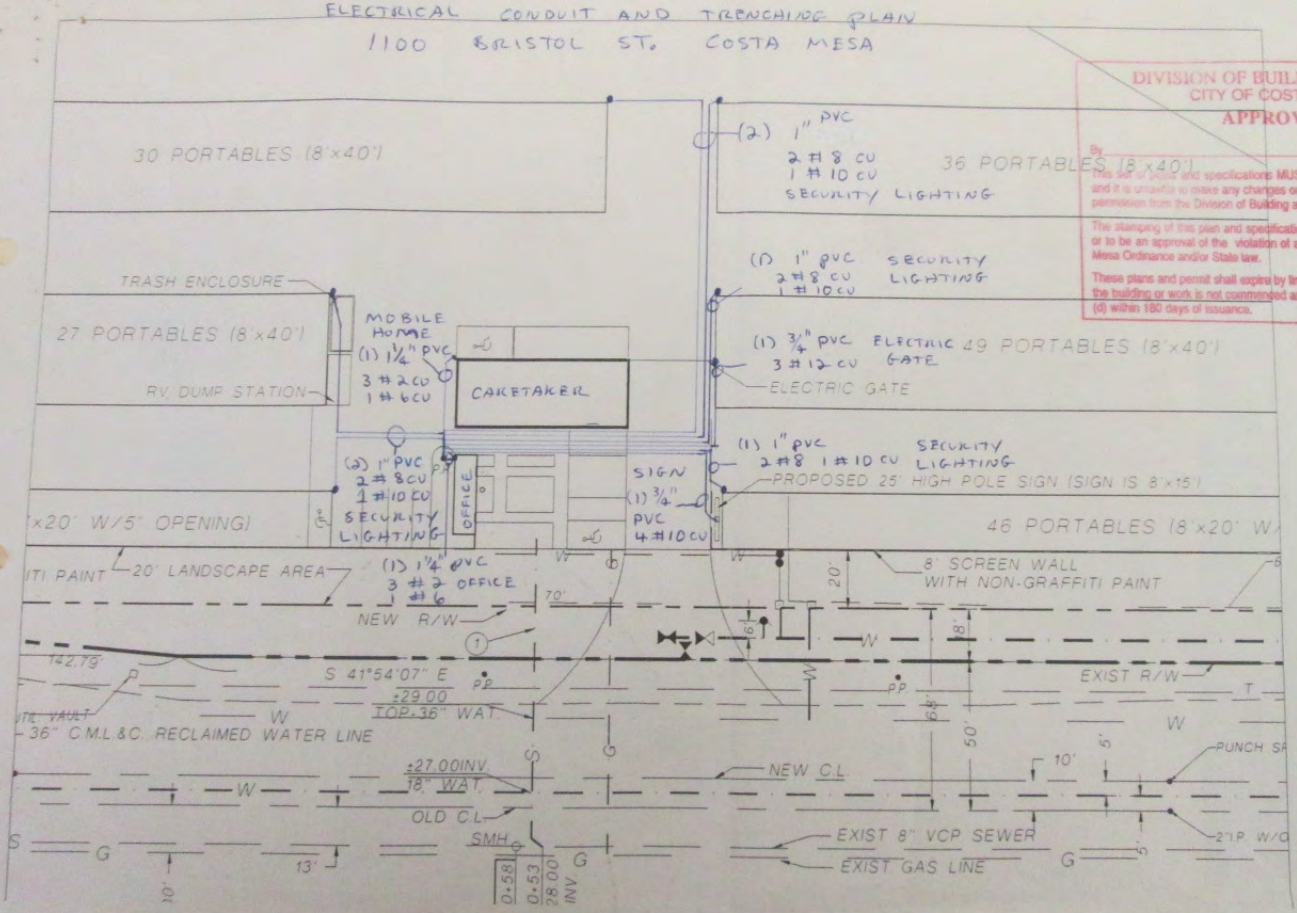
AUG-05-'94 FRI 14:55 ID: STANDARD PACIFIC 1
1-05-1994 00150

AUG- 2-94 TUE 11:36 ROBIN B. HAMER



ELECTRICAL CONDUIT AND TRENCHING PLAN

1100 BRISTOL ST. COSTA MESA



DIVISION OF BUILDING SAFETY
CITY OF COSTA MESA
APPROVED
By _____ Date _____

This set of plans and specifications MUST be kept on this job at all times and it is unlawful to make any changes or alteration on same without written permission from the Division of Building and Safety, City of Costa Mesa.

The stamping of this plan and specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of any City of Costa Mesa Ordinance and/or State law.

These plans and permit shall expire by limitation and become null and void if the building or work is not commenced and maintained active per UBC §303 (d) within 180 days of issuance.

Department of Conservation

Division of Oil, Gas & Geothermal Resources Well Finder

Lat: 40.16, Long: -129.45

Find By Location

Find My Current Location

or

Street: 1100 Bristol Street

City: Costa Mesa

Zip: 92626 Find

Display a 1500ft buffer

Find By API

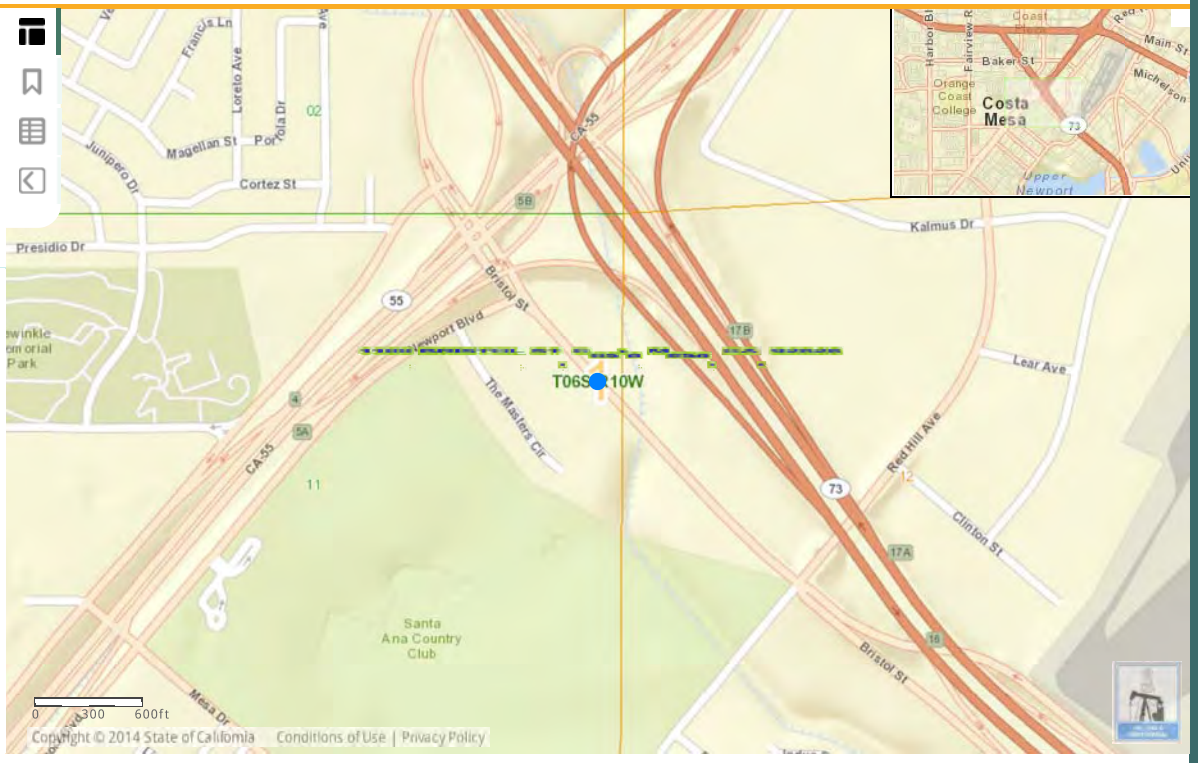
Find By Lat / Long

Find By PLSS

Find By Oil / Gas Field

Data (Layers):

- Notice & Permit
- DOGGR Well
  - Label: API# Well# Detailed
- Oil / Gas Field
- Public Land Survey System
- DOGGR District
- City
- County
- Street



Matthew Rodriquez
Secretary for
Environmental Protection

Department of Toxic Substances Control

Deborah O. Raphael, Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Edmund G. Brown Jr.
Governor

EPA ID PROFILE

ID Number: CAC002623713 **Name :** BROOKEFIELD HOMES

Status: INACTIVE **Inactive Date:** 05/08/2008 **Record Entered:** 11/09/2007 **Last Updated:** 06/11/2008

County: ORANGE **NAICS:** **SIC:**

	Name	Address	City	State	Zip Code	Phone
Location	BROOKEFIELD HOMES	1100 BRISTOL ST	COSTA MESA	CA	92626	
Mailing		3090 BRISTOL ST STE 200	COSTA MESA	CA	92626	
Owner	BROOKEFIELD HOMES	3090 BRISTOL ST STE 200	COSTA MESA	CA	92626	7143311874
Operator/ Contact	ROBERT LOOMANS	151 KALMUS DR STE K-3	COSTA MESA	CA	926265988	7143311874

Based ONLY upon ID Number **CAC002623713**

Calif. Manifests ?	Non Calif. Manifests ?	Transporter Registration ?
YES	NO	NO

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

	GENERATOR
2007	1 0.8000

Non California Manifest Total Tonnage

Waste Code By Year By Entity Matrix Report (based on California Manifests only)

Calif.	Generator	Transporter 1	Transporter 2	TSDF	Alt. TSDF
RCRA	Generator	Transporter 1	Transporter 2	TSDF	Alt. TSDF

California Waste Code By Year Matrix

ID Number: CAC002623713

Entity Type : GENERATOR

Weight (in Tons)

Ship Years

Calif. Code	Description	2007
331	OFF-SPEC, AGED, OR SURPLUS ORGANICS	0.8000
	Grand Total	**0.8000**

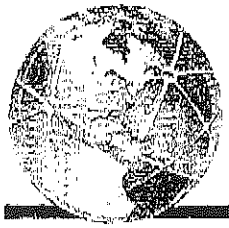
RCRA Waste Code By Year Matrix Report

ID Number: CAC002623713

Entity Type: GENERATOR

Weight (in Tons)

RCRA Code	Description	*Ship Years* 2007
D035	Methyl ethyl ketone	**0.8000**
	Grand Total	**0.8000**



AEI Consultants

Environmental & Engineering Services

March 21, 2014

Costa Mesa Fire Prevention Bureau
Attn: Michelle
2803 Royal Palm Avenue
Costa Mesa, CA 92626
TEL: (714) 327-7400
Fax: (714) 327-7408

Subject: Request to Review Files

Dear Michelle:

I am conducting an environmental assessment at the following properties:

1100 Bristol St Costa Mesa, CA 92626

For the purposes of our report, I am requesting any records that your department may have on:

- underground or aboveground storage tanks.
- historical or present hazardous materials usage, and
- any Notice of Violation and/or Notice to Comply issued.

Please contact me at (310) 798-4255, should you have any questions and to schedule a time to review files, if there are any.

Thank you for your assistance.

Sincerely, Kelly McMann

Kelly McMann
Project Manager
AEI Consultants
5933 West Century Boulevard, Suite 360 Los Angeles, CA 90045
office 310.798.4255 ext 1215
fax 310.846.5594
kmcmann@aeiconsultants.com
NOTE: AEI Los Angeles will have a new address after *March 30th*:
2233 W. 190th Street Torrance, CA 90504
All other contact information will remain the same.

no records found

COUNTY OF ORANGE
HEALTH CARE AGENCY

ENVIRONMENTAL HEALTH
http://www.ochealthinfo.com/regulatory/environ.htm

MAILING ADDRESS:
1241 E. DYER ROAD STE. 120
SANTA ANA, CA 92702

TELEPHONE: (714) 433-6000
FAX: (714) 433-6424

REQUEST FOR ENVIRONMENTAL HEALTH RECORDS

The undersigned hereby requests a copy of the records prepared and maintained by the Health Care Agency in the ordinary course of business, at or near the time of the act, condition, or event which they depict.

The records requested are maintained under the Public Records Act Government Code § 6250 – 6276.48. Some information held in the documents may be exempt from release pursuant to the Public Records Act.

The undersigned understands that the Health Care Agency will charge $0.15 per page copied. In the case of a request for a large number of copies, the Health Care Agency may provide the requestor an estimate of copy costs prior to making said copies. If any request is to be canceled, this office must be notified at the above number within ten (10) days of receipt of request, otherwise cost incurred will be charged to the undersigned.

In order to assist you, please describe the reason for your request:

Environmental Report

Please list addresses here (no more than 10 addresses per request):

1100 Bristol St Costa Mesa, CA 92626

Check here if you would like a review only or to review before copies are made ☒

—

SIGNATURE of Requester

Kelly McMann: AEI Consultants

PRINT Name of Requester (and Company Name - if applicable)

5933 West Century Boulevard, Suite 360 (310) 798-4255
PRINT Street Address Area Code and Phone Number

Los Angeles, CA, 90045 March 21, 2014
PRINT City, State and Zip Code **Date**

RECORDS THAT HAVE NOT BEEN PICKED UP WITHIN 60 DAYS OF NOTIFICATION WILL BE DESTROYED

COUNTY OF ORANGE
HEALTH CARE AGENCY

ENVIRONMENTAL HEALTH
http://www.ochealthinfo.com/regulatory/environ.htm

MAILING ADDRESS:
1241 E. DYER ROAD STE. 120
SANTA ANA, CA 92702

TELEPHONE: (714) 433-6000
FAX: (714) 433-6424

HAZARDOUS WASTE / OTHER PROGRAM INFORMATION CHECKLIST

Please check only the records you need. This will enable us to search only the actual files that pertain to your request, cutting down time spent on searching for records that you may not want.

Site Specific Information	
☒	Above Ground Petroleum Storage Tank File
☒	California Accidental Release Prevention Program File
☒	Certified Unified Program Agency (CUPA) records
☒	City of Brea Hazardous Materials Business Plan File
☒	Complaints regarding Hazardous Waste or Underground Storage Tank Facility
☒	Hazardous Waste Generator Facility File
☒	Hazardous Waste Industrial Cleanup Site File
☒	Hazardous Waste Spill Response Log (Emergency Incidents Log)
☒	Leaking Underground Storage Tank Cleanup Site File
☒	Medical Waste Facility Record
☒	Proposition 65 Notification
☒	Recycling Program
☒	Solid Waste Facility File (large files – need to be specific)
☒	Spill Prevention, Control and Countermeasure (SPCC) File
☒	Tiered Permit Facility File
☒	Underground Storage Tank File
☒	Water Quality Information

Available on Environmental Health Website (See www.ochealthinfo.com/regulatory/downloads/reports.htm)
List of Hazardous Waste Generator Facilities (HWFACILITIES.SRW)
List of Industrial Cleanup Sites (IC PROGRAM CASES BY CITY.SRW)
List of Underground Storage Tank Cleanup Sites
List of Underground Storage Tank Facilities (USTFACILITIES.SRW)
A list of Solid Waste landfills (which includes closed landfills) can be obtained through the California website: www.ciwmb.ca.gov/SWIS/

Other information: _____

APPENDIX E

ASTM USER QUESTIONNAIRE

AEI Consultants
Environmental & Engineering Services

ASTM E 1527-13 User Questionnaire

In order to qualify for the protection offered under the EPA All Appropriate Inquiry (AAI) Standard, the **User** (entities seeking to use the ASTM E1527-13 Practice to complete an environmental site assessment of the property; i.e. Lenders and/or Borrowers) must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that AAI is not complete. This information should be the collective knowledge of the entities relying on the Phase I. **Please note that you are not being asked to evaluate the property, but rather to provide your knowledge of information on the property.**

Site Name/Address: 1100 S.E BRISTOL ST COSTA MESA CA. 92626

Person Interviewed/Title: BRAD SATTERFIELD GM GARAGE Date: 3/24/14

If known, when was the property initially developed? UNDEVELOPED

If different, when were the current building(s) on the property constructed? NA

1. Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law? (**Note:** If unknown, a review of title records or an environmental lien search is recommended)

Yes ☐ No ☑ If you answer yes, please include an explanation in the space provided below:

2. Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Are you aware of any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Engineering Controls are defined as physical modifications to a site or facility to reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or ground water on the property). *Institutional Controls* are defined as a legal or administrative restriction on the use of, or access to, a site or facility to 1) reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or ground water on the property, or 2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment.

Yes ☐ No ☑ If you answer yes, please include an explanation in the space provided below:

3. Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

As the *User* of this *ESA* do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes ☐ No ☑ If you answer yes, please include an explanation in the space provided below:

4. Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).

a) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*?

Yes ☑ No ☐ If you answer no, please include an explanation in the space provided below, including whether the lower purchase price is because contamination is known or believed to be present at the *property*?

5. Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example, as *User*:

a. Do you know the past uses of the *property*?

Yes ☑ No ☐

b. Do you know of specific chemicals that are present or once were present at the *property*?

Yes ☐ No ☑

c. Do you know of spills or other chemical releases that have taken place at the *property*?

Yes ☐ No ☑

d. Do you know of any environmental cleanups that have taken place at the *property*?

Yes ☐ No ☑

If you answered yes to any of the questions above, please include an explanation in the space provided below:

WE ARE NEXT DOOR TO THE PROPERTY AND HAVE SEEN A SELF STORAGE BUSINESS THERE FOR MANY YEARS. SINCE IT HAS BEEN VACANT OTHER THAN USE BY COUNTY FOR STORAGE AND CHRISTMAS TREE LOTS.

6. The degree of obviousness of the presence of likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the *User* of this *ESA*, based on your knowledge and experience related to the *property*, are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?

Yes ☐ No ☑ If you answer yes, please include an explanation in the space provided below:

Please provide the following property contact information:

Property Owner: COUNTY OF ORANGE Phone Number: _____

Key Site Personnel: SCOTT D. MAYER Phone Number: 714-834-3046

Past Owner: COUNTY OF ORANGE Phone Number: _____

CHIEF REAL ESTATE OFFICER-COUNTY OF ORANGE,

Signature: _____ Date: 3/24/14

THIS PROPERTY WILL BE LEASED FROM THE COUNTY

APPENDIX F

QUALIFICATIONS

Kelly McMann – Project Manager

B.S. – Marine Biology, University of New England, Magna Cum Laude

Ms. McMann has one year of experience in the environmental field. Her past experiences include working with a non-profit organization located in southern Florida, which researched and rehabilitated endangered sea mammals.

Project experience for Ms. McMann includes:

- Phase I Environmental Site Assessments
- Environmental Transaction Screens
- Environmental Transaction Analyses
- Regulatory Database Review
- Historical Records Review

Ms. McMann has worked in the environmen tal field for the past year. She has attended various conferences regarding environmental issues. In addition, Ms. McMann has worked and volunteered with environmental non-profit organizations.

Victor T. DeTroy – Due Diligence Manager, Southern California Region

B.A. - Earth and Environmental Science, Columbia University, Cum Laude

OSHA 40-Hour Hazardous Waste Operations
Emergency Response (HAZWOPER) Training
EPA AHERA 24-hour Asbestos Building Inspector

Mr. DeTroy has over five years experience in the environmental service industry and provides project management to ensure compliance and satisfaction of client requirements for Phase I Environmental Site Assessments, Transaction Screens, limited due diligence assessments, Phase II and Phase III subsurface investigations, and quarterly groundwater monitoring events. He has successfully completed assessments on a variety of residential, commercial, and complex industrial sites. Mr. DeTroy is accustomed to all aspects of Due Diligence Property Assessments and the needs and requirements of a variety of reporting standards, including ASTM, EPA's All Appropriate Inquiry (AAI), Freddie Mac, Fannie Mae, HUD, and customized client formats.

Project experience for Mr. DeTroy includes:

- Phase I Environmental Site Assessments
- Telecommunication Phase I Environmental Site Assessments
- Environmental Transaction Screens
- Environmental Transaction Analyses
- Limited Environmental Site Assessments
- Regulatory Database Reviews
- Historical Records Reviews
- Project Coordination and Setup
- Due Diligence Portfolio Management
- The design and implementation of Phase II soil and groundwater investigations and Phase III subsurface characterizations for a variety of suspected contaminants for due diligence and liability purposes

Subsurface investigations have included extensive soil and groundwater testing, identification of petroleum hydrocarbons and volatile organic compounds contamination in near surface soils, and contaminant plume delineation in soil vapor, soil, and groundwater. Mr. DeTroy's management and technical experience has allowed AEI's projects to be performed in a cost effective and timely manner to the satisfaction of AEI's clients and regulatory agencies.

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APPENDIX F

PRELIMINARY WATER QUALITY MANAGEMENT PLAN

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Preliminary Water Quality Management Plan (WQMP)

Project Name:

Ganahl Lumber, Costa Mesa

Prepared for:

Ganahl Lumber Co.

1220 East Ball Road

Anaheim, CA 92805

Prepared by:

Joseph C. Truxaw and Associates, Inc.

Engineer: Craig Di Bias Registration No. 75205

265 S. Anita Drive, Suite 111

Orange, CA 92868

(714) 935-0265

September 11, 2014
Revised January 16, 2015

Project Owner's Certification			
Permit/Application No.	Pending	Grading Permit No.	Pending
Tract/Parcel Map No.		Building Permit No.	Pending
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract)			

This Water Quality Management Plan (WQMP) has been prepared for Ganahl Lumber Co. by Joseph C. Truxaw and Associates, Inc.. The WQMP is intended to comply with the requirements of the local NPDES Stormwater Program requiring the preparation of the plan.

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 the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner:			
Title			
Company	Ganahl Lumber Company		
Address	1220 East Ball Road, Anaheim, CA 92805		
Email			
Telephone #			
Signature		Date	

Contents

Page No.

Attachments

***To be provided with Final WQMP**

Section I Discretionary Permit(s) and Water Quality Conditions

Provide discretionary permit and water quality information. *Refer to Section 2.1 in the Technical Guidance Document (TGD) available from the Orange County Stormwater Program (ocwatersheds.com).*

Project Infomation			
Permit/Application No.	Pending	Tract/Parcel Map No.	
Additional Information/ Comments:			
Water Quality Conditions			
Water Quality Conditions (list verbatim)			
Watershed-Based Plan Conditions			
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.			

Section II Project Description

II.1 Project Description

Provide a detailed project description including:

- Project areas;
- Land uses;
- Land cover;
- Design elements;
- A general description not broken down by drainage management areas (DMAs).

Include attributes relevant to determining applicable source controls. *Refer to Section 2.2 in the TGD for information that must be included in the project description.*

Description of Proposed Project		
Development Category (Verbatim from WQMP):	Category 8: All significant redevelopment projects where significant redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site.	
Project Area (ft^2): 298,498	Number of Dwelling Units: __0____	SIC Code: __5211____
Narrative Project Description:	The proposed development includes construction of a proposed building and shed, with parking lots and landscape areas. Proposed On Site Activities: The facility has the following activities namely, Warehousing of raw materials and finished goods to support sales and distribution network Types of Materials & Products: The facility is a retainer of building materials. Receipt and Storage of Materials: Raw materials are received via freight trucks. These materials are transferred to and from truck into the adjacent, onsite retail store and outdoor storage racks. These materials will be transferred as needed to customer vehicles. Generation; The facility mainly generate non-hazardous waste such as: • Paper and cardboard which are collected and sent to recycling centers, • Lumber waste scraps are collected and transported to licensed waste disposal sites, or otherwise sold for firewood, used for	

	dunnage No streets, roads or highways are proposed as part of this project. Project requires a specific BMP approach. Project does not include food preparation, cooking or eating areas. Vehicle fueling will be conducted onsite, however, no vehicle or equipment service, repair or washing is to be conducted onsite. The only outdoor activities that will be conducted include material delivery and storage, pedestrian access and onsite traffic circulation. The developer and owner of the property is Ganahl Lumber Co. There will be no property owner's association, The property owner will be responsbile for long term maintenance of the project's stormwater facilities. Funding for long term operations and maintenance of BMPs will be included within the general facility operations budget.			
Project Area	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions **Currently**, the site consists of two very small concrete pads, and the rest is **dirt vacant land. In 2007 the site was used as a Self-Storage facility, with buildings, paved drive aisles and parking areas.**	39,497 (2007)	13.23 (2007)	259,000 (2007)	86.77 (2007)
Post-Project Conditions	22,392	7.50	276,106	92.50
Drainage Patterns/Connections	The existing storm runoff from the site drains from the north to an existing circular grate inlet, connected to an existing curb opening catch basin located at Bristol Street and to an existing Caltrans 102" RCB. Currently the Santa Ana Delhi Channel owned by the O.C.F.C.D., a public storm drain system is accepting the runoff from the site. See Hydrology Map.			

II.2 Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities. *Refer to Section 2.2.2 and Table 2.1 in the TGD for guidance.*

Pollutants of Concern			
Pollutant	Circle One: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid/ Sediment	E ☒	N ☐	Expected
Nutrients	E ☐	N ☒	Not expected due to the lack of landscape areas
Heavy Metals	E ☒	N ☐	Expected
Pathogens (Bacteria/Virus)	E ☐	N ☒	Not Expected
Pesticides	E ☐	N ☒	Not expected due to the lack of landscape areas
Oil and Grease	E ☒	N ☐	Expected
Toxic Organic Compounds	E ☒	N ☐	Expected
Trash and Debris	E ☒	N ☐	Expected

II.3 Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are determined to be potentially susceptible to hydromodification impacts. *Refer to Section 2.2.3.1 in the TGD for* NOC *or Section 2.2.3.2 for* <SOC>.

☒ No – Show map

☐ Yes – Describe applicable hydrologic conditions of concern below. *Refer to Section 2.2.3 in the TGD.*

The project does not create any Hydrologic Conditions of Concern (HCOCs). Downstream channels are not susceptible to hydrologic degradation. Per the regional map (TGD* Fig. 4 Susceptibility Analysis Newport Bay- Newport Coastal Streams included in Attachment C), the downstream Santa Ana-Delhi Channel is considered "stabilized".

Refer to Attachment C in this WQMP for regional maps.

*TGD = Orange County WQMP Technical Guidance Document.

II.4 Post Development Drainage Characteristics

Describe post development drainage characteristics. *Refer to Section 2.2.4 in the TGD.*

Drainage of the proposed improvement will be directed to the existing Santa Ana Delhi Channel and will be accepted by the existing public storm drain system. The site discharges to the Upper Newport Bay, to the Lower Newport Bay and finally conveyed to the Pacific Ocean via the Main Channel.

II.5 Property Ownership/Management

Describe property ownership/management. *Refer to Section 2.2.5 in the TGD.*

The subject site will be leased from the County of Orange and managed/operated by Ganahl Lumber Company. A general manager will be at the site during business hours.

Section III Site Description

III.1 Physical Setting

Fill out table with relevant information. *Refer to Section 2.3.1 in the TGD.*

Planning Area/ Community Name	N/A
Location/Address	1100 Bristol Street
	Costa Mesa, California
Land Use	General Commercial. See Attachment C.
Zoning	C-1 Local Business. See Attachment C.
Acreage	5.999 acres.
Predominant Soil Type	As per the Orange County Infiltration Study, native soils are classified as "D". See Figures VXI-2a and 2b, in Attachment C.

III.2 Site Characteristics

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. Refer to Section 2.3.2 in the TGD.

Precipitation Zone	Site is located in the rainfall zone of 0.75 inches design capture storm depth per figure XVI- 1 in Attachment C.
Topography	The site is vacant land unpaved, relatively flat and slopes from the northeast toward the southeast.
Drainage Patterns/Connections	The existing storm runoff from the site drains from the north to an existing circular grate inlet, connected to an existing curb opening catch basin located at Bristol Street and to an existing Caltrans 102" RCB. Currently the Santa Ana Delhi Channel owned by the O.C.F.C.D., a public storm drain system is accepting the runoff from the site. See Hydrology Map.

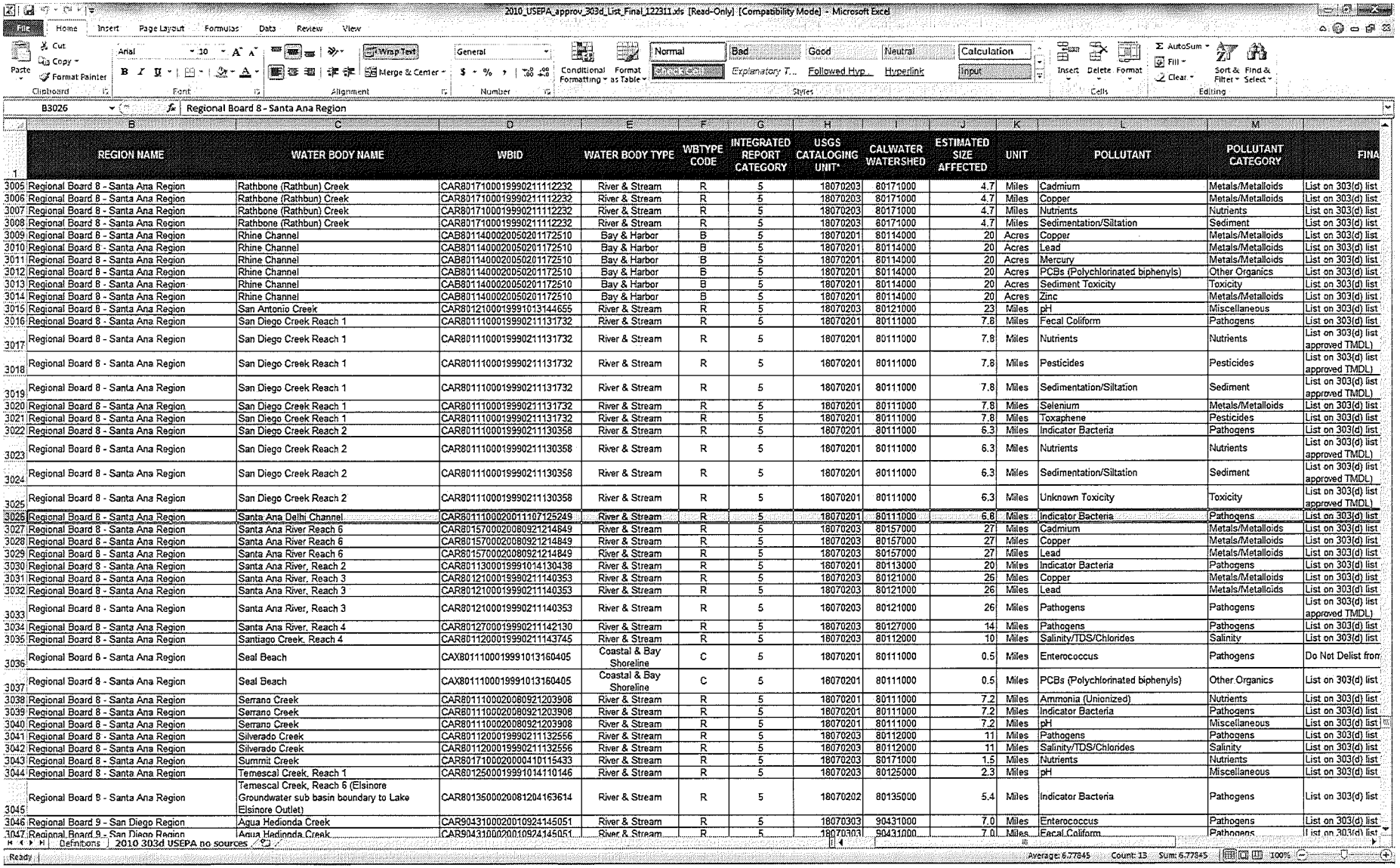
Soil Type, Geology, and Infiltration Properties	Infiltration seems to be feasible as per the infiltration test giving a measured infiltration rate of 0.73 in/hr. See "Geotechnical Investigation Report" by G.A. Nicoll and Associates, Inc., dated June 13, 2014 in Attachment D..

Site Characteristics (continued)	
Hydrogeologic (Groundwater) Conditions	As per Figure XVI -2d, the depth to first groundwater is approximately 30 feet. As per the "Geotechnical Investigation Report" by G.A Nicoll and Associates, Inc., dated June 13, 2014, available groundwater investigation indicate that the groundwater table is at a depth of 24.5 feet, 12 feet above mean sea level.
Geotechnical Conditions (relevant to infiltration)	See above.
Off-Site Drainage	Run-on drainage is not encountered
Utility and Infrastructure Information	There are existing underground concrete conduits, 102" RCB and Santa Ana-Delhi Channel running parallel to the east boundary of the site. Proposed underground infiltration is proposed to be located clear of these facilities.

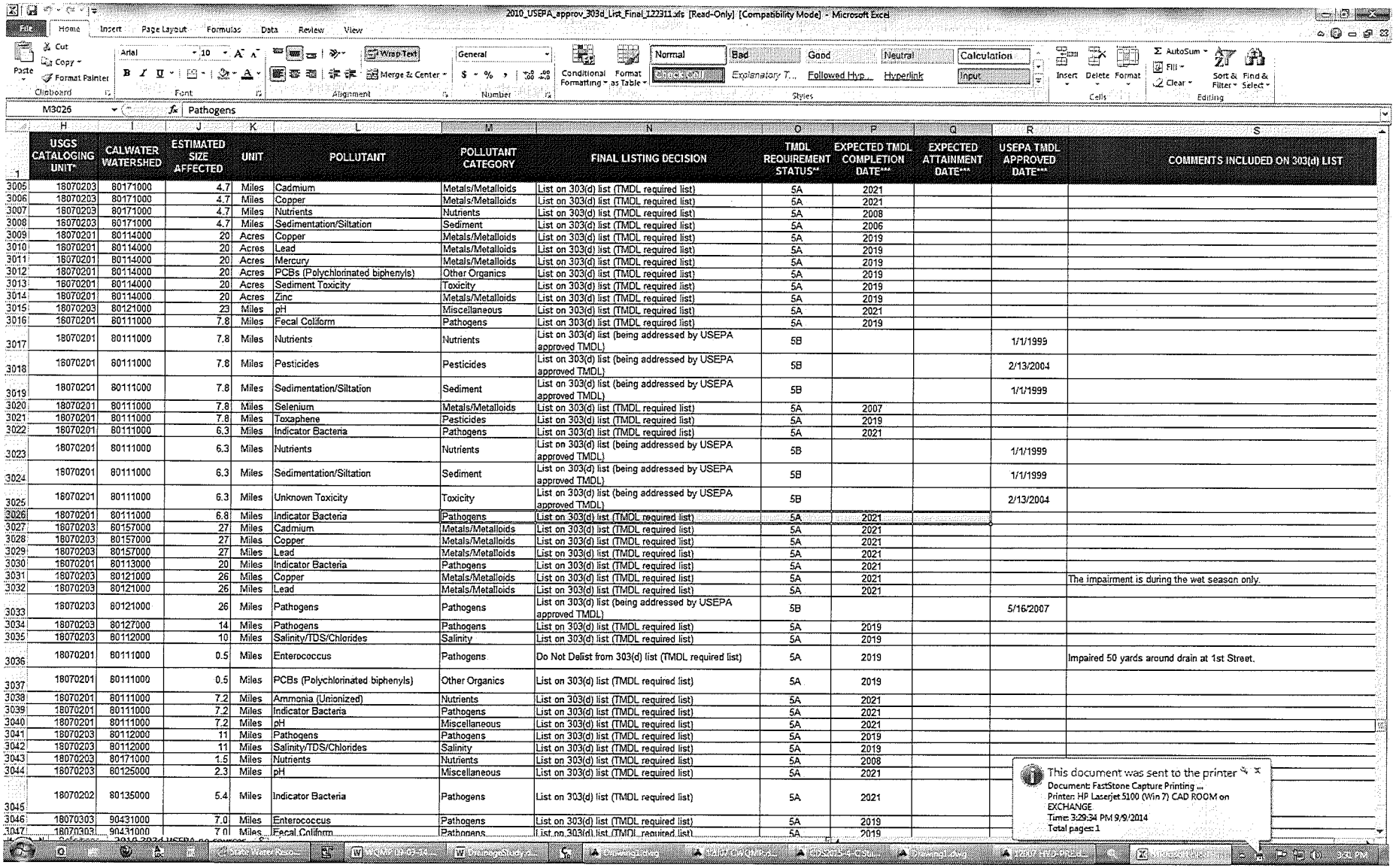
III.3 Watershed Description

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.3 in the TGD.*

Receiving Waters	Drainage of the proposed improvement will be directed to the existing Santa Ana Delhi Channel and Bristol Street and will be accepted by the existing public storm drain system. The site discharges to the Upper Newport Bay, to the Lower Newport Bay and finally conveyed to the Pacific Ocean via the Main Channel.
303(d) Listed Impairments	Pathogens. Category 5A. See attached sheets.
Applicable TMDLs	Category 5A - 303(d) list requiring the development of a TMDL



	REGION NAME	WATER BODY NAME	WBID	WATER BODY TYPE	WBTYPE CODE	INTEGRATED REPORT CATEGORY	USGS CATALOGING UNIT*	CALWATER WATERSHED	ESTIMATED SIZE AFFECTED	UNIT	POLLUTANT	POLLUTANT CATEGORY	FINA
3005	Regional Board 8 - Santa Ana Region	Rathbone (Rathbun) Creek	CAR801710001999021111232	River & Stream	R	5	18070203	80171000	4.7	Miles	Cadmium	Metals/Metalloids	List on 303(d) list
3006	Regional Board 8 - Santa Ana Region	Rathbone (Rathbun) Creek	CAR801710001999021111232	River & Stream	R	5	18070203	80171000	4.7	Miles	Copper	Metals/Metalloids	List on 303(d) list
3007	Regional Board 8 - Santa Ana Region	Rathbone (Rathbun) Creek	CAR801710001999021111232	River & Stream	R	5	18070203	80171000	4.7	Miles	Nutrients	Nutrients	List on 303(d) list
3008	Regional Board 8 - Santa Ana Region	Rathbone (Rathbun) Creek	CAR801710001999021111232	River & Stream	R	5	18070203	80171000	4.7	Miles	Sedimentation/Siltation	Sediment	List on 303(d) list
3009	Regional Board 8 - Santa Ana Region	Rhine Channel	CAB801140002005020172510	Bay & Harbor	B	5	18070201	80114000	20	Acres	Copper	Metals/Metalloids	List on 303(d) list
3010	Regional Board 8 - Santa Ana Region	Rhine Channel	CAB801140002005020172510	Bay & Harbor	B	5	18070201	80114000	20	Acres	Lead	Metals/Metalloids	List on 303(d) list
3011	Regional Board 8 - Santa Ana Region	Rhine Channel	CAB801140002005020172510	Bay & Harbor	B	5	18070201	80114000	20	Acres	Mercury	Metals/Metalloids	List on 303(d) list
3012	Regional Board 8 - Santa Ana Region	Rhine Channel	CAB801140002005020172510	Bay & Harbor	B	5	18070201	80114000	20	Acres	PCBs (Polychlorinated biphenyls)	Other Organics	List on 303(d) list
3013	Regional Board 8 - Santa Ana Region	Rhine Channel	CAB801140002005020172510	Bay & Harbor	B	5	18070201	80114000	20	Acres	Sediment Toxicity	Toxicity	List on 303(d) list
3014	Regional Board 8 - Santa Ana Region	Rhine Channel	CAB801140002005020172510	Bay & Harbor	B	5	18070201	80114000	20	Acres	Zinc	Metals/Metalloids	List on 303(d) list
3015	Regional Board 8 - Santa Ana Region	San Antonio Creek	CAR801210001999101344655	River & Stream	R	5	18070203	80121000	23	Miles	pH	Miscellaneous	List on 303(d) list
3016	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 1	CAR801110001999021111732	River & Stream	R	5	18070201	80111000	7.8	Miles	Fecal Coliform	Pathogens	List on 303(d) list
3017	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 1	CAR801110001999021111732	River & Stream	R	5	18070201	80111000	7.8	Miles	Nutrients	Nutrients	List on 303(d) list approved TMDL)
3018	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 1	CAR801110001999021111732	River & Stream	R	5	18070201	80111000	7.8	Miles	Pesticides	Pesticides	List on 303(d) list approved TMDL)
3019	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 1	CAR801110001999021111732	River & Stream	R	5	18070201	80111000	7.8	Miles	Sedimentation/Siltation	Sediment	List on 303(d) list approved TMDL)
3020	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 1	CAR801110001999021111732	River & Stream	R	5	18070201	80111000	7.8	Miles	Selenium	Metals/Metalloids	List on 303(d) list
3021	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 1	CAR801110001999021111732	River & Stream	R	5	18070201	80111000	7.8	Miles	Toxaphene	Pesticides	List on 303(d) list
3022	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 2	CAR801110001999021130358	River & Stream	R	5	18070201	80111000	6.3	Miles	Indicator Bacteria	Pathogens	List on 303(d) list
3023	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 2	CAR801110001999021130358	River & Stream	R	5	18070201	80111000	6.3	Miles	Nutrients	Nutrients	List on 303(d) list approved TMDL)
3024	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 2	CAR801110001999021130358	River & Stream	R	5	18070201	80111000	6.3	Miles	Sedimentation/Siltation	Sediment	List on 303(d) list approved TMDL)
3025	Regional Board 8 - Santa Ana Region	San Diego Creek Reach 2	CAR801110001999021130358	River & Stream	R	5	18070201	80111000	6.3	Miles	Unknown Toxicity	Toxicity	List on 303(d) list approved TMDL)
3026	Regional Board 8 - Santa Ana Region	Santa Ana Delhi Channel	CAR801110002001107125249	River & Stream	R	5	18070201	80111000	6.8	Miles	Indicator Bacteria	Pathogens	List on 303(d) list
3027	Regional Board 8 - Santa Ana Region	Santa Ana River Reach 6	CAR801570002008092121484 9	River & Stream	R	5	18070203	80157000	27	Miles	Cadmium	Metals/Metalloids	List on 303(d) list
3028	Regional Board 8 - Santa Ana Region	Santa Ana River Reach 6	CAR801570002008092121484 9	River & Stream	R	5	18070203	80157000	27	Miles	Copper	Metals/Metalloids	List on 303(d) list
3029	Regional Board 8 - Santa Ana Region	Santa Ana River Reach 6	CAR801570002008092121484 9	River & Stream	R	5	18070203	80157000	27	Miles	Lead	Metals/Metalloids	List on 303(d) list
3030	Regional Board 8 - Santa Ana Region	Santa Ana River, Reach 2	CAR801130001999101413043 8	River & Stream	R	5	18070201	80113000	20	Miles	Indicator Bacteria	Pathogens	List on 303(d) list
3031	Regional Board 8 - Santa Ana Region	Santa Ana River, Reach 3	CAR801210001999021114035 3	River & Stream	R	5	18070203	80121000	26	Miles	Copper	Metals/Metalloids	List on 303(d) list
3032	Regional Board 8 - Santa Ana Region	Santa Ana River, Reach 3	CAR801210001999021114035 3	River & Stream	R	5	18070203	80121000	26	Miles	Lead	Metals/Metalloids	List on 303(d) list
3033	Regional Board 8 - Santa Ana Region	Santa Ana River, Reach 3	CAR801210001999021114035 3	River & Stream	R	5	18070203	80121000	26	Miles	Pathogens	Pathogens	List on 303(d) list approved TMDL)
3034	Regional Board 8 - Santa Ana Region	Santa Ana River, Reach 4	CAR801270001999021114213 0	River & Stream	R	5	18070203	80127000	14	Miles	Pathogens	Pathogens	List on 303(d) list
3035	Regional Board 8 - Santa Ana Region	Santiago Creek, Reach 4	CAR801120001999021114374 5	River & Stream	R	5	18070203	80112000	10	Miles	Salinity/TDS/Chlorides	Salinity	List on 303(d) list
3036	Regional Board 8 - Santa Ana Region	Seal Beach	CAX801110001999101316040 5	Coastal & Bay Shoreline	C	5	18070201	80111000	0.5	Miles	Enterococcus	Pathogens	Do Not Delist from
3037	Regional Board 8 - Santa Ana Region	Seal Beach	CAX801110001999101316040 5	Coastal & Bay Shoreline	C	5	18070201	80111000	0.5	Miles	PCBs (Polychlorinated biphenyls)	Other Organics	List on 303(d) list
3038	Regional Board 8 - Santa Ana Region	Serrano Creek	CAR801110002008092120390 8	River & Stream	R	5	18070201	80111000	7.2	Miles	Ammonia (Unionized)	Nutrients	List on 303(d) list
3039	Regional Board 8 - Santa Ana Region	Serrano Creek	CAR801110002008092120390 8	River & Stream	R	5	18070201	80111000	7.2	Miles	Indicator Bacteria	Pathogens	List on 303(d) list
3040	Regional Board 8 - Santa Ana Region	Serrano Creek	CAR801110002008092120390 8	River & Stream	R	5	18070201	80111000	7.2	Miles	pH	Miscellaneous	List on 303(d) list
3041	Regional Board 8 - Santa Ana Region	Silverado Creek	CAR801120001999021113255 6	River & Stream	R	5	18070203	80112000	11	Miles	Pathogens	Pathogens	List on 303(d) list
3042	Regional Board 8 - Santa Ana Region	Silverado Creek	CAR801120001999021113255 6	River & Stream	R	5	18070203	80112000	11	Miles	Salinity/TDS/Chlorides	Salinity	List on 303(d) list
3043	Regional Board 8 - Santa Ana Region	Summit Creek	CAR801710002000041011543 3	River & Stream	R	5	18070203	80171000	1.5	Miles	Nutrients	Nutrients	List on 303(d) list
3044	Regional Board 8 - Santa Ana Region	Temescal Creek, Reach 1	CAR801250001999101411014 6	River & Stream	R	5	18070203	80125000	2.3	Miles	pH	Miscellaneous	List on 303(d) list
3045	Regional Board 8 - Santa Ana Region	Temescal Creek, Reach 6 (Elsinore Groundwater sub basin boundary to Lake Elsinore Outlet)	CAR801360002008120416361 4	River & Stream	R	5	18070202	80135000	5.4	Miles	Indicator Bacteria	Pathogens	List on 303(d) list
3046	Regional Board 9 - San Diego Region	Agua Hedionda Creek	CAR904310002001092414505 1	River & Stream	R	5	18070303	90431000	7.0	Miles	Enterococcus	Pathogens	List on 303(d) list
3047	Regional Board 9 - San Diego Region	Agua Hedionda Creek	CAR904310002001092414505 1	River & Stream	R	5	18070303	90431000	7.0	Miles	Fecal Coliform	Pathogens	List on 303(d) list



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M3026 | Pathogens

	USGS CATALOGING UNIT*	CALWATER WATERSHED	ESTIMATED SIZE AFFECTED	UNIT	POLLUTANT	POLLUTANT CATEGORY	FINAL LISTING DECISION	TMDL REQUIREMENT STATUS**	EXPECTED TMDL COMPLETION DATE***	EXPECTED ATTAINMENT DATE***	USEPA TMDL APPROVED DATE***	COMMENTS INCLUDED ON 303(d) LIST
3005	18070203	80171000	4.7	Miles	Cadmium	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			
3006	18070203	80171000	4.7	Miles	Copper	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			
3007	18070203	80171000	4.7	Miles	Nutrients	Nutrients	List on 303(d) list (TMDL required list)	5A	2008			
3008	18070203	80171000	4.7	Miles	Sedimentation/Siltation	Sediment	List on 303(d) list (TMDL required list)	5A	2006			
3009	18070201	80114000	20	Acres	Copper	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			
3010	18070201	80114000	20	Acres	Lead	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			
3011	18070201	80114000	20	Acres	Mercury	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			
3012	18070201	80114000	20	Acres	PCBs (Polychlorinated biphenyls)	Other Organics	List on 303(d) list (TMDL required list)	5A	2019			
3013	18070201	80114000	20	Acres	Sediment Toxicity	Toxicity	List on 303(d) list (TMDL required list)	5A	2019			
3014	18070201	80114000	20	Acres	Zinc	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			
3015	18070203	80121000	23	Miles	pH	Miscellaneous	List on 303(d) list (TMDL required list)	5A	2021			
3016	18070201	80111000	7.8	Miles	Fecal Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
3017	18070201	80111000	7.8	Miles	Nutrients	Nutrients	List on 303(d) list (being addressed by USEPA approved TMDL)	5B			1/1/1999	
3018	18070201	80111000	7.8	Miles	Pesticides	Pesticides	List on 303(d) list (being addressed by USEPA approved TMDL)	5B			2/13/2004	
3019	18070201	80111000	7.8	Miles	Sedimentation/Siltation	Sediment	List on 303(d) list (being addressed by USEPA approved TMDL)	5B			1/1/1999	
3020	18070201	80111000	7.8	Miles	Selenium	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2007			
3021	18070201	80111000	7.8	Miles	Toxaphene	Pesticides	List on 303(d) list (TMDL required list)	5A	2019			
3022	18070201	80111000	6.3	Miles	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
3023	18070201	80111000	6.3	Miles	Nutrients	Nutrients	List on 303(d) list (being addressed by USEPA approved TMDL)	5B			1/1/1999	
3024	18070201	80111000	6.3	Miles	Sedimentation/Siltation	Sediment	List on 303(d) list (being addressed by USEPA approved TMDL)	5B			1/1/1999	
3025	18070201	80111000	6.3	Miles	Unknown Toxicity	Toxicity	List on 303(d) list (being addressed by USEPA approved TMDL)	5B			2/13/2004	
3026	18070201	80111000	6.8	Miles	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
3027	18070203	80157000	27	Miles	Cadmium	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			
3028	18070203	80157000	27	Miles	Copper	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			
3029	18070203	80157000	27	Miles	Lead	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			
3030	18070201	80113000	20	Miles	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
3031	18070203	80121000	26	Miles	Copper	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			The impairment is during the wet season only.
3032	18070203	80121000	26	Miles	Lead	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			
3033	18070203	80121000	26	Miles	Pathogens	Pathogens	List on 303(d) list (being addressed by USEPA approved TMDL)	5B			5/16/2007	
3034	18070203	80127000	14	Miles	Pathogens	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
3035	18070203	80112000	10	Miles	Salinity/TDS/Chlorides	Salinity	List on 303(d) list (TMDL required list)	5A	2019			
3036	18070201	80111000	0.5	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			Impaired 50 yards around drain at 1st Street.
3037	18070201	80111000	0.5	Miles	PCBs (Polychlorinated biphenyls)	Other Organics	List on 303(d) list (TMDL required list)	5A	2019			
3038	18070201	80111000	7.2	Miles	Ammonia (Unionized)	Nutrients	List on 303(d) list (TMDL required list)	5A	2021			
3039	18070201	80111000	7.2	Miles	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
3040	18070201	80111000	7.2	Miles	pH	Miscellaneous	List on 303(d) list (TMDL required list)	5A	2021			
3041	18070203	80112000	11	Miles	Pathogens	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
3042	18070203	80112000	11	Miles	Salinity/TDS/Chlorides	Salinity	List on 303(d) list (TMDL required list)	5A	2019			
3043	18070203	80171000	1.5	Miles	Nutrients	Nutrients	List on 303(d) list (TMDL required list)	5A	2008			
3044	18070203	80125000	2.3	Miles	pH	Miscellaneous	List on 303(d) list (TMDL required list)	5A	2021			
3045	18070202	80135000	5.4	Miles	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
3046	18070303	90431000	7.0	Miles	Enterococcus	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
3047	18070303	90431000	7.0	Miles	Fecal Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			

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Pollutants of Concern for the Project

Pollutants of Concern

Pollutant	Circle One: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid/ Sediment	E ☒	N ☐	Expected
Nutrients	E ☐	N ☒	Not expected due to the lack of landscape areas
Heavy Metals	E ☒	N ☐	Expected
Pathogens (Bacteria/Virus)	E ☐	N ☒	Not Expected
Pesticides	E ☐	N ☒	Not expected due to the lack of landscape areas
Oil and Grease	E ☒	N ☐	Expected
Toxic Organic Compounds	E ☒	N ☐	Not Expected
Trash and Debris	E ☒	N ☐	Expected

Environmentally Sensitive and Special Biological Significant Areas	The project is not located adjacent to or within 200 feet of an Environmentally Sensitive Area (ESA). the project does not discharge directly to an ESA. There are no Areas of Special Biological Significance (ASBS) within the vicinity of the project.

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Describe project performance criteria. Several steps must be followed in order to determine what performance criteria will apply to a project. These steps include:

- If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. The local Permittee planning or NPDES staff should be consulted regarding the existence of an approved WIHMP or equivalent.
- Determine applicable hydromodification control performance criteria. *Refer to Section 7.II-2.4.2.2 of the Model WQMP.*
- Determine applicable LID performance criteria. *Refer to Section 7.II-2.4.3 of the Model WQMP.*
- Determine applicable treatment control BMP performance criteria. *Refer to Section 7.II-3.2.2 of the Model WQMP.*
- Calculate the LID design storm capture volume for the project. *Refer to Section 7.II-2.4.3 of the Model WQMP.*

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?	YES ☐	NO ☒
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.		

Project Performance Criteria (continued)	
If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)	HCOC does not exist. Refer to Figure 4 in Attachment C.
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	NON-STRUCTURAL MEASURES N1. Education for Property Owners, tenants and occupants – No Property Owners Association. Copies of this manual shall be used by the owner of this site and shall be responsible for the training of their employees on proper BMP procedures that apply to their portion of the site. N2. Activity Restrictions - Documents shall be prepared by the owner for the purpose of surface water quality protection. N3. Common Area Landscape Management – Ongoing maintenance consistent with County Water Conservation Resolution, with the City of Costa Mesa model water efficient landscape ordinance, and fertilizer and pesticide usage consistent with County N4. BMP Maintenance – The owner will be responsible for implementing each non-structural BMP and schedule cleaning and maintenance of all BMP structural facilities as shown on Section V. N5. Title 22 CCR Complaince – N/A. No hazardous waste at the site. N6. Local Industrial Permit Compliance – N/A City of Costa Mesa does not issue water quality permits. N7. Spill Contingency Plan - A spill contingency plan is required for the proposed vehicle fueling area. N8. Underground Storage Tank Compliance – N/A. No underground storage tanks are proposed at the site. N9. Hazardous Materials Disclosure Compliance – A hazardous materials disclsure is required for the proposed vehicle fueling area..

	N10. Uniform Fire Code Implementation – N/A. Property owner is not required to comply with Article 80 of the Uniform Fire Code. N11. Common Area Litter Control – The owner will be required to implement trash management and litter control procedures in the areas aimed at reducing pollution of drainage water. N12. Employee Training – Education program as it would apply to future employees of the residence. N13. Housekeeping of Loading Docks – The proposed loading dock must be maintained in a clean and orderly condition through a regular program of sweeping and litter control. Spills and broken containers are to be cleaned up immediately. Cleanup procedures should reduce or eliminate the use of water. If wash water is used, it must be disposed of in an approved manner and not discharged to the storm drain system.. N14. Common Area Catch Basin Inspection - The owner shall have all onsite proposed catch basins inspected and, if necessary, cleaned prior to the wet season, no later than October 1st each year. N15. Street Sweeping Private Streets and Parking Lots – Sweeping of the private street will be the responsibility of the owner. N16. Retail Gasoline Outlets – N/A. No retail gasoline outlets are proposed at the site. STRUCTURAL MEASURES S1.- Storm Drain System Stenciling and Signage. Storm drain stencils are highly visible source control messages, typically placed directly adjacent to storm drain inlets. The stencils contain a brief statement that prohibits the dumping of improper materials into the municipal storm drain system. S2 -Design Outdoor Hazardous Material Storage Areas to Reduce Pollutant Introduction. The proposed fueling area will be protected by a containment curb. S3 -Design Trash Enclosures to Reduce Pollutant Introduction. Trash enclosure areas will be paved and have perimeter walls and gates and a solid roof covering to prevent precipitation from contacting trash. S4 - Use Efficient Irrigation Systems and Landscape Design Projects shall design the timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the municipal storm drain system.

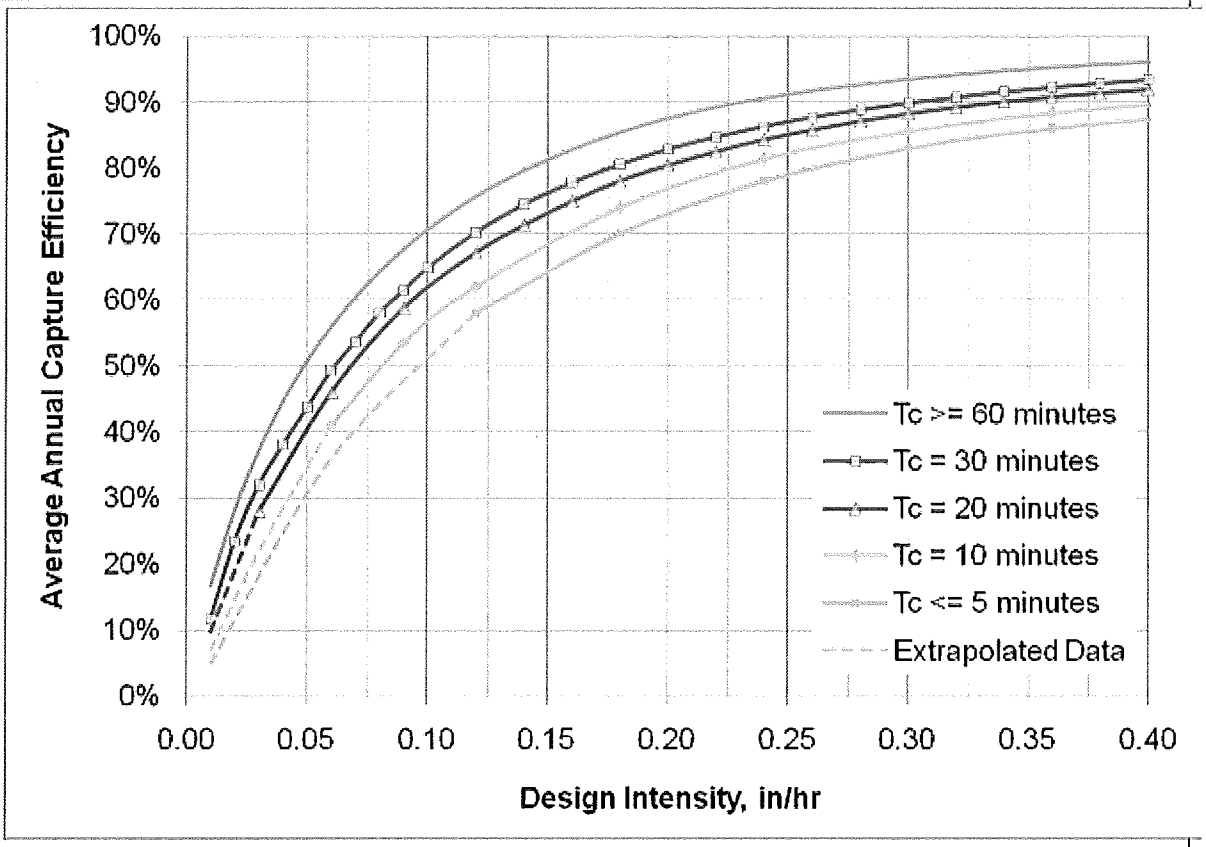
	S5 - Protect Slopes and Channels. Slope areas to be protected with plant materials selected by the landscape architect. No channels to protect at the site. S6- Loading Dock Areas. The loading area will drain to an inlet with a pre-treatment filter that connects to the underground infiltration system. S7 - Maintenance Bays. N/A. No maintenance Bays at the site S8 - Vehicle Wash Areas. N/A. No vehicle Wash areas at the site. S9 - Outdoor Processing Areas. N/A. No outdoor processing areas at the site. S10 - Equipment Wash Areas. N/A. No equipment wash areas at the site. S11 - Fueling Areas. The proposed fueling area will be paved with concrete sloped at no more than 2% and will have a solid roof covering extending beyond the designated fueling area. S12 - Site Design and Landscape Planning (Hillside Landscaping). N/A - Project not located within a hillside area S13 - Wash Water Controls for Food Preparation Areas. N/A. S14-- Community Car Wash Racks. N/A. TREATMENT CONTROL MEASURES Design LID BMPs using the assumed Principal Unit Operations and Processes Provided of Filtration, Sorption/Ion Exchange and Volume loss, will be reached by Underground Infiltration gallery as shown on Plan. See WQMP.
List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)	**Maximize Natural Infiltration Capacity** Infiltration was selected for this project due to the favorable infiltration rates as presented in the Geotechnical Investigation Report (Attachment B). **Preserve Existing Drainage Patterns and Time of Concentration** See Hydrology Maps Pre- and Post-Development, showing the similarity among runoff time of concentration for existing and proposed conditions.

Calculate LID design storm capture volume for Project.	LID DESIGN STORM CAPTURE VOLUME Priority projects must retain on-site stormwater runoff as feasible up to the Design Capture Volume (85^{th} percentile, 24-hour storm event). If retention is infeasible, the project must biotreat, the additional runoff, as feasible, up to 80 percent average annual capture efficiency. As per TGD the volume will be: $V = d \times C \times A \times 43{,}560/12$ Where: d = Design Capture storm depth in inches, d = 0.75 in per Figure XVI-1 C = Runoff coefficient $C = (0.75 \times Imp + 0.15)$ Imp = Impervious in decimal A = area of DMA in acres RUNOFF COEFFICIENT CALCULATIONS DMA-1: C_{DMA-1} for 94.33% impervious = $0.9433 \times 0.75 + 0.15 = 0.857$ DMA-2: C_{DMA-2} for 97.31% impervious = $0.9731 \times 0.75 + 0.15 = 0.880$ DMA-3: C_{DMA-3} for 99.46% impervious = $0.9946 \times 0.75 + 0.15 = 0.900$ DESIGN CAPTURE VOLUME CALCULATIONS DMA-1: $V_{DMA-1} = 0.857 \times 0.75$ in x 2.352 ac x 43560 sf/ac x 1/12 in/ft. = 5,487.65 **cf** DMA-2: $V_{DMA-2} = 0.880 \times 0.75$ in x 1.107 ac x 43560 sf/ac x 1/12 in/ft. = 2,652.15 **cf** DMA-3: $V_{DMA-3} = 0.900 \times 0.75$ in x 2.449 ac x 43560 sf/ac x 1/12 in/ft. = 6,000.66 **cf** However the pre-treatment devices (CDS units) for the CONTECH infiltration systems of the site will be selected using the "Simple Method Runoff Coefficient for **Flow-based** BMP Sizing" as described in TGD Design flow calculations for flow-based BMPs should be calculated as: $Q = C \times i \times A$ Where: Q = Design flow rate, cfs C = Runoff coefficient $C = (0.75 \times Imp + 0.15)$ Imp = Impervious in decimal i = Design intensity (0.25 in/hr.) Design intensity should be selected using the attached Figure III.4 , with an average annual capture efficiency of 80% and the time of concentration calculated in the hydrology study of the site, as per TGD A = area of DMA in acres See computations below

	DMA-1: V_{DMA-1} = 0.857 x 0.25 in/hr. x 2.352 ac = **0.504 cfs** DMA-2: V_{DMA-2} = 0.880 x 0.25 in/hr. x 1.107 ac = 0.244 **cfs** DMA-3: V_{DMA-3} = 0.900 x 0.25 in/hr. x 2.449 ac = 0.551 **cfs**

Worksheet F: Determining Capture Efficiency of a Flow-based BMP based on Treatment Capacity

Graphical Operations



Provide supporting graphical operations.

IV.2. SITE DESIGN AND DRAINAGE PLAN

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 is designed to allow BMPs to be incorporated to the MEP
- A table of DMA characteristics and list of LID BMPs proposed in each DMA.
- Reference to the WQMP plot plan.
- Calculation of Design Capture Volume (DCV) for each drainage area.
- A listing of GIS coordinates for LID and Treatment Control BMPs (unless not required by local jurisdiction).

Refer to Section 2.4.2 in the TGD.

Site Design BMPs

Technique	Included?		Description of Method
	Yes	No	
Minimize Impervious Area/Maximize Permeability (C-Factor Reduction)	X		C-Factor remains the same
Minimize Directly Connected Impervious Areas (DCIAs) (C-Factor Reduction)		X	
Create Reduced or "Zero Discharge" Areas (Runoff Volume Reduction)		X	
Conserve Natural Areas (C-Factor Reduction)	X		See above

Infiltration BMP will be installed to treat runoff from the DMAs. The next Table shows the characteristics of the DMAs and the proposed LID BMPs. The project's DMA's are described below:

Table 1.-DRAINAGE MANAGEMENT AREAS

DMA	SURFACE TYPE	AREA acres	PERVIOUS		IMPERVIOUS		PROPOSED LID BMP
DMA -1	ROOF -PAV. LANDSCAPE	2.352	0.133 ac.	5.67 %	2.219 ac.	94.33 %	**Infiltration.**
DMA-2	ROOF - PAV. LANDSCAPE	1.107	0.030 ac.	2.69 %	1.077 ac.	97.31 %	**Infiltration.**
DMA-3	ROOF - PAV LANDSCAPE	2.449	0.0.013 ac	0.54 %	2.436 ac.	99.64 %	**Infiltration.**

IV.3 LID BMP SELECTION AND PROJECT CONFORMANCE ANALYSIS

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets. *Refer to Section 2.4.2.3 in the TGD for selecting LID BMPs and Section 2.4.3 in the TGD for conducting conformance analysis with project performance criteria.*

IV.3.1 Hydrologic Source Controls

If required HSCs are included, fill out applicable check box forms. If the retention criteria are otherwise met with other LID BMPs, include a statement indicating HSCs not required.

Name	Included?
Localized on-lot infiltration	☐
Impervious area dispersion (e.g. roof top disconnection)	☐
Street trees (canopy interception)	☐
Residential rain barrels (not actively managed)	☐
Green roofs/Brown roofs	☐
Blue roofs	☐
Impervious area reduction (e.g. permeable pavers, site design)	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐

IV.3.2 Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met state why BMPs cannot be met

Name	Included?
Bioretention without underdrains	☐
Rain gardens	☐
Porous landscaping	☐
Infiltration planters	☐
Retention swales	☐
Infiltration trenches	☐
Infiltration basins	☐
Drywells	☐
Subsurface infiltration galleries	☒
French drains	☐
Permeable asphalt	☐
Permeable concrete	☐
Permeable concrete pavers	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with infiltration BMPs. If not document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

SUBSURFACE INFILTRATION GALLERY

Note: The disturbed project area totals 6.853 acres as specified in Section II. The underground infiltration systems are being sized based on the drainage subareas. See Attachment G for drainage map.

LID DESIGN STORM CAPTURE VOLUME
Priority projects must retain on-site stormwater runoff as feasible up to the Design Capture Volume (85^{th} percentile, 24-hour storm event).

	DCV	PROPOSED BMP	DIMENSIONS	PROVIDED VOLUME	FOOTPRINT
DMA-1	5,488 ft^3	CONTECH INFILTRATION SYSTEM	126.14x25.08	5,508 ft^3	3,163.58 ft^2
DMA-2	2,652 ft^3	CONTECH INFILTRATION SYSTEM	62.09 x 25.08	2,660 ft^3	1,557.22 ft^2
DMA-3	6,001 ft^3	CONTECH INFILTRATION SYSTEM	147.49 x 25.08	6,019 ft^3	3,699.05 ft^2

See attached computations from the manufacturer

Observation Well
Provide a vertical section of pipe, 4-inch in diameter, as recommended by the manufacturer.

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, describe any evapotranspiration, rainwater harvesting BMPs.

Name	Included?
All HSCs; *See Section IV.3.1*	☐
Surface-based infiltration BMPs	☐
Biotreatment BMPs	☐
Above-ground cisterns and basins	☐
Underground detention	☐
Other:	☐
Other:	☐
Other:	☐

Humberto Vidales

From: csinfo@conteches.com
Sent: Monday, September 08, 2014 2:09 PM
To: Humberto Vidales
Subject: Your CONTECH Design Your Own Detention System Project No. 203748

URBANGREEN™
Stormwater Solutions from CONTECH

Thank you for using DYODS.

DYO Project design made easy.

For your records, here is a copy of your detention project storage volume and design criteria with results for material requirements.

Your local Contech representative will be in touch to discuss your project and provide additional assistance as needed. If you have any additional questions or need immediate assistance, please call 800-338-1122 or visit your local resources to speak with a CONTECH representative.

My Project:

Contact Information

First Name: Humberto	Last Name: Vidales
Title: Project Engineer	Role in Project: Engineer
Company: Joseph C. Truxaw & Asso., Inc	
Address: 265 S. Anita Drive, Suite 111	Address Continued:
City: Orange	State: California
Zip: 92868	Country:
e-mail: humbertovidales@truxaw.com	Phone: (714) 935-0265
Fax:	

How did you hear about CONTECH detention and infiltration solutions?

If other, please specify.

Project Information

DYODS Project Number
203748

Project Title
Warehouse

Project Location - City
Costa Mesa

Project Location - County
Orange

Project Location - State
California

End Market
Non-Residential

End Sub-Market
Manufacturing Plants, Warehouses, Labs

Funding
Private

ChamberMaxx™ Infiltration Solution

Common Design Criteria

Storage Volume Required
5,488 cf.

Limiting Length
150 ft.

Limiting Width
30 ft.

Depth of Pavement
8 in.

Effective Depth to Invert
6 ft.

ChamberMaxx™ Design Criteria

Number of Headers
1

Header Diameter
12 in.

Included as Storage

Spacing Between Chambers
5 in.

Freeboard
6 in.

Stone Porosity
40 %

Porous Stone
Width at Ends of System
12 in.

Included as Storage

Porous Stone
Width at Sides of System
12 in.

Included as Storage

Porous Stone

6	in.	6	in.
Included as Storage		Included as Storage	

Structural Backfill Zone Between Chambers Included as Storage

ChamberMaxx™ Results

System Sizing

System Design

5 rows with 17 chambers per row.

Chamber Count		Rectangular Footprint	
5		126.14 x 25.08	ft.
Chamber Storage		Header Storage	
3,867	cf.	19	cf.
Porous Stone Storage		Total Storage Provided	
1,641	cf.	5,508	cf.

Percent of Required Storage

100 %

CONTECH Materials

ChamberMaxx™ Units

Start	Middle	End
5	75	5

Total CMP Footage		Approximate CMP Piece Count	
	ft.		
Approximate Coupling Bands		Approximate Truckloads	

Construction Quantities

Total Excavation

840 cy.

Stone Backfill		Remaining Backfill to Pavement	
257	cy.	349	cy.
Geotextile Type		Geotextile Quantity	
Permeable		944	sy.

Construction quantities are approximate and should be verified upon final design.

CONTECH ENGINEERED SOLUTIONS

Humberto Vidales

From: csinfo@conteches.com
Sent: Monday, September 08, 2014 2:16 PM
To: Humberto Vidales
Subject: Your CONTECH Design Your Own Detention System Project No. 203749

Thank you for using DYODS.

For your records, here is a copy of your detention project storage volume and design criteria with results for material requirements.

Your local Contech representative will be in touch to discuss your project and provide additional assistance as needed. If you have any additional questions or need immediate assistance, please call 800-338-1122 or visit your local resources to speak with a CONTECH representative.

My Project:

Contact Information

First Name: Humberto	Last Name: Vidales
Title: Project Engineer	Role in Project: Engineer
Company: Joseph C. Truxaw & Asso., Inc	
Address: 265 S. Anita Drive, Suite 111	Address Continued:
City: Orange	State: California
Zip: 92868	Country:
e-mail: humbertovidales@truxaw.com	Phone: (714) 935-0265
Fax:	

How did you hear about CONTECH detention and infiltration solutions?

If other, please specify.

Project Information

DYODS Project Number
203749

Project Title
Warehouse

Project Location - City
Costa Mesa

Project Location - County
Orange

Project Location - State
California

End Market
Non-Residential

End Sub-Market
Manufacturing Plants, Warehouses, Labs

Funding
Private

ChamberMaxx™ Infiltration Solution

Common Design Criteria

Storage Volume Required
2,652 cf.

Limiting Length
65 ft.

Limiting Width
30 ft.

Depth of Pavement
8 in.

Effective Depth to Invert
6 ft.

ChamberMaxx™ Design Criteria

Number of Headers
1
Included as Storage

Header Diameter
12 in.

Spacing Between Chambers
5 in.

Freeboard
6 in.

Stone Porosity
40 %

Porous Stone
Width at Ends of System
12 in.
Included as Storage

Porous Stone
Width at Sides of System
12 in.
Included as Storage

Porous Stone

6	in.	6	in.
Included as Storage		Included as Storage	

Structural Backfill Zone Between Chambers Included as Storage

ChamberMaxx™ Results

System Sizing

System Design

5 rows with 8 chambers per row.

Chamber Count		Rectangular Footprint	
5		62.09 x 25.08	ft.
Chamber Storage		Header Storage	
1,825	cf.	19	cf.
Porous Stone Storage		Total Storage Provided	
835	cf.	2,660	cf.

Percent of Required Storage

100 %

CONTECH Materials

ChamberMaxx™ Units

Start	Middle	End
5	30	5

Total CMP Footage		Approximate CMP Piece Count	
	ft.		
Approximate Coupling Bands		Approximate Truckloads	

Construction Quantities

Total Excavation

413 cy.

Stone Backfill		Remaining Backfill to Pavement	
129	cy.	172	cy.
Geotextile Type		Geotextile Quantity	
Permeable		485	sy.

Construction quantities are approximate and should be verified upon final design.

Humberto Vidales

From: csinfo@conteches.com
Sent: Monday, September 08, 2014 2:21 PM
To: Humberto Vidales
Subject: Your CONTECH Design Your Own Detention System Project No. 203750

Thank you for using DYODS.

For your records, here is a copy of your detention project storage volume and design criteria with results for material requirements.

Your local Contech representative will be in touch to discuss your project and provide additional assistance as needed. If you have any additional questions or need immediate assistance, please call 800-338-1122 or visit your local resources to speak with a CONTECH representative.

My Project:

Contact Information

First Name: Humberto	Last Name: Vidales
Title: Project Engineer	Role in Project: Engineer
Company: Joseph C. Truxaw	
Address: 265 S. Anita Drive	Address Continued:
City: Orange	State: California
Zip: 92868	Country:
e-mail: humbertovidales@truxaw.com	Phone: (714) 935-0265
Fax:	

How did you hear about CONTECH detention and infiltration solutions?

If other, please specify.

Project Information

DYODS Project Number
203750

Project Title
Warehouse

Project Location - City
Costa Mesa

Project Location - County
Orange

Project Location - State
California

End Market
Non-Residential

End Sub-Market
Manufacturing Plants, Warehouses, Labs

Funding
Private

ChamberMaxx™ Infiltration Solution

Common Design Criteria

Storage Volume Required
6,001 cf.

Limiting Length
160 ft.

Limiting Width
30 ft.

Depth of Pavement
8 in.

Effective Depth to Invert
6 ft.

ChamberMaxx™ Design Criteria

Number of Headers
1
Not Included as Storage

Header Diameter
12 in.

Spacing Between Chambers
5 in.

Freeboard
8 in.

Stone Porosity
40 %

Porous Stone
Width at Ends of System
12 in.
Included as Storage

Porous Stone
Width at Sides of System
12 in.
Included as Storage

Porous Stone

6	in.	6	in.
Included as Storage		Included as Storage	

Structural Backfill Zone Between Chambers Included as Storage

ChamberMaxx™ Results

System Sizing

System Design

3 rows with 20 chambers per row. 2 rows with 19 chambers per row.

Chamber Count		Rectangular Footprint	
5		147.49 x 25.08	ft.
Chamber Storage		Header Storage	
4,216	cf.	0	cf.
Porous Stone Storage		Total Storage Provided	
1,804	cf.	6,019	cf.
Percent of Required Storage			
100	%		

CONTECH Materials

ChamberMaxx™ Units

Start	Middle	End
5	88	5

Total CMP Footage		Approximate CMP Piece Count	
	ft.		
Approximate Coupling Bands		Approximate Truckloads	

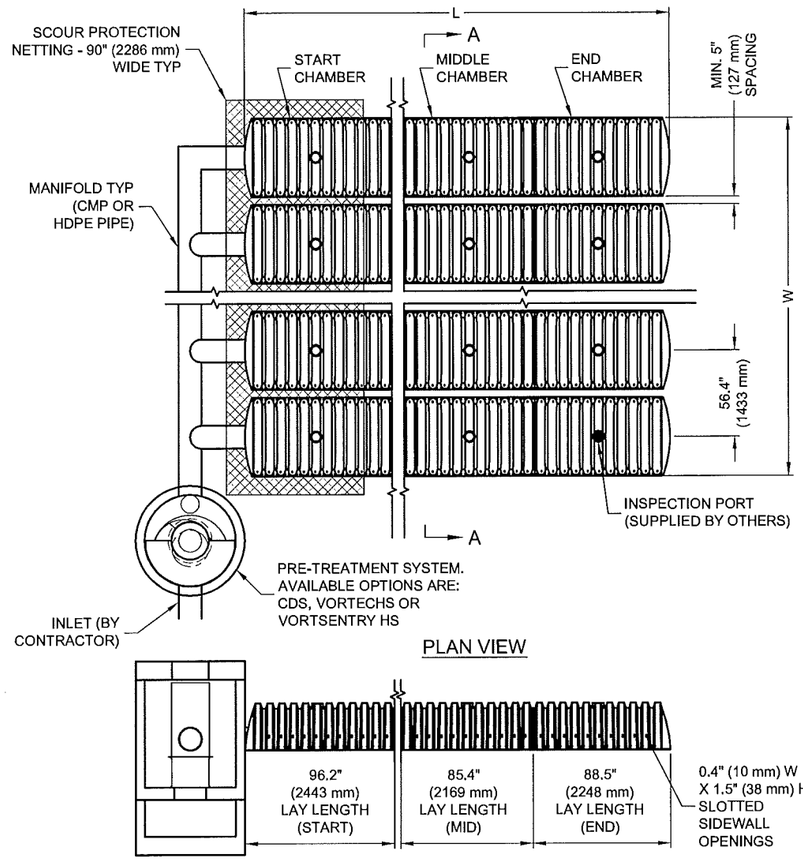
Construction Quantities

Total Excavation

982 cy.

Stone Backfill		Remaining Backfill to Pavement	
303	cy.	408	cy.
Geotextile Type		Geotextile Quantity	
Permeable		1,097	sy.

Construction quantities are approximate and should be verified upon final design.



PLAN VIEW

ELEVATION VIEW

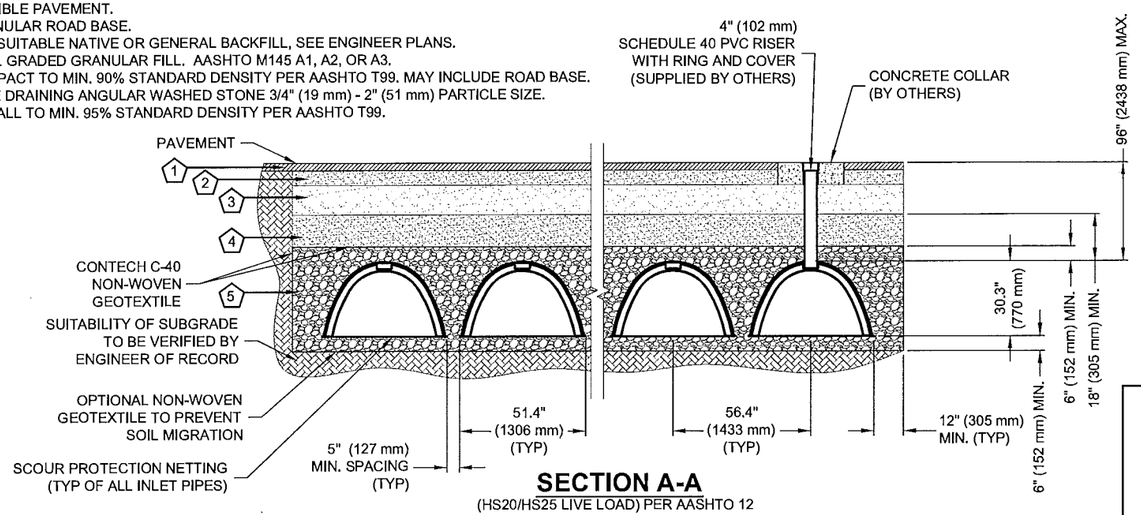
TYPICAL LAYOUT

CHAMBERMAXX DESIGN DETAILS

FEATURE	START CHAMBER	MIDDLE CHAMBER	END CHAMBER
OVERALL CHAMBER HEIGHT - IN (mm)	30.3 (770)	30.3 (770)	30.3 (770)
OVERALL CHAMBER WIDTH - IN (mm)	51.4 (1306)	51.4 (1306)	51.4 (1306)
ACTUAL LENGTH - IN (mm)	98.4 (2500)	91.0 (2311)	92.0 (2337)
INSTALLED LAY LENGTHS - IN (mm)	96.2 (2443)	85.4 (2169)	88.5 (2248)
CHAMBER STORAGE VOLUME - CF (m^3)	52.5 (1.49)	49.3 (1.39)	48.2 (1.36)
CHAMBER STORAGE PER LINEAR FOOT - CF/LF (m^3/m)	6.5 (0.604)	6.9 (0.641)	6.5 (0.604)
*MIN. INSTALLED CHAMBER VOLUME - CF (m^3)	78.7 (2.23)	76.7 (2.17)	76.1 (2.15)
*MIN. INSTALLED CHAMBER VOLUME PER LINEAR FOOT - CF/LF (m^3/m)	9.8 (0.910)	10.8 (1.003)	10.3 (0.957)
CHAMBER WEIGHT - LB (kg)	85 (38.55)	77 (34.92)	76 (34.47)
*6" (152 mm) OF STONE ABOVE AND BELOW CHAMBER, 5" (127 mm) CHAMBER SPACING AND 40% POROSITY			

* SITE SPECIFIC DATA REQUIREMENTS	
FOR DETAILED DESIGN ASSISTANCE REFERENCE CHAMBERMAXX DYODS (DESIGN YOUR OWN DETENTION SYSTEM) SOFTWARE AND CHAMBERMAXX STAGE STORAGE CALCULATOR @ WWW.CONTECHSTORMWATER.COM	
TOTAL REQUIRED STORAGE VOLUME (CF OR m^3)	
DEPTH TO INVERT BELOW ASPHALT (FT OR m)	
LIMITING WIDTH (FT OR m)	
LIMITING LENGTH (FT OR m)	
POROUS STONE ABOVE CHAMBER (IN OR mm)	
POROUS STONE BELOW CHAMBER (IN OR mm)	
STONE POROSITY (0 TO 40%)	
MANIFOLD SYSTEM DIAMETER (IN OR mm)	
* PER ENGINEER OF RECORD	

KEY
1. FLEXIBLE PAVEMENT.
2. GRANULAR ROAD BASE.
3. ANY SUITABLE NATIVE OR GENERAL BACKFILL, SEE ENGINEER PLANS.
4. WELL GRADED GRANULAR FILL. AASHTO M145 A1, A2, OR A3. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99. MAY INCLUDE ROAD BASE.
5. FREE DRAINING ANGULAR WASHED STONE 3/4" (19 mm) - 2" (51 mm) PARTICLE SIZE. INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.



SECTION A-A
(HS20/HS25 LIVE LOAD) PER AASHTO 12

GENERAL NOTES

1. ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
2. PRIOR TO INSTALLATION OF THE CHAMBERMAXX SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.
3. CHAMBERMAXX CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.
4. CHAMBERMAXX SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.
5. ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
6. MINIMUM COVER IS 18-INCHES (457 mm) AND MAXIMUM COVER IS 96-INCHES (2438 mm) TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES (2438 mm) CONTACT YOUR LOCAL REPRESENTATIVE.
7. ALL PARTS PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.
8. FOR INFORMATION ON PRE-TREATMENT SYSTEMS, REFERENCE CONTECH PRE-TREATMENT SYSTEM STANDARD DETAILS OR CONTACT YOUR LOCAL REPRESENTATIVE.
9. CHAMBERMAXX BY CONTECH CONSTRUCTION PRODUCTS (800) 925-5240

INSTALLATION NOTES

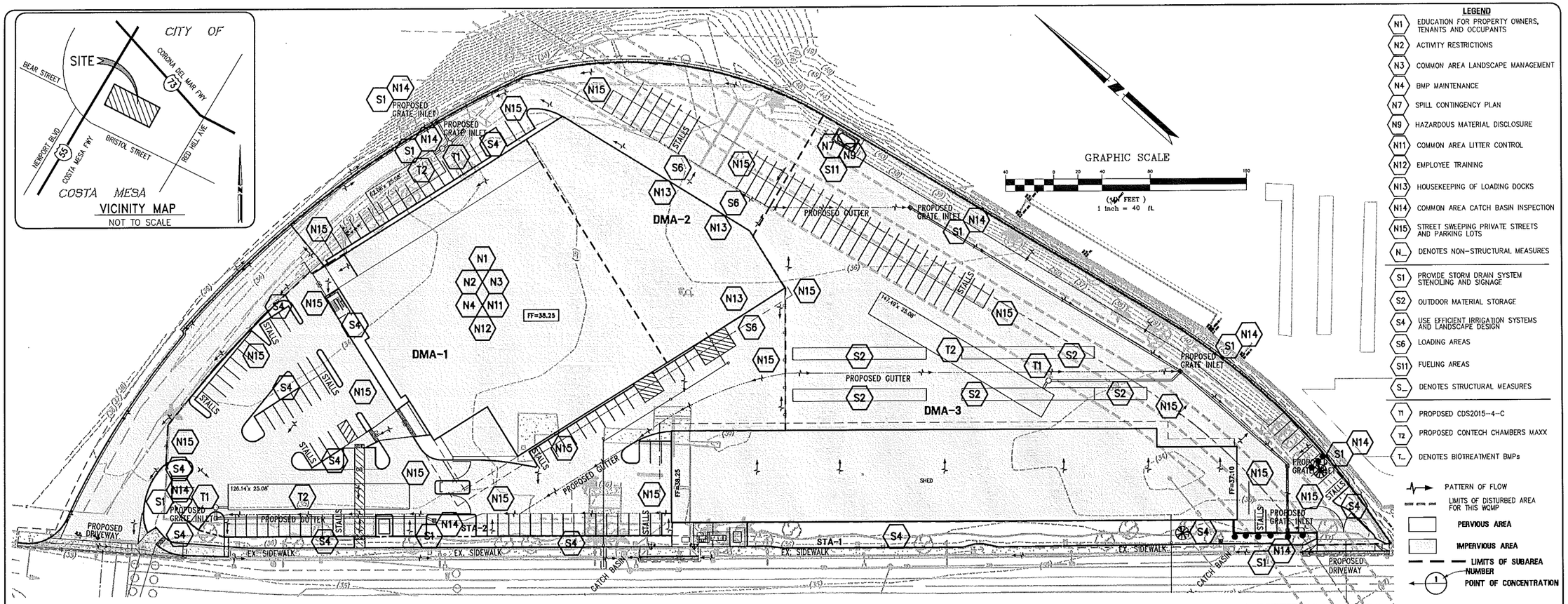
1. CHAMBERMAXX INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.
2. PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, A TENSAR BX GEOGRID SHALL BE UTILIZED OR UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.
3. THE SCOUR PROTECTION NETTING TO EXTEND 1'-0" (305 mm) BEYOND OUTSIDE EDGE OF INLET CHAMBERS.
4. COVER ANY OPEN VOID SPACES GREATER THAN ¾" (19 mm) ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILTRATION OF BACKFILL MATERIAL.
5. STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 95% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH (152 mm) TO 8-INCH (203 mm) LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% SPD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.
6. REFER TO CHAMBERMAXX INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.
7. IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.
8. GENERAL INSTALLATION METHODS AND MATERIALS TO BE IN ACCORDANCE WITH ASTM D2321.

CHAMBERMaxx®
PATENT PENDING

CONTECH®
CONSTRUCTION PRODUCTS INC.
www.contech-cpi.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CHAMBERMAXX STORMWATER RETENTION STANDARD DETAIL PRE-TREATMENT STRUCTURE OPTION

VICINITY MAP
NOT TO SCALE



LEGEND

- N1 EDUCATION FOR PROPERTY OWNERS, TENANTS AND OCCUPANTS
- N2 ACTIVITY RESTRICTIONS
- N3 COMMON AREA LANDSCAPE MANAGEMENT
- N4 BMP MAINTENANCE
- N7 SPILL CONTINGENCY PLAN
- N9 HAZARDOUS MATERIAL DISCLOSURE
- N11 COMMON AREA LITTER CONTROL
- N12 EMPLOYEE TRAINING
- N13 HOUSEKEEPING OF LOADING DOCKS
- N14 COMMON AREA CATCH BASIN INSPECTION
- N15 STREET SWEEPING PRIVATE STREETS AND PARKING LOTS
- N_ DENOTES NON-STRUCTURAL MEASURES
- S1 PROVIDE STORM DRAIN SYSTEM STENCILING AND SIGNAGE
- S2 OUTDOOR MATERIAL STORAGE
- S4 USE EFFICIENT IRRIGATION SYSTEMS AND LANDSCAPE DESIGN
- S6 LOADING AREAS
- S11 FUELING AREAS
- S_ DENOTES STRUCTURAL MEASURES
- T1 PROPOSED CDS2015-4-C
- T2 PROPOSED CONTECH CHAMBERS MAXX
- T_ DENOTES BIOTREATMENT BMPs

PATTERN OF FLOW
LIMITS OF DISTURBED AREA FOR THIS WQMP
PERVIOUS AREA
IMPERVIOUS AREA
LIMITS OF SUBAREA NUMBER
POINT OF CONCENTRATION

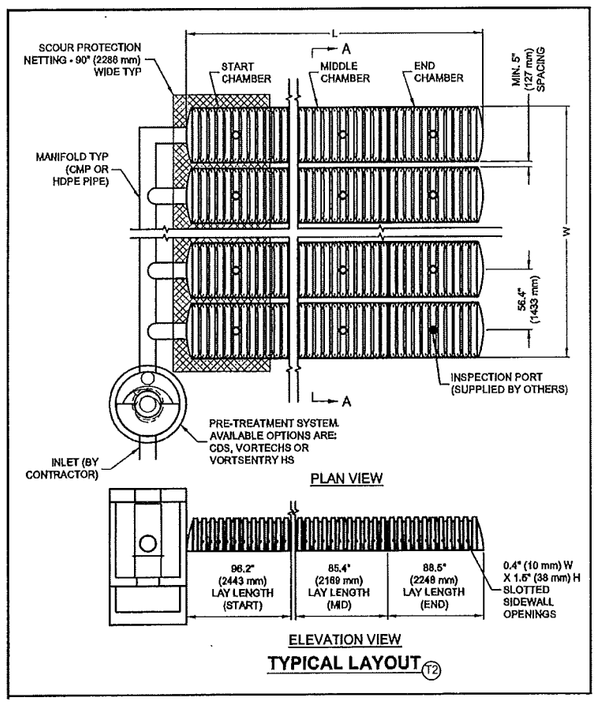
DISTURBED AREA = 6.853 ACRES

DRAINAGE MANAGEMENT AREAS

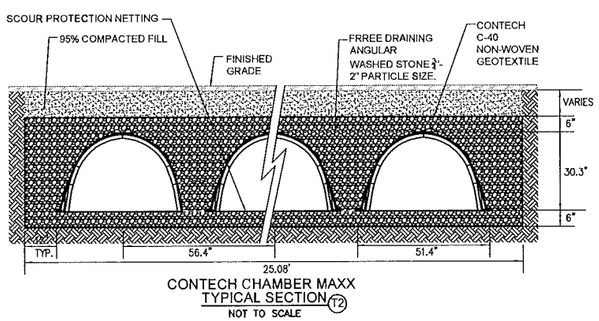
	SURFACE TYPE	AREA	PERVIOUS		IMPERVIOUS		PROPOSED BMP	PRE-TREATMENT
DMA 1	ROOF + PAVEMENT	2.352 ac			2.219 ac	94.33%	INFILTRATION	Q = 0.504 cfs CDS2015-4-C
	LANDSCAPE		0.133 ac	5.67%				
DMA 2	ROOF + PAVEMENT	1.107 ac			1.077 ac	97.31%	INFILTRATION	Q = 0.244 cfs CDS2015-4-C
	LANDSCAPE		0.030 ac	2.69%				
DMA 3	ROOF + PAVEMENT	2.449 ac			2.436 ac	99.46%	INFILTRATION	Q = 0.551 cfs CDS2015-4-C
	LANDSCAPE		0.013 ac	0.54%				

DESIGN CAPTURE VOLUME AND PROPOSED BMPs

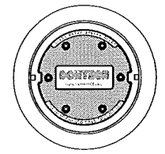
	DEPTH in	RUNOFF COEFFICIENT	AREA acres	DCV ft³	PROPOSED BMP	DIMENSIONS L x W ft	PROVIDED VOLUME ft³	FOOTPRINT ft²
DMA 1	0.75	0.857	2.352	5,488	CONTECH INFILTRATION SYSTEM	126.14x25.08	5,508	3,163.59
DMA 2	0.75	0.880	1.107	2,652	CONTECH INFILTRATION SYSTEM	62.09x25.08	2,660	1,557.22
DMA 3	0.75	0.900	2.449	6,001	CONTECH INFILTRATION SYSTEM	147.49x25.08	6,019	3,699.05



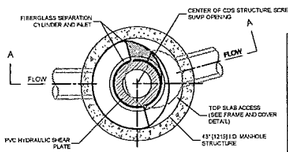
TYPICAL LAYOUT (T2)



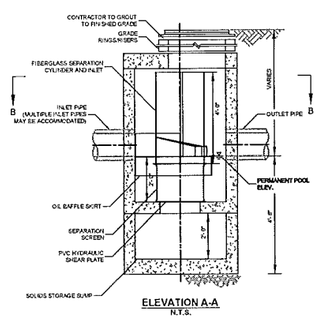
CONTECH CHAMBER MAXX
TYPICAL SECTION (T2)
NOT TO SCALE



FRAME AND COVER
(DIAMETER VARIES)
N.T.S



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

DMA-1 SITE SPECIFIC DATA REQUIREMENTS

		ID
STRUCTURE ID		
WATER QUALITY FLOW RATE (CFS)		0.504
PEAK FLOW RATE (CFS)		7.56
RETURN PERIOD OF PEAK FLOW (YRS)		25
SCREEN APERTURE (2400 OR 4700)		2400
PIPE DATA	I.E. MATERIAL DIAMETER	
INLET PIPE 1	ELEV PVC 12"	
INLET PIPE 2	ELEV PVC 12"	
OUTLET PIPE	ELEV PVC 12"	
RIM ELEVATION		RIM
ANTI-FLOTATION BALLAST	WIDTH HEIGHT	
	WIDTH HEIGHT	
NOTES/SPECIAL REQUIREMENTS		
* PER ENGINEER OF RECORD		

DMA-2 SITE SPECIFIC DATA REQUIREMENTS

		ID
STRUCTURE ID		
WATER QUALITY FLOW RATE (CFS)		0.244
PEAK FLOW RATE (CFS)		6.94
RETURN PERIOD OF PEAK FLOW (YRS)		25
SCREEN APERTURE (2400 OR 4700)		2400
PIPE DATA	I.E. MATERIAL DIAMETER	
INLET PIPE 1	ELEV PVC 12"	
INLET PIPE 2	ELEV PVC 12"	
OUTLET PIPE	ELEV PVC 12"	
RIM ELEVATION		RIM
ANTI-FLOTATION BALLAST	WIDTH HEIGHT	
	WIDTH HEIGHT	
NOTES/SPECIAL REQUIREMENTS		
* PER ENGINEER OF RECORD		

DMA-3 SITE SPECIFIC DATA REQUIREMENTS

		ID
STRUCTURE ID		
WATER QUALITY FLOW RATE (CFS OR L/s)		0.551
PEAK FLOW RATE (CFS OR L/s)		8.47
RETURN PERIOD OF PEAK FLOW (YRS)		25
SCREEN APERTURE (2400 OR 4700)		2400
PIPE DATA	I.E. MATERIAL DIAMETER	
INLET PIPE 1	ELEV PVC 12"	
INLET PIPE 2	ELEV PVC 12"	
OUTLET PIPE	ELEV PVC 12"	
RIM ELEVATION		RIM
ANTI-FLOTATION BALLAST	WIDTH HEIGHT	
	WIDTH HEIGHT	
NOTES/SPECIAL REQUIREMENTS		
* PER ENGINEER OF RECORD		

CDS2015-4-C DESIGN NOTES

CDS2015-4-C RATED TREATMENT CAPACITY IS 6.7 CFS (189 L/s) OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 10.0 CFS (283 L/s). IF THE SITE CONDITIONS EXCEED 10.0 (283 L/s) CFS, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET H520 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
- A ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD
- B CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED)
- C CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
- D CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- E CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800.338.1122 513.645.7000 513.645.7993 FAX

CDS2015-4-C
INLINE CDS (T1)
STANDARD DETAIL

NO.	REVISIONS	DATE

Prepared by:
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Civil Engineers and Land Surveyors
265 S. Anita Dr., Suite 111, Orange, CA. 92868 (714)935-0265 fax:(714)935-0106

CONCEPTUAL WATER QUALITY MANAGEMENT PLAN

S. BRISTOL STREET AND NEWPORT BOULEVARD
CITY OF COSTA MESA, COUNTY OF ORANGE
STATE OF CALIFORNIA

ISSUE DATE	1-16-15
DRAWN BY	HV
CHECKED BY	CD
JOB NO.	GNH12007
SHEET NO.	1
	OF 1 SHEETS

PLOT:

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with evapotranspiration, rainwater harvesting BMPs in combination with infiltration BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

IV.3.4 Biotreatment BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, and/or evapotranspiration and rainwater harvesting BMPs, describe biotreatment BMPs. Include sections for selection, suitability, sizing, and infeasibility, as applicable.

Name	Included?
Bioretention with underdrains	☐
Stormwater planter boxes with underdrains	☐
Rain gardens with underdrains	☐
Constructed wetlands	☐
Vegetated swales	☐
Vegetated filter strips	☐
Proprietary vegetated biotreatment systems	☐
Wet extended detention basin	☐
Dry extended detention basins	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with infiltration, evapotranspiration, rainwater harvesting and/or biotreatment BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

IV.3.5 Hydromodification Control BMPs

Describe hydromodification control BMPs. See Section 5 TGD. Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Prior Conditions of Approval.

Hydromodification Control BMPs	
BMP Name	**BMP Description**

IV.3.6 Regional/Sub-Regional LID BMPs

Describe regional/sub-regional LID BMPs in which the project will participate. *Refer to Section 7.II-2.4.3.2 of the Model WQMP.*

Regional/Sub-Regional LID BMPs

IV.3.7 Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Describe treatment control BMPs including sections for selection, sizing, and infeasibility, as applicable.

Treatment Control BMPs	
BMP Name	**BMP Description**

IV.3.8 Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non-structural source controls were not used.

Non-Structural Source Control BMPs

Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
N1	Education for Property Owners, Tenants and Occupants	☒	☐	
N2	Activity Restrictions	☒	☐	
N3	Common Area Landscape Management	☒	☐	
N4	BMP Maintenance	☒	☐	
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	No hazardous waste
N6	Local Industrial Permit Compliance	☐	☒	This BMP is not applicable. The City of Costa Mesa does not issue water quality permits.
N7	Spill Contingency Plan	☒	☐	
N8	Underground Storage Tank Compliance	☐	☒	No underground storage tanks
N9	Hazardous Materials Disclosure Compliance	☒	☐	
N10	Uniform Fire Code Implementation	☐	☒	No hazardous materials
N11	Common Area Litter Control	☒	☐	
N12	Employee Training	☒	☐	
N13	Housekeeping of Loading Docks	☒	☐	
N14	Common Area Catch Basin Inspection	☒	☐	
N15	Street Sweeping Private Streets and Parking Lots	☒	☐	
N16	Retail Gasoline Outlets	☐	☒	Not a retailer of fuels

N1– Education for Property Owners, Tenants and Occupants

The Property Owner shall provide information contained within this report to educate the owners and tenants of general good housekeeping practices that contribute to the protection of storm water quality. Refer to Section VII for a checklist of educational materials included as part of this WQMP. This education program applies to all current and future employees of the facility as well as maintenance contractors. The owner shall prepare manual(s) that include copies of educational materials as included in Appendix A for distribution to employees, tenants and future property owners. Appropriate employee training shall be provided by the owner to provide employees, tenants and future property owners with an awareness and understanding of potential stormwater pollutants and potential pollutant-generating activities, the importance of maintaining potential pollutants in a manner that prevents them from physical contact with the outside environment and the storm drain system, and an awareness that stormwater entering the storm drain system in not treated and is conveyed directly to the ocean. A copy of this WQMP is to be present at the site at all times.

This activity shall be conducted on an ongoing / as-needed basis.

N2– Activity Restrictions

The Property Owner will be responsible for refraining from the activity restriction listed herein.

No washing down hard or paved surfaces. Washing down hard or paved surfaces, including, but not limited to, sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards, and then only by use of a held-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device or a low-volume, high-pressure cleaning machine equipped to recycle any water used.

Water conservation and landscape activity restrictions are described in BMP 'N3' below.

N3 – Landscape Management

The Property Owner will be responsible for on-going landscape management requirements consistent with the City's "Water Conservation Information". See specific activity restrictions below.

Limits on Watering Hours. Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited between the hours of 10:00 a.m. and 4:00 p.m. Pacific Standard Time on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

Limit on Watering Duration. Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than fifteen minutes watering per day per station. This subsection does not apply to landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no emitter produces more than two gallons of water per hour and weather based controllers or stream rotor sprinklers that meet a seventy percent efficiency standard.

No Excessive Water Flow or Runoff. Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter or ditch is prohibited.

Obligation to Fix Leaks, Breaks or Malfunctions. Excessive use, loss or escape of water through breaks, leaks or other malfunctions in the water user's plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected and in no event more than five days of receiving notice form the city, is prohibited.

The Property Owner will also be responsible for on-going landscape maintenance consistent with the County's management guidelines for use of pesticides and fertilizers (DAMP Section 5.5) including, but not limited to, the flowing:

- Thoroughly investigate and consider all least toxic pest management practices
- Use pesticides only according to label instruction.
- Consider weather conditions that could affect applications (i.e. wind or rain)
- Only apply the minimum amount of fertilizer or pesticide needed.
- Plant, or mulch/re-mulch (wood chips or shredded wood products) any bare areas in the landscaping.
- Irrigation application rates and schedules should be adjusted to minimize surface runoff, especially immediately following the application of fertilizer or pesticides.
- Immediately clean up spills using dry methods of cleanup.

N4 - BMP Maintenance

The Property Owner shall be responsible for implementation, maintenance, and cleaning of all BMPs.

N7 – Spill Contingency Plan

A Spill Contingency Plan will be prepared by the store manager for implementation at the proposed fueling area. The Spill Contingency Plan will describe how employees will prepare for and respond to fuel spills. This plan will describe stockpiling of cleanup materials, notification of responsible agencies, disposal of cleanup materials, documentation, etc.

N9 – Hazardous Materials Disclosure Compliance

The store manager will be responsible for compliance with ordinances enforced the fire department for the management of hazardous materials associated with the fuel dispensing area.

N11 - Common Area Litter Control

The Property Owner shall implement trash management and litter control procedures aimed at reducing off-site migration of trash and pollution of drainage water. The Property Owner may contract with landscape maintenance firms to provide this service during regularly scheduled maintenance which should consist of litter patrol, and emptying of trash receptacles.

N12 – Employee Training

The Property Owner shall train employees and maintenance contractors on general housekeeping practices that contribute to the protection of stormwater quality. Refer to Section VII for a checklist of educational materials included as part of this WQMP. This education program applies to all current and future employees as well as maintenance contractors of the facility. The owner shall prepare manual(s) that include copies of educational materials as included in Appendix A for distribution to employees and contractors. Appropriate employee training shall be provided by the owner to provide employees and contractors with an awareness and understanding of potential stormwater pollutants and potential pollutant-generating activities, the importance of maintaining potential pollutants in a manner that prevents them from physical contact with the outside environment and the storm drain system, and an awareness that stormwater entering the storm drain system in not treated and is conveyed directly to the ocean. A copy of this WQMP is to be present at the site at all times.

N13 – Housekeeping of Loading Docks

The Property Owner will be responsible for keeping loading docks clean and orderly. Loading areas shall not be washed down and shall be swept at least once prior to the storm season in August/September, and as necessary throughout the year.

N14 – Catch Basin Inspection

The Property Owner will be responsible for inspection and maintenance of all catch basins and inlet structures once per year prior to the storm season in August/September, and as necessary throughout the year. Maintenance consists of cleaning out accumulated debris and sediment either manually or by mechanical methods. Debris and sediment shall not be washed down the storm drain.

N15 – Street Sweeping

The Property Owner shall be responsible for having the private streets, driveways, and parking areas swept at least once prior to the storm season in August/September, and as necessary throughout the year.

IV.3.9 Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if Structural source controls were not used.

Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
S1	Provide storm drain system stenciling and signage	☒	☐	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	☒	☐	
S3	Design and construct trash and waste storage areas to reduce pollution introduction	☒	☐	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	☒	☐	
S5	Protect slopes and channels and provide energy dissipation	☐	☒	No slopes or channels
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	☐	☐	
S6	Dock areas	☒	☐	
S7	Maintenance bays	☐	☒	No maintenance bays
S8	Vehicle wash areas	☐	☒	No vehicle wash areas
S9	Outdoor processing areas	☐	☒	No outdoor processing areas
S10	Equipment wash areas	☐	☒	No equipment wash areas
S11	Fueling areas	☒	☐	
S12	Hillside landscaping	☐	☒	No hillside areas
S13	Wash water control for food preparation areas	☐	☒	No food prep. areas
S14	Community car wash racks	☐	☒	No car wash racks

S1– Storm Drain Stenciling and Signage

Anti-dumping stenciling messages will be provided at storm drain inlets to alert the public to the destination of pollutants discharged into stormwater. Stenciling shall comply with the following requirements:

(1) Provide stenciling or labeling of all storm drain inlets and catch basins within the project area with prohibitive language (such as: "NO DUMPING - DRAINS TO OCEAN") and/or graphical icons to discourage illegal dumping

(2) Maintain legibility of stencils

S2– Outdoor Material Storage

All materials to be stored outdoors will be placed in racks off of the ground with roof coverings to keep rainwater off of the materials.

S3– Trash Enclosure Design

Trash storage areas will be designed to reduce pollutant introduction. All trash container areas shall meet the following requirements:
1. Paved with an impervious surface, designed not to allow run-on from adjoining areas, designed to divert drainage from adjoining roofs and pavements diverted around the area, screened or walled to prevent off-site transport of trash; and
2. Provide solid roof or awning to prevent direct precipitation.
Connection of trash area drains to the municipal storm drain system is prohibited.
Potential conflicts with fire code and garbage hauling activities should be considered in implementing this source control.
See CASQA Stormwater Handbook Section 3.2.9 and BMP Fact Sheet SD-32 for additional information.

S4 – Efficient Irrigation

The landscape/irrigation plan shall implement irrigation smart timers. The Property Owner will be responsible for adjusting the system seasonally, and checking for broken/over-spraying sprinkler heads. See additional irrigation requirements in BMP 'N2" and 'N3' above.

S6 – Loading Dock Areas

The loading dock will drain to an inlet with pre-treatment filter that connects to the underground infiltration system. Housekeeping of this delivery area shall be consistent with N13.

S11 – Fueling Areas

Fuel dispensing areas shall contain the following:
1. At a minimum, the fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

2. The fuel dispensing area shall be paved with Portland cement concrete. The use of asphalt concrete shall be prohibited.
3. The fuel dispensing area shall have an appropriate slope (2% - 4%) to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of stormwater.
4. An overhanging roof structure or canopy shall be provided. The cover's minimum dimensions must be equal to or greater than the area of the fuel dispensing area in the first item above. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. The fueling area shall drain to the project's Treatment Control BMP(s) prior to discharging to the municipal storm drain system.

See CASQA Stormwater Handbook Section 3.2.11 and BMP Fact Sheet SD-30 for additional information.

Refer to O& M Plan in Section V and applicable BMP Fact sheets in Attachment 'A' for additional information.

IV.4 ALTERNATIVE COMPLIANCE PLAN (IF APPLICABLE)

IV.4.1 Water Quality Credits

Determine if water quality credits are applicable for the project. *Refer to Section 3.1 of the Model WQMP for description of credits and Appendix VI of the TGD for calculation methods for applying water quality credits.*

<table>
<tr><th colspan="5">Description of Proposed Project</th></tr>
<tr><td colspan="5">Project Types that Qualify for Water Quality Credits (Select all that apply):</td></tr>
<tr><td colspan="2">☐Redevelopment projects that reduce the overall impervious footprint of the project site.</td><td colspan="2">☐Brownfield redevelopment, meaning redevelopment, expansion, or reuse of real property which may be complicated by the presence or potential presence of hazardous substances, pollutants or contaminants, and which have the potential to contribute to adverse ground or surface WQ if not redeveloped.</td><td>☐ Higher density development projects which include two distinct categories (credits can only be taken for one category): those with more than seven units per acre of development (lower credit allowance); vertical density developments, for example, those with a Floor to Area Ratio (FAR) of 2 or those having more than 18 units per acre (greater credit allowance).</td></tr>
<tr><td colspan="2">☐ Mixed use development, such as a combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that can demonstrate environmental benefits that would not be realized through single use projects (e.g. reduced vehicle trip traffic with the potential to reduce sources of water or air pollution).</td><td colspan="2">☐ Transit-oriented developments, such as a mixed use residential or commercial area designed to maximize access to public transportation; similar to above criterion, but where the development center is within one half mile of a mass transit center (e.g. bus, rail, light rail or commuter train station). Such projects would not be able to take credit for both categories, but may have greater credit assigned</td><td>☐ Redevelopment projects in an established historic district, historic preservation area, or similar significant city area including core City Center areas (to be defined through mapping).</td></tr>
<tr><td>☐Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.</td><td>☐ Developments in a city center area.</td><td>☐ Developments in historic districts or historic preservation areas.</td><td>☐ Live-work developments, a variety of developments designed to support residential and vocational needs together – similar to criteria to mixed use development; would not be able to take credit for both categories.</td><td>☐In-fill projects, the conversion of empty lots and other underused spaces into more beneficially used spaces, such as residential or commercial areas.</td></tr>
<tr><td colspan="2">Calculation of Water Quality Credits
(if applicable)</td><td colspan="3">Not Applicable</td></tr>
</table>

IV.4.2 Alternative Compliance Plan Information

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the WQMP.*

Not Applicable

Section V Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies. *Refer to Section 7.II 4.0 in the Model WQMP.*

BMP Inspection/Maintenance			
BMP	**Reponsible Party(s)**	**Inspection/ Maintenance Activities Required**	**Minimum Frequency of Activities**
N1. Education for Property Owners, Tenants and Occupants	Ganahl Lumber Company or Future Property Owner	The Property Owner shall provide information contained within this report to educate the owners and tenants of general good housekeeping practices that contribute to the protection of storm water quality. Refer to Section VII for a checklist of educational materials included as part of this WQMP. This education program applies to all current and future employees of the facility as well as maintenance contractors. The owner shall prepare manual(s) that include copies of educational materials as included in Appendix A for distribution to employees, tenants and future property owners. Appropriate employee training shall be provided by the owner to provide employees, tenants and future property owners with an awareness and understanding of potential stormwater pollutants and potential pollutant-generating activities, the importance of maintaining potential pollutants in a manner that prevents them from physical contact with the outside	Education program as it would apply to future employees of the facility. The owner shall prepare manual(s) for employees. Included in Appendix are educational materials intended for reproduction and distribution to employees. Copy of this WQMP to be present at the site Continuous

		environment and the storm drain system, and an awareness that stormwater entering the storm drain system in not treated and is conveyed directly to the ocean. A copy of this WQMP is to be present at the site at all times. This activity shall be conducted on an ongoing / as-needed basis.	
N2. Activity Restriction	Ganahl Lumber Company or Future Property Owner	The Property Owner will be responsible for refraining from the activity restriction listed herein. No washing down hard or paved surfaces. Washing down hard or paved surfaces, including, but not limited to, sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards, and then only by use of a held-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device or a low-volume, high-pressure cleaning machine equipped to recycle any water used. Water conservation and landscape activity restrictions are described in BMP 'N3' below.	Do not use detergents or other chemical additives when washing concrete sidewalks or building exteriors, use potable water only and collect wash water runoff using a vacuum truck, for proper offsite disposal. Continuous
N3. Common Area Landscape Management	Ganahl Lumber Company or Future Property Owner	The Property Owner will be responsible for on-going landscape management requirements consistent with the City's "Water Conservation Information". See specific activity restrictions below. **Limits on Watering Hours.** Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited between the hours of 10:00 a.m. and 4:00 p.m. Pacific Standard Time on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off	Owner may employ the services of a qualified landscape maintenance contractor to maintain all planters in accordance with City of Costa Mesa Management Guidelines. See County of Orange, Model Integrated Pest Management, Pesticides, and Fertilizer Guidelines.

		nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system. **Limit on Watering Duration.** Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than fifteen minutes watering per day per station. This subsection does not apply to landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no emitter produces more than two gallons of water per hour and weather based controllers or stream rotor sprinklers that meet a seventy percent efficiency standard. **No Excessive Water Flow or Runoff.** Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter or ditch is prohibited. **Obligation to Fix Leaks, Breaks or Malfunctions.** Excessive use, loss or escape of water through breaks, leaks or other malfunctions in the water user's plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected and in no event more than five days of receiving notice form the city, is prohibited. The Property Owner will also be responsible for on-going landscape maintenance consistent with the County's management guidelines	(DAMP 5.5) Weekly

		for use of pesticides and fertilizers (DAMP Section 5.5)	
N4. BMP Maintenance	Ganahl Lumber Company or Future Property Owner	The Property Owner shall be responsible for implementation, maintenance, and cleaning of all BMPs.	The manager and employees will be instructed in environmental procedures regarding contamination and cleanup. The matrix itself is N4. Per established maintenance schedule
N7. Spill Contingency Plan	Ganahl Lumber Company or Future Property Owner	A Spill Contingency Plan will be prepared by the store manager for implementation at the proposed fueling area. The Spill Contingency Plan will describe how employees will prepare for and respond to fuel spills. This plan will describe stockpiling of cleanup materials, notification of responsible agencies, disposal of cleanup materials, documentation, etc.	Continuous
N9. Hazardous Materials Disclosure Compliance	Ganahl Lumber Company or Future Property Owner	The store manager will be responsible for compliance with ordinances enforced the fire department for the management of hazardous materials associated with the fuel dispensing area.	Annually or as requested by governing agency
N11. Common Area Litter Control	Ganahl Lumber Company or Future Property	The Property Owner shall implement trash management and litter control procedures aimed at reducing off-site migration of trash and pollution of drainage water.	Management shall prepare educational manuals based on this Water Quality Management Plan to

	Owner	The Property Owner may contract with landscape maintenance firms to provide this service during regularly scheduled maintenance which should consist of litter patrol, and emptying of trash receptacles.	inform future employees working at this site about the BMPs required at this facility. Weekly/As needed
N12. Employee Training	Ganahl Lumber Company or Future Property Owner	The Property Owner shall train employees and maintenance contractors on general housekeeping practices that contribute to the protection of stormwater quality. Refer to Section VII for a checklist of educational materials included as part of this WQMP. This education program applies to all current and future employees as well as maintenance contractors of the facility. The owner shall prepare manual(s) that include copies of educational materials as included in Appendix A for distribution to employees and contractors. Appropriate employee training shall be provided by the owner to provide employees and contractors with an awareness and understanding of potential stormwater pollutants and potential pollutant-generating activities, the importance of maintaining potential pollutants in a manner that prevents them from physical contact with the outside environment and the storm drain system, and an awareness that stormwater entering the storm drain system in not treated and is conveyed directly to the ocean. A copy of this WQMP is to be present at the site at all times.	Provide educational materials to new employees; Provide updates to existing employees annually Continuous, annually

N13. Housekeeping of Loading Docks	Ganahl Lumber Company or Future Property Owner	The property owner will be responsible for keeping loading docks clean and orderly. Loading areas shall not be washed down and shall be swept at least once prior to the storm season in August/September, and as necessary throughout the year.	Continuous, Annually
N14. Common Area Catch Basin Inspection	Ganahl Lumber Company or Future Property Owner	The Property Owner will be responsible for inspection and maintenance of all catch basins and inlet structures once per year prior to the storm season in August/September, and as necessary throughout the year. Maintenance consists of cleaning out accumulated debris and sediment either manually or by mechanical methods. Debris and sediment shall not be washed down the storm drain.	Management to inspect and , if necessary, remove silt and debris from catch basins prior to the rainy season Monthly and prior to rainy season (October 1st each year)
N15. Street Sweeping Private Streets and Parking Lots	Ganahl Lumber Company or Future Property Owner	The Property Owner shall be responsible for having the private streets, driveways, and parking areas swept at least once prior to the storm season in August/September, and as necessary throughout the year.	Management may contract with a contractor to provide sweeping or vacuuming of the entrance driveway and interior drive lanes. The use of water to flush debris and sediment into storm drains shall be prohibited. Sweep parking lot weekly and prior to the rainy season
Structural Source Control BMPs			

Provide Storm Drain System Stenciling and Signage	Ganahl Lumber Company or Future Property Owner	Anti-dumping stenciling messages will be provided at storm drain inlets to alert the public to the destination of pollutants discharged into stormwater. Stenciling shall comply with the following requirements: (1) Provide stenciling or labeling of all storm drain inlets and catch basins within the project area with prohibitive language (such as: "NO DUMPING – DRAINS TO OCEAN") and/or graphical icons to discourage illegal dumping (2) Maintain legibility of stencils	Management shall have the phrase "NO DUMPING! DRAINS TO OCEAN" stenciled on each catch basin to alert the public to the destination of pollutants discharged into stormwater. Inspect Annually. Re-stencil as needed if stencilling becomes faded or otherwise illegible.
Design and Construct Outdoor Material Storage Areas to Reduce Pollutant Introduction	Ganahl Lumber Company or Future Property Owner	Materials stored outdoors shall be placed on racks off of the ground and under roof or otherwise covered	Continuous
Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction	Ganahl Lumber Company or Future Property Owner	Trash storage areas will be kept clean. Trash and debis will be picked up and placed in dumpsters that are stored within the trash enclosure area under roof. The trash area shall be swept clean.	Continuous
Use Efficient Irrigation Systems & Landscape Design	Ganahl Lumber Company or Future Property Owner	The landscape/irrigation plan shall implement irrigation smart timers. The Property Owner will be responsible for adjusting the system seasonally, and checking for broken/over-spraying sprinkler heads. See additional irrigation requirements in BMP 'N2" and 'N3' above	Adjust landscape watering according to weather conditions to avoid excess usage; inspect timers and adjust seasonally; inspect for broken/over-spraying sprinkler heads Monthly

Loading Docks	Ganahl Lumber Company or Future Property Owner	The property owner will be responsible for keeping loading docks clean and orderly. Loading areas shall not be washed down and shall be swept at least once prior to the storm season in August/September, and as necessary throughout the year.	Continuous, Annually
Fueling Areas	Ganahl Lumber Company or Future Property Owner	The fueling area shall be swept clean and shall have spill clean-up materials readily available in accordance with the Spill Prevention Plan. Disposal of spill material shall be in accordance with the provisions of the Spill Prevention Plan.	Continuous
Treatment Control BMPs			
Pre-Treatment Control BMPs for DMA-1, DMA-2 and DMA-3	Ganahl Lumber Company or Future Property Owner	Select pre-treatment system to protect the underground infiltration gallery from clogging due to sediment. Use CDS pre-treatment system.	Visually inspect and remove debris. 3 times annually prior to, during and after rainy season.
Treatment Control BMPs for DMA-1, DMA-2 and DMA-3	Ganahl Lumber Company or Future Property Owner	**Underground Infiltration gallery** Design LID BMPs using the assumed Principal Unit Operations and Processes Provided of Filtration, Sorption/Ion Exchange and Volume loss, will be reached by an Underground Infiltration gallery as shown on Plan. Use CONTECH ChamberMaxx Infiltration Solution	Visually inspect and remove debris. 3 times annually prior to, during and after rainy season.

Section VI Site Plan and Drainage Plan

VI.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 BMP locations
- Drainage delineations and flow information
- Drainage connections
- BMP details

Section VII Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. For the copy submitted to the Permittee, only attach the educational materials specifically applicable to the project. Other materials specific to the project may be included as well and must be attached.

Education Materials

Residential Material (http://www.ocwatersheds.com)	Check If Applicable	Business Material (http://www.ocwatersheds.com)	Check If Applicable
The Ocean Begins at Your Front Door	☒	Tips for the Automotive Industry	☐
Tips for Car Wash Fund-raisers	☐	Tips for Using Concrete and Mortar	☐
Tips for the Home Mechanic	☐	Tips for the Food Service Industry	☐
Homeowners Guide for Sustainable Water Use	☐	Proper Maintenance Practices for Your Business	☒
Household Tips	☐	**Other Material**	**Check If Attached**
Proper Disposal of Household Hazardous Waste	☒		
Recycle at Your Local Used Oil Collection Center (North County)	☐		☐
Recycle at Your Local Used Oil Collection Center (Central County)	☐		☐
Recycle at Your Local Used Oil Collection Center (South County)	☐		☐
Tips for Maintaining a Septic Tank System	☐		☐
Responsible Pest Control	☒		☐
Sewer Spill	☐		☐
Tips for the Home Improvement Projects	☐		☐
Tips for Horse Care	☐		☐
Tips for Landscaping and Gardening	☒		☐
Tips for Pet Care	☐		☐
Tips for Pool Maintenance	☐		☐
Tips for Residential Pool, Landscape and Hardscape Drains	☐		☐
Tips for Projects Using Paint	☐		☐

Attachment "A"

Attachment "B"

Attachment "C"

SUSCEPTIBILITY MAP UPDATE (DEC 2012)

PRELIMINARY MAP – SUBJECT TO FURTHER REVISION

Susceptibility

- Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility

Channel Type

- Earth (Unstable)
- Earth (Stabilized)
- Stabilized

Tidel Influence

- <= Mean High Water Line (4.28')

Water Body

- Basin
- Dam
- Lake
- Reservoir

Other Lands

- Airport/Military

PROJECT SITE

AnaheimBay-HuntingtonHarbor Watershed

Santa Ana River Watershed

Santa Ana River Watershed

South Orange County

El Modena-Irvine Retarding Basin

Lower Peters Canyon Retarding Basin

Eastlect Retarding Basin

Orchard Estates Retention Basin

Hicks Canyon Retarding Basin

Rattlesnake Reservoir

East Hicks Canyon Retarding Basin

Siphon Reservoir

Bee Canyon Retarding Basin

Round Canyon Retarding Basin

Trabuco Retarding Basin

Marshburn Retarding Basin

Agua Chinon Retarding Basin

John Wayne Airport

North Lake

South Lake

Basin Number 2

Basin Number 1

Sand Canyon Reservoir

Laguna Reservoir

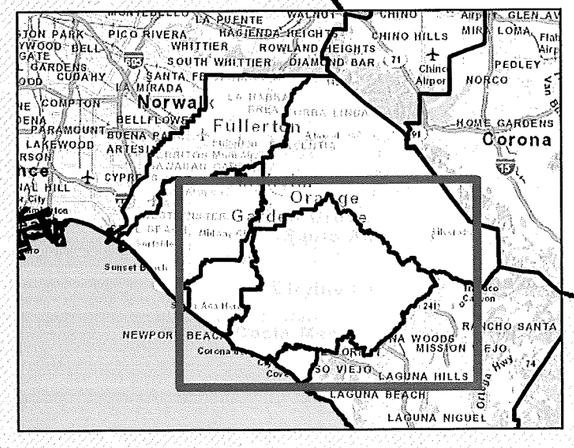
Bonita Canyon Reservoir

San Joaquin Reservoir

Big Canyon Reservoir

Harbor View Dam

Village Pond Park



N

0 9,000 18,000 Feet

TITLE: SUSCEPTIBILITY ANALYIS NEWPORT BAY-NEWPORT COASTAL STREAMS

JOB: ORANGE COUNTY WATERSHED MASTER PLANNING ORANGE CO. CA

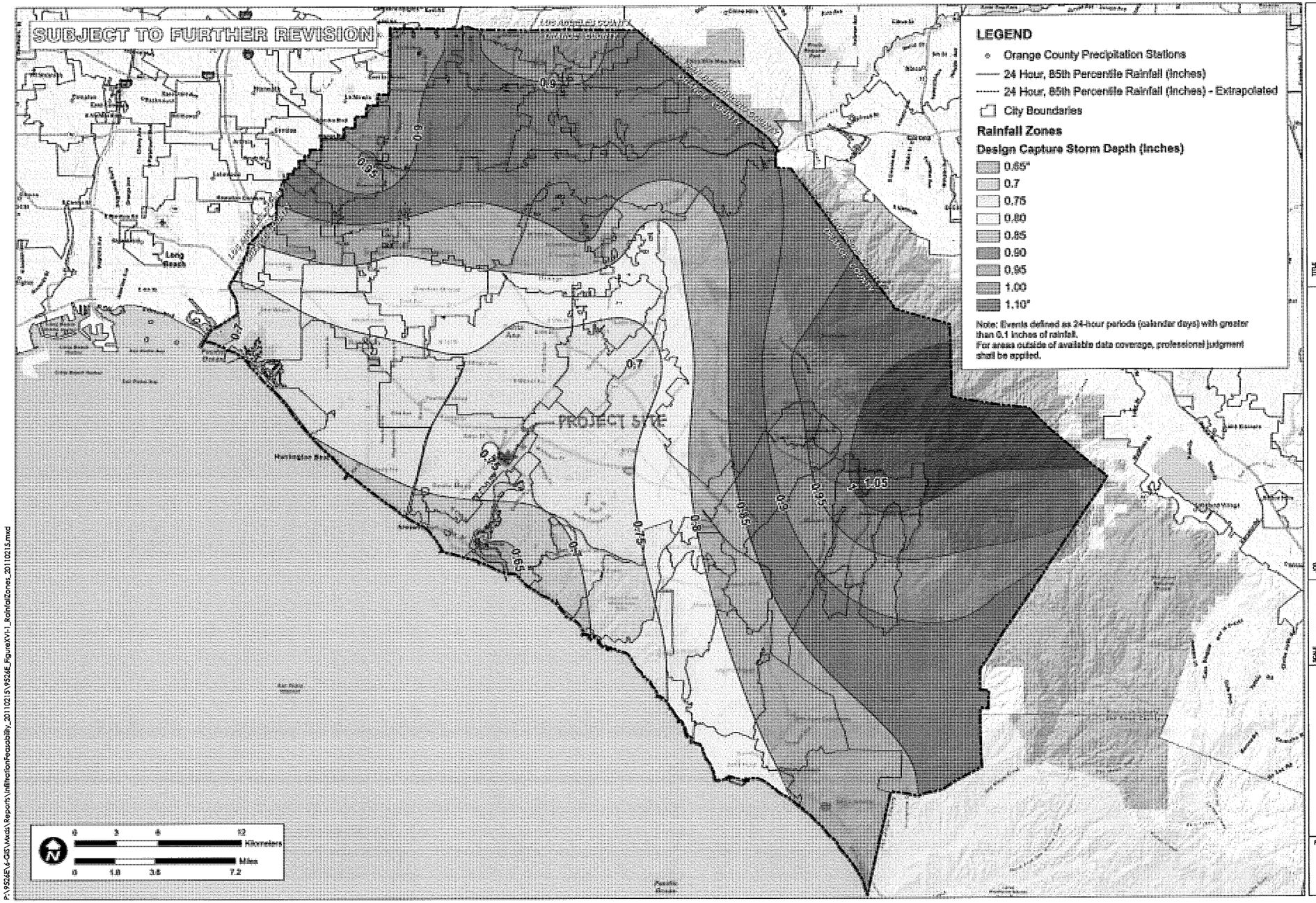
SCALE	1" = 12000'
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/30/10
JOB NO.	9526-E

PACE Advanced Water Engineering

FIGURE 4

P:\9526E\6-GIS\Mxds\SusceptabilityMaps_20100505\9526E_NewportBaySusceptibility_20100430.mxd

SUBJECT TO FURTHER REVISION



P:\Y526E\6-GIS\Mxds\Reports\InfiltrationFeasibility_20110215\Y526E_FigureXVI-1_RainfallZones_20110215.mxd

RAINFALL ZONES

ORANGE COUNTY
TECHNICAL GUIDANCE
DOCUMENT

ORANGE CO.

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-1

SUBJECT TO FURTHER REVISION

LOS ANGELES COUNTY / ORANGE COUNTY

SAN BERNARDINO COUNTY / ORANGE COUNTY

RIVERSIDE COUNTY / ORANGE COUNTY

LOS ANGELES COUNTY / ORANGE COUNTY

PROJECT SITE

Pacific Ocean

Pacific Ocean

LEGEND

City Boundaries

Hydrologic Soil Groups

D Soils

Source:
D Soils: Natural Resources Conservation Service (NRCS)
Soil Survey - soil_ca678, Orange County & Western Riverside
Date of publication: 2006-02-08
http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

0 2.5 5 10 Kilometers

0 1.8 3.6 7.2 Miles

P:\9526E\A-GIS\Mxds\Reports\InfiltrationFeasibility_20110215\9526E_FigureXVI-2b_D-Soils_20110215.mxd

TITLE

HYDROLOGIC SOIL GROUP
TYPE D NRCS SOIL SURVEY

ORANGE COUNTY
INFILTRATION STUDY

CA

JOB

ORANGE CO.

SCALE:	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE

XVI-2b

SUBJECT TO FURTHER REVISION

LEGEND

- Depth To First Groundwater Contours
- City Boundaries
- OCWD Groundwater Basin Protection Boundary

Note: Data are not available for South Orange County at this time.

Source:
Sprotte, Fuller and Greenwood, 1980.
California Division of Mines and Geology;
California Geological Survey

LOS ANGELES COUNTY / ORANGE COUNTY

SAN BERNARDINO COUNTY / ORANGE COUNTY

RIVERSIDE COUNTY / ORANGE COUNTY

PROJECT SITE

0 2 4 8 Kilometers

0 1.25 2.5 5 Miles

P:\V526E\4-GIS\Mxds\Reports\InfiltrationFeasability_20110215\V526E_FigureXVI-2d_DepthToGroundwaterOverview_20110215.mxd

TITLE
NORTH ORANGE COUNTY
MAPPED DEPTH TO FIRST
GROUNDWATER

ORANGE COUNTY
INFILTRATION STUDY

CA

JOB
ORANGE CO.

SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2d

SUBJECT TO FURTHER REVISION

LOS ANGELES COUNTY
ORANGE COUNTY

SAN BERNARDINO COUNTY
ORANGE COUNTY

RIVERSIDE COUNTY
ORANGE COUNTY

LOS ANGELES COUNTY
ORANGE COUNTY

PROJECT SITE

LEGEND

- City Boundaries
- OCWD Groundwater Basin Protection Boundary

Depth To Groundwater

- <= 5'
- 5-10'

Note: Data are not available for South Orange County at this time.

Source:
Sprotte, Fuller and Greenwood, 1980.
California Division of Mines and Geology;
California Geological Survey

0 2 4 8 Kilometers
0 1.25 2.5 5 Miles

TITLE
NORTH ORANGE COUNTY
MAPPED SHALLOW GROUNDWATER

ORANGE COUNTY
INFILTRATION STUDY

CA

JOB

SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

ORANGE CO.

PACE
Advanced Water Engineering

FIGURE
XVI-2e

P:\9526E\6-GIS\Mxds\Reports\InfiltrationFeasibility_20110215\9526E_FigureXVI-2e_DepthToGroundwater1.5ft_20110215.mxd

SUBJECT TO FURTHER REVISION

PROJECT SITE

LEGEND

City Boundaries

Seismic Hazards

Potential Landslide Area

Source:
Seismic Hazard Zone Maps
Division of Mines and Geology, California Geology Survey,
Publication Date: 2005; Data Downloaded 02-09-2011
http://www.conservation.ca.gov/cgs/shzp/Pages/Index.aspx

0 2.5 5 10 Kilometers

0 1.8 3.6 7.2 Miles

P:\V526E\6-GIS\Mxds\Reports\InfiltrationFeasibility_20110215\V526E_FigureXVI-2c_Landslides_20110215.mxd

TITLE: HYDROLOGIC SOIL GROUP
TYPE D NRCS SOIL SURVEY

ORANGE COUNTY
INFILTRATION STUDY

CA

JOB

SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

ORANGE CO.

PACE
Advanced Water Engineering

FIGURE

XVI-2c

SUBJECT TO FURTHER REVISION

LOS ANGELES COUNTY
ORANGE COUNTY

SAN BERNARDINO COUNTY
ORANGE COUNTY

RIVERSIDE COUNTY
ORANGE COUNTY

PROJECT SITE

LEGEND

- City Boundaries
- OCWD Groundwater Basin Protection Boundary

Plume Protection Boundaries

- North Basin Groundwater Protection Project
- South Basin Groundwater Protection Project
- El Toro Marine Base
- Tustin Marine Air Base
- Approximate Selenium Contamination Area

Note: Individual contamination sites are not plotted.
See State Water Resources Control Board Geotracker database (http://geotracker.waterboards.ca.gov), Department of Toxic Substance Control Envirostor database (http://www.envirostor.dtsc.ca.gov) and other applicable sources for current listing of active contaminated sites.

Groundwater basin and plume protection boundaries for South Orange County are not shown on this exhibit at this time

0 2 4 8 Kilometers
0 1.25 2.5 5 Miles

P:\V526E\6-GIS\Mxds\Reports\InfiltrationFeasibility_20110215\V526E_FigureXVI-2f_NorthOCGroundwaterProtectionAreasStreetMap_20110215.mxd

TITLE
NORTH ORANGE COUNTY
GROUNDWATER PROTECTION
AREAS

ORANGE COUNTY
INFILTRATION STUDY

CA

JOB

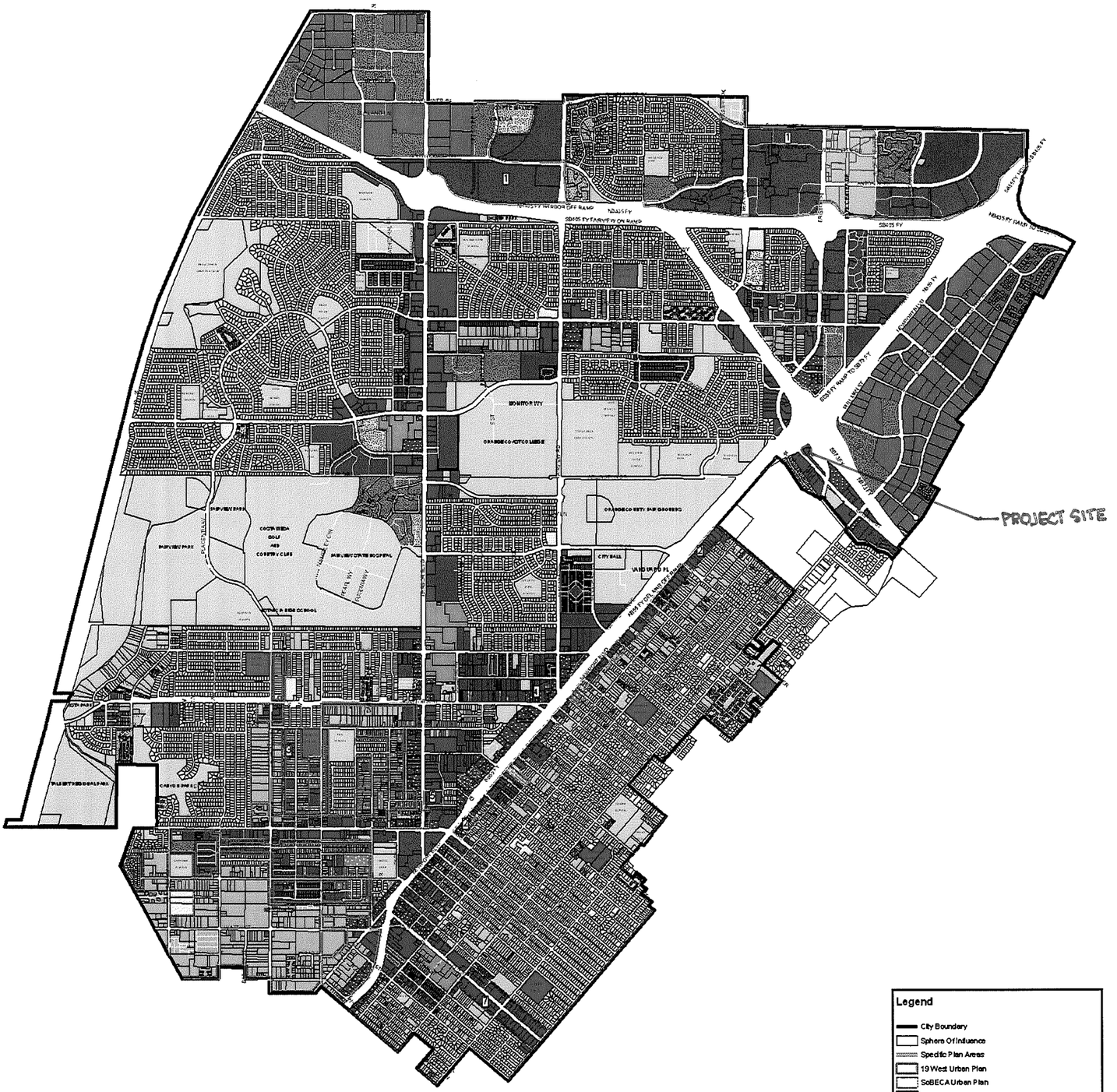
SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

ORANGE CO.

PACE
Advanced Water Engineering

FIGURE
XVI-2f

CITY OF COSTA MESA
ZONING MAP



Specific Plan Legend

1 North Costa Mesa Specific Plan
2 Newport Boulevard Specific Plan
3 Placentia / Hamilton Specific Plan
4 Avocado Street Specific Plan
5 Bernard / Paularino Specific Plan
6 Baker / Paularino Specific Plan
7 East 17th Street Specific Plan
8 19 West Urban Plan
9 Mesa West Bluffs Urban Plan
10 Mesa West Residential Ownership Urban Plan
11 SoBECA Urban Plan

City of Costa Mesa
Zoning Map Amendments

R-01-01	October 1, 2001	Ordinance No. 01-23
R-01-03	November 5, 2001	Ordinance No. 01-27
R-01-05	January 7, 2002	Ordinance No. 01-31
R-01-06	February 4, 2002	Ordinance No. 02-1
R-04-01	May 17, 2004	Ordinance No. 04-08
R-04-04	July 19, 2004	Ordinance No. 04-08
R-02-02	October 18, 2004	Ordinance No. 04-13
R-04-03	April 18, 2005	Ordinance No. 05-14
R-05-02	Nov. 15, 2005	Ordinance No. 05-16
R-05-01	Dec. 05, 2005	Ordinance No. 05-17
R-05-03	Dec. 05, 2005	Ordinance No. 05-18
R-05-05	April 18, 2006	Ordinance No. 05-10
R-05-02	August 15, 2006	Ordinance No. 05-16
R-06-04	March 5, 2007	Ordinance No. 07-3
R-06-05	March 20, 2007	Ordinance No. 07-4
R-07-01	April 17, 2007	Ordinance No. 07-07

May 2007

Legend

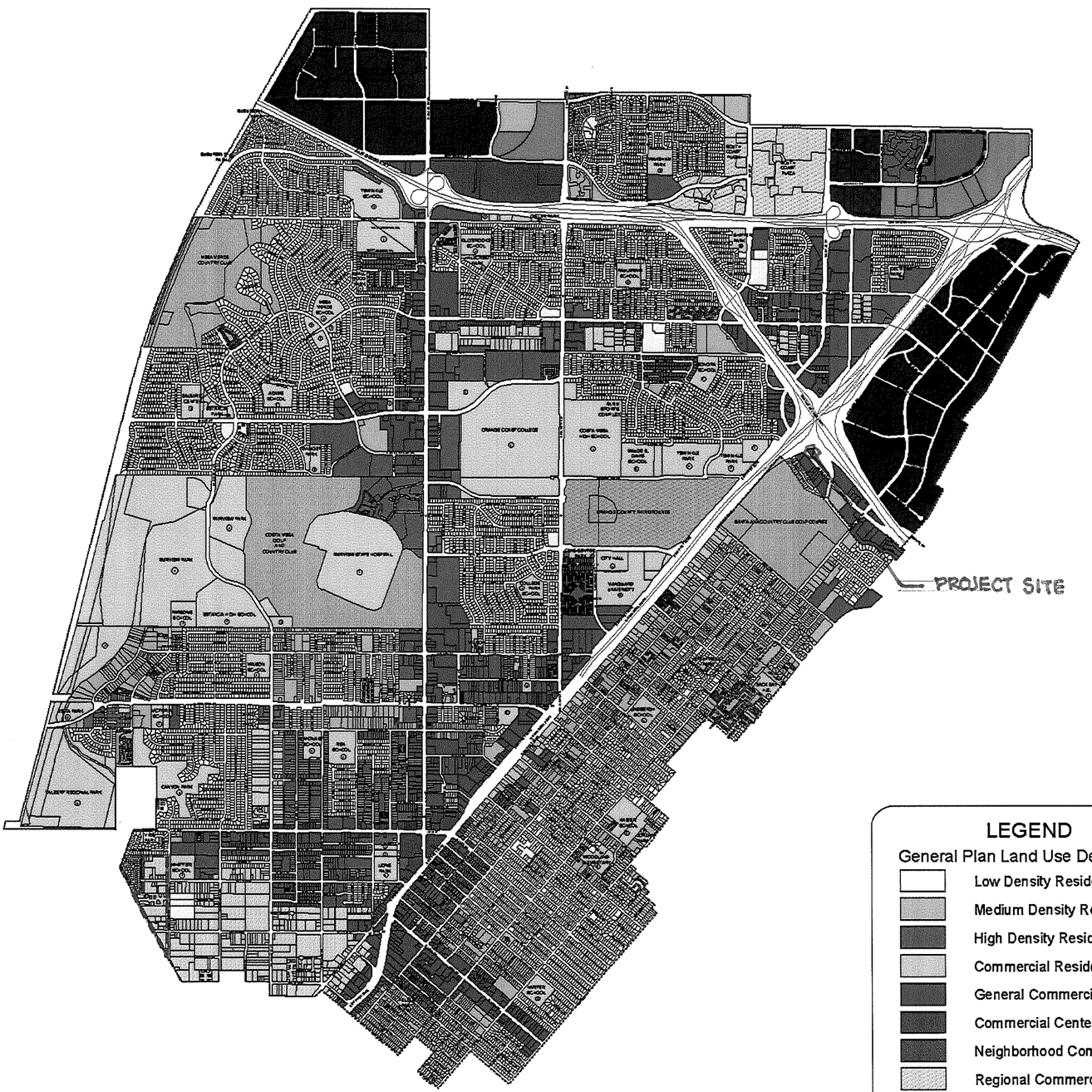
- City Boundary
- Sphere Of Influence
- Specific Plan Areas
- 19 West Urban Plan
- SoBECA Urban Plan
- Mesa West Residential Ownership Urban Plan
- Mesa West Bluffs Urban Plan
- R1 Single Family Residential
- R2-MD Multiple Family Residential (Medium Density)
- R3-HD Multiple Family Residential (High Density)
- R3 Multiple Family Residential
- AP Administrative and Professional
- C1 Commercial Limited
- C1-S Shopping Center
- C2 Local Business
- C3 General Business
- TC Town Center
- PDR-LD Planned Development Residential - LowDensity
- PDR-MD Planned Development Residential - Medium Density
- PDR-HD Planned Development Residential - High Density
- PDR-NCM Planned Development Residential - North Costa Mesa
- PDC Planned Development Commercial
- PDI Planned Development Industrial
- I&R Institutional and Recreational
- I&R-S Institutional and Recreational - School
- P Off-Street Parking
- MG General Industrial
- MP Industrial Park

0 0.5 1 1.5 2 Miles

NOTE: DUE TO THE SCALE OF THE ZONING MAP, PLEASE VERIFY ZONING WITH THE CITY OF COSTA MESA PLANNING DIVISION. (714)754-5245

City Of Costa Mesa

GENERAL PLAN LAND USE MAP



N

W E

S

0 1000 2000 3000 4000 Feet

0 0.5 1 1.5 2 Miles

NOTE: DUE TO THE SCALE OF THE GENERAL PLAN MAP, PLEASE VERIFY GENERAL PLAN DESIGNATIONS WITH THE CITY OF COSTA MESA PLANNING DIVISION. (714) 754-5245

City of Costa Mesa
2000 General Plan Land Use Map Amendments

Adopted	January 22, 2002	Resolution # 02-8
GP-01-04	January 22, 2002	Resolution # 02-9
GP-01-05	January 22, 2002	Resolution # 02-10
GP-02-01	June 03, 2002	Resolution # 02-37
GP-04-01	May 17, 2004	Resolution # 04-06
GP-04-02	Aug 02, 2004	Resolution # 04-52

July 2004

LEGEND

General Plan Land Use Designations

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial Residential
- General Commercial
- Commercial Center
- Neighborhood Commercial
- Regional Commercial
- Urban Center Commercial
- Cultural Arts Center
- Light Industry
- Industrial Park
- Golf Course
- Fairgrounds
- Public/Institutional

Special Designations

- 25-35 Dwelling Units Per Acre
- Underlying Designation of Low Density Residential that can be activated with Specific Plan
- Freeways
- City Limits

Attachment "D"

G.A. Nicoll
and Associates, Inc.

June 13, 2014
Project 6848-04

Ganahl Construction
6586 Beach Boulevard
Buena Park, California 90621

Attention: Mr. Patrick Ganahl

Subject: **GEOTECHNICAL INVESTIGATION REPORT**
Proposed Ganahl Lumber Facility
1100 Bristol Street
Costa Mesa, California

Gentlemen:

1. INTRODUCTION

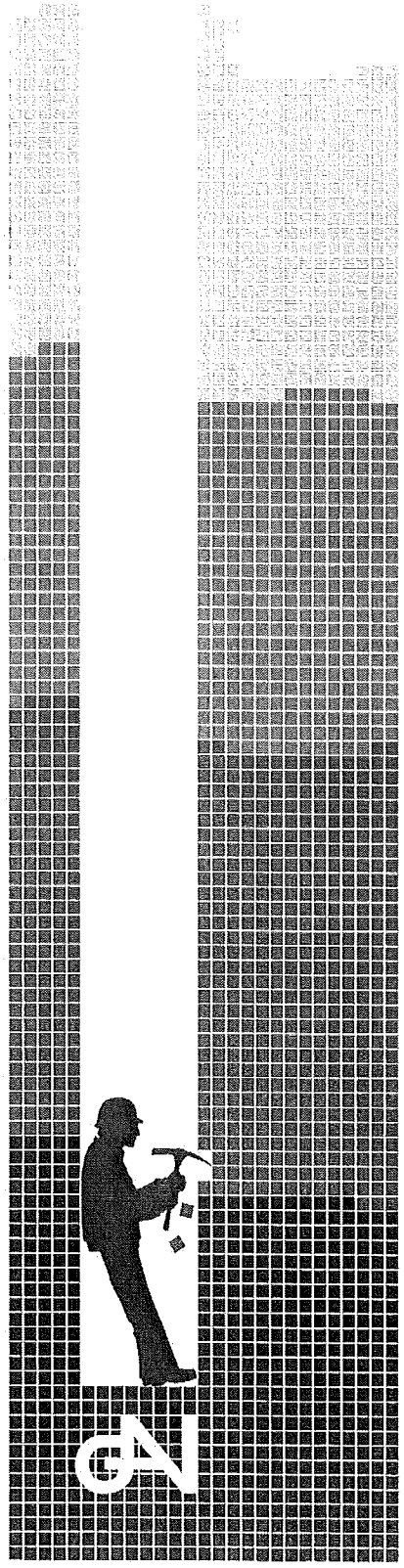
a) In accordance with your request and authorization, we have conducted a geotechnical investigation on the above referenced property. The results of the investigation are presented in this report.

b) The purpose of the investigation was to obtain soil and geologic data, and to provide preliminary design parameters and recommendations pertaining to the geotechnical aspects of the proposed development.

c) We have conducted percolation testing to evaluate the feasibility of utilizing an on-site drainage infiltration system.

d) We have reviewed the site plan showing the site conditions and the location of the new improvements. A copy of the plan was modified and used as the *Geologic Map, Figure B-1*, in Appendix B.

e) We have reviewed the geologic maps and reports of the area. The maps and reports are listed in *References, Appendix A*.



Page 2

2. IMPROVEMENTS

a) The conceptual plan provided shows a single-story retail store with an attached will-call storage building, loading dock, a separate building for milling and a number of outside lumber storage sheds. The structures are to be supported by conventional spread footings with slab-on-grade floors.

b) The remaining area will be utilized for parking and access.

c) The location and details regarding the proposed infiltration system have not been established.

d) Detailed structural and grading plans are not available at present.

3. SCOPE OF SERVICES

The scope of our services included:

a) Review of available pertinent reports, maps and data regarding the site;

b) Field exploration consisting of sixteen (16) hollow-stem auger borings, excavated to depths ranging from 7 to 51.5 feet below the existing ground surface;

c) Logging of the borings by our Project Geologist;

d) Obtaining in-situ and bulk samples for classification and laboratory testing;

e) Percolation testing;

f) Laboratory testing of selected samples considered representative of site conditions;

g) Geotechnical analysis of field and laboratory data;

h) Seismicity and seismic hazards assessment;

i) Preparation of a report presenting our findings, conclusions and recommendations.

4. FIELD INVESTIGATION

Details of the field exploration, including the Logs of Borings, are presented in *Appendix B, Field Exploration.* The boring locations are shown on the *Geologic Map, Figure B-1, in Appendix B.*

5. LABORATORY TESTING

Description of the laboratory tests and the results are presented in *Appendix C.*

6. PERCOLATION TESTING

The details and results of our percolation testing are presented in *Percolation Test Results, Appendix D.*

7. SITE DESCRIPTION

7.1 Location

a) The site is located at 1100 Bristol Street, in Costa Mesa, California.

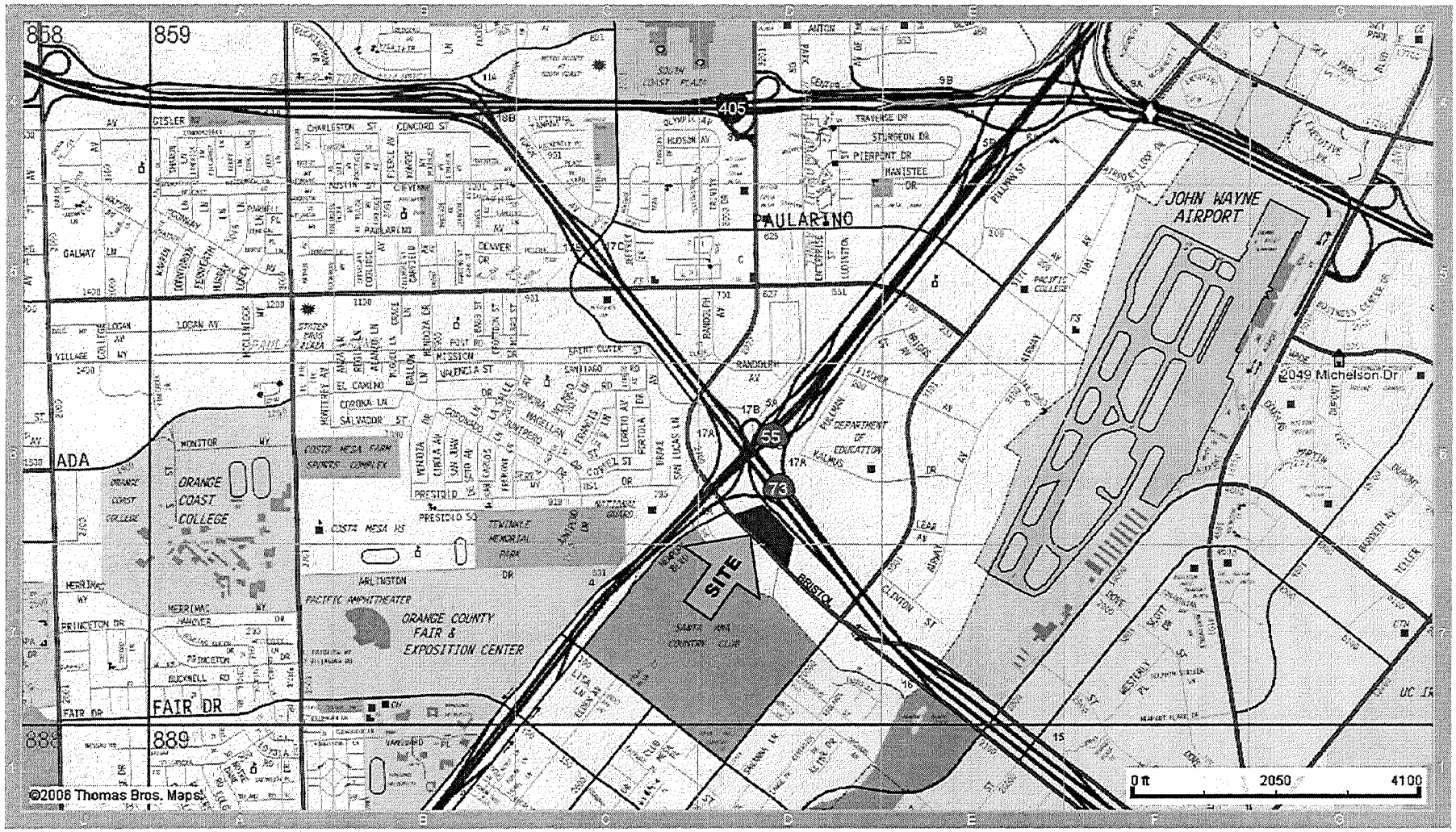
b) The approximate site location is shown on the *Location Map, Figure 1.*

7.2 Surficial Conditions

a) The project site is a trapezoidally shaped, 5.9+ acre flat site, located on the northeast side of Bristol Street. A 7±-foot-high slope is situated along the northeast side of the property.

b) A County Flood Control access road is situated along the north side of the property. The existing Ganahl Lumber facility is situated to the southeast. An easement for the Santa Ana Delhi Channel is located on the east side of the site. A triple-box concrete drainage culvert is located within the easement. The outside dimensions of the box are approximately 62 feet wide by 16 feet deep. The plans show a fill cover ranging from 4 to 6 feet. Additional fill may have been added in later years.

LOCATION MAP



G. A. Nicoll & Associates, Inc. EARTH SCIENCE CONSULTANTS	GANAHL Construction Corporation New Costa Mesa Facility 1100 S.E. Bristol Street, Costa Mesa, CA		
	6848-04	June 2014	Fig. 1

c) Several abandoned concrete slabs are situated near the entrance to the property. A fire hydrant is located in about the center of the site. A water line connects to the hydrant from the street.

d) A block wall is present along the Bristol Street property line and at the northwest corner of the site. Chain-link fencing is situated along the County Flood Control easement road. The maintenance access opening for the Santa Ana Delhi box culvert is located offsite near the northerly corner of the property.

e) The above mean sea level (amsl) elevations range from approximately 33.5 to 36 feet. The southeast half of the site drains via sheet flow toward the south corner of the site to a filter-fabric covered catch basin. The northwest half drains via sheet flow toward the low area long the northwest side of the site.

f) The site is mostly devoid of vegetation, with the exception of some scattered weeds, and some trees and scrubs on the slope along the northern side of the property.

g) The site conditions are shown on the *Geologic Map, Figure B-1 in Appendix B.*

8. GEOLOGY

8.1 General Conditions

a) The project site is underlain by fill that overlies alluvium and late Pleistocene age terrace deposits. The Geologic Map of Orange County, *Reference 8,* indicates that the site is within the marine terrace deposits (Qtm)) that underlie the Newport Mesa. The alluvial deposits are generally of minimal thickness.

b) The old Delhi Drainage Ditch was located on the property. The approximate location is shown on *Figure B-1* and in older photographs (5/30/1953) and a 1935 USGS topographic map for the Newport Beach Quadrangle.

c) The ditch was replaced by the realigned Santa Ana Delhi unlined channel some time prior to December 1992. The channel was replaced by the 3-box, concrete drainage channel at the project site.

d) The deeper fills at the site are located in the area of the old Delhi Drainage Ditch and along the sides of the current 3-box channel. A relatively thin layer of alluvium was found in Boring B-10 beneath the fill placed in the area of the old Delhi Drainage Ditch.

8.2 Project Site Geology

8.2.1 General Conditions

a) At the project site 6 to 25+ feet of fill covers mostly Pleistocene-age terrace deposits, with the deepest fill having been found along the sides of the 3-box channel.

b) Fill found in the area of the old Delhi Drainage Ditch ranged in thickness from approximately 11 to 19 feet. 2.5± feet of alluvium was found beneath the fill in the old ditch area in Boring B-10.

c) The fill thickness in the remaining areas of the site ranged from approximately 6 to 11 feet.

d) The fill thickness beneath the proposed retail store was found to range from approximately 6 to 19 feet, with the thickest fill in the west corner of the building *(see B-3)* and the thinnest section in the northeast corner *(see B-4)*.

8.2.2 Fill (FILL)*

a) Fill materials encountered in the borings consisted predominantly of thick layers of firm to very stiff, moist to saturated Sandy CLAY, and medium dense to dense, moist to saturated Silty and Clayey SAND. A 12±-inch layer of Silty to Sandy CLAY with Gravel is present at the surface.

b) An estimated 6 to 10 feet of moist to very moist, dense and stiff, Silty SAND with Gravel, Silty SAND and Sandy CLAY overlies the 3-Box Channel.

*See the Key on the Geologic Map, Figure B-1, for identification of symbols

8.2.3 Alluvium (Qal)*

The thin layer of alluvium found in Boring B-10, at 14 to 16.5 feet, consisted of dark greenish-gray, very moist to saturated, soft, Silty CLAY with black carbon stringers and very decayed roots.

8.2.4 Terrace Deposits (Qt)*

a) The terrace deposits encountered consisted of medium thick to thick layers of slightly moist to wet, medium dense to dense, mostly fine- to coarse-grained SAND, very moist to saturated, stiff, greenish-brown to greenish-gray Silty and Sandy CLAY, and thin to medium thick layers of yellowish- to light greenish-brown, moist to very moist, stiff Sandy and Clayey SILT.

b) A thick, wet, dense layer of fine- to coarse-grained SAND at 28 to 44 feet overlies a dark greenish-gray, soft to stiff, saturated Silty CLAY, to the maximum depth drilled of 51.5 feet.

c) Some layers of shells and shell fragments were found in the deep Silty CLAY deposits.

d) Descriptions of the materials encountered are found in the *Logs of Borings, in Appendix B.*

*See the Key on the Geologic Map, Figure B-1, for identification of symbols

9. GROUND WATER

a) Ground water was encountered in several borings and stabilized at depths ranging from 23.5 to 24.5 feet below the existing ground surface and 10.7 to 12 feet above mean sea level (amsl), adjusted for variations in the ground surface elevations.

b) The shallowest amsl level of 12 feet was found in Boring B-i3 in the westerly portion of the site. This may represent a perched ground water condition overlying the less permeable Silty CLAY layer found at 43 to 44 feet.

c) A County of Orange boring, B-7, drilled in December 1992 for the Santa Ana Delhi Channel, shows a stabilized ground water level at 27 feet, or 7.8 feet amsl.

d) A review of Seismic Hazard Zone Report for the Anaheim and Newport Beach Quadrangles, SHZR-03 *(Appendix A, Reference 4)*, shows a historically highest ground water level in the general area of the site at 30 feet of the ground surface.

e) The level for the principal groundwater aquifer beneath the site is approximately -50 feet below mean sea level.

10. SEISMICITY

10.1 General

a) Seismic risk in Southern California is a well-recognized factor, and is directly related to geologic fault proximity to active or potentially active fault zones, and on the type of geologic structures. In relative terms, seismic damage is generally less intense in consolidated formations, *i.e.* bedrock, than in unconsolidated materials, such as alluvium.

b) In Southern California, most of the seismic damage to man-made structures results from ground shaking, and to a lesser degree from liquefaction and ground rupture caused by earthquakes along active fault zones. In general, the greater the magnitude of the earthquake, the greater the potential damage.

c) Seismic hazards at this site are attributed to ground shaking as a result of an earthquake epicentered on an active nearby fault.

Ground rupture is not expected to occur on the property as a consequence of fault movement during an earthquake event on active faults.

10.2 Site Seismicity

10.2.1 Design E.Q. Fault

a) The site is not located within a currently established Alquist-Priolo Earthquake Fault Zone. The closest approach of known active faults to the site is the San Joaquin Hills Thrust Fault, which lies 1.9 miles or 3.0 km to the southeast of the site. The magnitude of a credible earthquake on that fault is on the order of 6.3.

b) For a maximum credible earthquake of 6.3 generated along the San Joaquin Hills Thrust, a peak acceleration of 0.813g is estimated for the site (Blake, 2004, Ref. 1). The following seismic factors from the 2013 Uniform Building Code are considered applicable.

10.3 Site Details and Seismic Parameters

The following site details and seismic parameters, utilizing the 2010 ASCE 7-10 design code document, are listed below.

a) Geographic Location: Latitude 33.670558°
Longitude -117.885632°

b) Site Classification: D

c) Site Occupancy Category: II

d) Spectral Response Accelerations: $S_s = 1.589g$ $S_1 = 0.584g$

e) Site Coefficients: $F_a = 1.0$ $F_v = 1.5$

f) Spectral Response Accelerations:
$SM_s = 1.589g$ (0.2 sec. period)
$SM_1 = 0.876g$ (1.0 sec. period)

g) Design Spectral Response Accelerations:
$SD_s = 1.060g$ (0.2 sec. period)
$SD_1 = 0.584g$ (1.0 sec. period)

h) The final selection of design coefficients and method of design should be made by the structural engineer based on appropriate design guidelines and ordinances, desired structural response, and structural performance objectives.

11. GEOLOGIC HAZARDS ASSESSMENT

This section generally follows the guidelines prepared by the California Division of Mines and Geology and most of the conclusions are presented on a subjective scale.

11.1 Seismic Hazards

11.1.1 Ground Surface Rupture

The property is not located within an Alquist-Priolo Earthquake Fault zone for active faults. Therefore, ground rupture along a fault plane is not expected at the site since no known active faults are present.

11.1.2 Seismic Ground Shaking

a) Slight to intense ground shaking is possible at the site if an earthquake occurs on a segment of an active fault in the Southern California region.

b) Buildings should be designed to resist seismic loads.

c) Ground shaking is not expected to be any more intense than that expected at the nearby residences.

11.2 Secondary Seismic Hazards

11.2.1 Liquefaction

The subject site is located within the liquefaction potential zone as shown on the State of California Seismic Hazard Zone Map, for the Newport Beach Quadrangle. As shown on Boring Logs B-3 and B-9 (Appendix B), the Terrace Material layers are present below the depth of historic high groundwater table (23.5 bgs). Terrace Materials consist of silty clay and dense sand existing. Based on the results of our investigation,

potential for liquefaction below the proposed building and storage is very low. It should be noted that as stated in the 1998 NCEER (ASCE Journal of Geotechnical and Geoenvironmental Engineering, April 2001), liquefaction potential pertains to *"Holocene or fluvial sediments."*

11.2.2 Seismically-Induced Landslides and Lateral Spreading

The potential for lateral spreading is very low, and is not located within an area designated as having a potential for earthquake-induced landsliding.

11.2.3 Seismically-Induced Settlement

a) Strong seismic shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Some loose, soft fill and native soil deposits are more susceptible to this phenomenon than others. Artificial fills, if not adequately compacted, may also experience seismically-induced settlement.

b) Since the entire soft/loose existing fill will be removed below the proposed building and storage structure and recompacted, and since the underlying Terrace Deposits consist of silty clay and dense sand, the potential for seismically-induced settlement is considered very low below the proposed structures. The maximum seismically induced settlement is anticipated to be less than ½ inch.

11.2.4 Flooding Attributable to Dam/Levee Failure

Flooding resulting from a failure of dam or levee failure will not occur.

11.2.5 Seiches and Tsunamis

The site is not located in an area that would be impacted by seiches and tsunamis.

11.2.6 Compressible Soils/Hydroconsolidation

Based on consolidation tests performed on selected fill samples and considering the moisture content of soil layers above the groundwater table, the collapse potential of fill soils is very

low. In addition, all fill soils below the proposed structures will be removed and replaced as compacted fill. Furthermore, Terrace Deposits are dense and stiff. Accordingly, the potential for excessive settlement due to compressibility or hydroconsolidation of these soils is considered very low.

11.3 Expansive Soil

a) From observation and laboratory testing and our experience with similar type materials, the Silty and Clayey SANDS are considered to have a medium expansion potential.

b) Future import materials (if any) should be sampled and tested prior to delivery. Additionally, expansion tests should be conducted on the near surface materials at the completion of rough grading.

11.4 Flooding, Erosion and Sedimentation

a) The planned development is not located within a 100- to 500-year flood zone.

b) Since the site has gentle grades and the future improvements and grades will improve surface water drainage, erosion and sedimentation is unlikely to occur.

11.5 Loss of Mineral Resources

Since no known economic mineral resources are present on the site, the loss of mineral resources as a consequence of development does not apply.

12. CONCLUSIONS AND RECOMMENDATIONS

12.1 General

a) It is our opinion that the site will be suitable for proposed development, from the geotechnical aspect, assuming that our recommendations are implemented.

b) We are of the opinion that the proposed structure can be supported on shallow spread footings founded in compacted fills.

c) We consider that the anticipated grading will not adversely affect, nor be adversely affected by, adjoining property, with due precautions being taken.

d) The design recommendations in the report should be reviewed during the grading phase when soil conditions in the excavations become exposed.

e) The final grading plans and foundation plans/design loads should be reviewed by the Geotechnical Engineer. Additional recommendations may be required at that time.

12.2 Grading

12.2.1 Processing of On-Site Soils

a) The upper existing fill soils below the proposed structures (within the northern portion of the site) are not documented engineered fills and are not considered adequate to support the building loads. Therefore, these materials should be removed and replaced as compacted fills. Horizontal extent of removals should extend beyond the structure to a point where a 1:1 line projected from outside edge of the footing intersects the underlying Terrace Deposit, or at least 5 feet beyond the building foundations, whichever is larger.

b) The existing fill soils below the areas of the proposed parking lot and sheds should be overexcavated and replaced by compacted fills to a depth of 3 feet below the existing grades, or 3 feet below the design grade; whichever is deeper.

c) Temporary excavation to a depth of 10 feet may be performed at a slope ratio of 1:1 (H:V) and when the overexcavation depth exceeds 10 feet, it should be performed at a slope ratio of 1.5:1 (H:V).

d) Wherever the new fill is to be placed, the upper 6 to 8 inches of the subgrade should, after overexcavation, first be scarified and reworked.

e) Any loosening of reworked or native material, consequent to the passage of construction traffic, weathering, etc., should be recompacted prior to further construction.

f) The depths of overexcavation should be reviewed by the Geotechnical Engineer during the actual construction. Any surface or subsurface obstructions, or questionable material encountered during grading should be brought immediately to the attention of the Geotechnical Engineer for proper exposure, removal or processing as directed.

g) No underground obstructions or facilities should remain in any structural areas. Depressions and/or cavities created as a result of the removal of obstructions should be backfilled properly with suitable material, and compacted.

h) Cavities created by the removal of tanks, root bowls, etc. should be graded so that the side slopes are no steeper than 1.5:1 (H:V) prior to placement of backfill.

i) Any soil loosened during the removal of backfill that remains in abandoned utility line trenches or from removal of tree bowls, should be removed and recompacted.

12.2.2 Material Selection

a) After the site has been stripped of any debris, vegetation and organic soils, excavated on-site soils are considered satisfactory for reuse in the construction of on-site fills, provided the organic content does not exceed 3 percent by volume.

b) If crushed concrete and asphalt, or rocks are to be placed in the fill, they should not exceed 6 inches, and not exceed 20 percent of the volume of the fill.

12.2.3 Compaction Requirements

a) Reworking and compaction shall include moisture-conditioning/drying as needed to bring the soils to slightly above the optimum moisture content. All reworked soils and structural fills should be densified to achieve at least 90 percent relative compaction with reference to the laboratory compaction standard. The optimum moisture content and

maximum dry density are determined in the laboratory in accordance with the current ASTM Test Designation D1557 (Reference: Appendix C).

b) Fill should be compacted in lifts not exceeding 8 inches in loose conditions.

12.2.4 Excavating Conditions

Excavation of on-site materials may be accomplished with standard earthmoving or trenching equipment. No hard rock was encountered which would require blasting.

12.2.5 Shrinkage/Subsidence

a) For preliminary earthwork computations, an average shrinking factor of 5% is estimated for the general fill.

b) Subsidence may be assumed at ¾-inch.

12.2.6 Expansion Potential

a) Based on our visual observations and test results, the expansivity of the Silty and Sandy CLAY is considered to be medium. Any imported material, or doubtful material exposed during grading, should be evaluated for its expansive properties.

b) In any event, since there may be changes in the soil type between our borings, subgrade soils should be tested for their expansion potential during the concluding stages of grading.

12.2.7 Sulphate Content

Appropriate recommendations will be provided after completion on ongoing laboratory tests.

12.2.8 Utility Trenching/Retaining Wall Excavations

a) The walls of temporary construction trenches should stand nearly vertical, with only minor sloughing, provided the total depth does not exceed about 4 feet. Shoring of

excavation walls or flattening of slopes may be required, if greater depths are necessary.

b) Trenches should be located so as not to impair the bearing capacity or to cause settlement under foundations. As a guide, trenches should be clear of a 45-degree plane extending outward and downward from the edge of foundations.

c) Existing onsite soils may be utilized for trenching backfill provided they are free of organic materials. Very moist to saturated soils may need drying prior to backfilling.

d) All work associated with trench shoring must conform to the state and federal safety codes.

12.2.9 Surface Drainage Provisions

Positive surface gradients should be provided adjacent to the buildings to direct surface water run-off away from structural foundations and to suitable discharge facilities.

12.2.10 Grading Control

a) All grading and earthwork should be performed under the observation of a Geotechnical Engineer in order to achieve proper subgrade preparation, selection of satisfactory materials, and placement and compaction of all structural fill. Sufficient notification prior to stripping and earthwork construction is essential to make certain that the work will be adequately observed and tested.

b) A pre-grading meeting should be held on site to discuss the details for the rough and fine grading.

12.3 Slabs-on-Grade

a) Concrete floor slabs may be founded on the compacted fill soils. The subgrade should be proof-rolled just prior to construction to provide a firm, unyielding surface, especially if the surface has been loosened by the passage of construction traffic.

b) It is recommended that the interior slab-on-grade should be underlain by 2 inches of SAND with a 10-mil plastic vapor barrier beneath. Floor slabs should be at least 4 inches thick.

c) It is recommended that #3 rebars at 18 inches on center each way, or equivalent be provided as minimum reinforcement on slabs-on-grade. Joints should be provided.

d) The plastic barrier can be placed on the subgrade. The subgrade surface should be smooth and free of rocks or other protrusions.

12.4 Foundations

The proposed structure, of the type anticipated, can be founded on shallow continuous footings.

12.4.1 Allowable Bearing Capacities

a) Continuous Footings: An allowable soil bearing capacity of 1,500 pounds per square foot may be utilized for design of continuous footings founded at a minimum depth of 12 inches below the lowest adjacent final grade. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width, to a maximum value of 2,500 pounds per square foot. The recommended allowable bearing value includes both dead and live loads, and may be increased by one-third for short duration wind and seismic forces.

b) Pad Footings: An allowable soil bearing capacity of 1,500 pounds per square foot may be utilized for design of isolated 24-inch-square footings founded at a minimum depth of 12 inches below the lowest adjacent final grade for pad footings that are not a part of the slab system and are used for support of such features as roof overhang, second-story decks, patio covers, etc. This value may be increased by 20 percent for each additional foot of depth and by 10 percent for each additional foot of width, to a maximum value of 2,500 pounds per square foot. The adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings. Exterior isolated pad footings may need to be connected to adjacent pad

and/or continuous footings via tie beams at the discretion of the project structural engineer.

c) The minimum footing dimensions and reinforcement recommended herein may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2013 CBC) by the structural engineer responsible for foundation design based on his/her calculations, engineering experience and judgment.

12.4.2 Lateral Resistance

A passive earth pressure of 250 pounds per square foot per foot of depth, to a maximum value of 2,500pounds per square foot, may be used to determine lateral bearing resistance for footings. In addition, a coefficient of friction of 0.30 times the dead load forces may be used between concrete and the supporting soils to determine lateral sliding resistance. The above values may be increased by one-third when designing for transient wind or seismic forces. It should be noted that the above values are based on the condition where footings are cast in direct contact with compacted fill or competent native soils. In cases where the footing sides are formed, all backfill placed against the footings upon removal of forms should be compacted to at least 90 percent of the applicable maximum dry density.

12.4.3 Footings

a) Exterior continuous footings supporting one- and two-story structures should be founded at a minimum depth of 12 inches below the lowest adjacent final grade, respectively. Interior continuous footings may be founded at a minimum depth of 10 inches below the top of the adjacent finish floor slabs.

b) All continuous footings should have minimum widths of 12 and 15 inches for one- and two-story construction, respectively. All continuous footings should be reinforced with a minimum of two No. 4 bars, one top and one bottom.

c) A minimum 12-inch-wide grade beam founded at the same depth as adjacent footings should be provided across garage entrances or similar openings (such as large doors or bay

windows). The grade beam should be reinforced with a similar manner as provided above.

d) Interior isolated pad footings, if required, should be a minimum of 24 inches square and founded at a minimum depth of 12 inches below the bottoms of the adjacent floor slabs. Pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings.

e) Exterior isolated pad footings intended for support of roof overhangs such as second-story decks, patio covers and similar construction should be a minimum of 24 inches square and founded at a minimum depth of 18 inches below the lowest adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings. Exterior isolated pad footings may need to be connected to adjacent pad and/or continuous footings via tie beams at the discretion of the project structural engineer.

f) The minimum footing dimensions and reinforcement recommended herein may be modified (increased or decreased subject to the constraints of Chapter 18 of the 2013 CBC) by the structural engineer responsible for foundation design based on his/her calculations, engineering experience and judgment.

(Notes:

- In the event that footings are founded in structural fills consisting of imported materials, the allowable bearing capacities will depend on the type of these materials, and should be re-evaluated.

- Planter areas should not be sited adjacent to walls.

- Footing excavations should be observed by the Geotechnical Engineer prior to placement of steel.

- It should be ensured that the embedment depths do not become reduced or adversely affected by erosion, softening, planting, digging, etc.)

12.4.4 Settlements

Total and differential settlements under the footings are expected to be within tolerable limits; typically less than 1-inch over a 40-foot span.

12.5 Footings for Free-Standing Walls

a) Footings for masonry block walls may be designed in accordance with the bearing and lateral resistance values provided previously for building footings. However, as a minimum, the wall footings should be embedded at a minimum depth of 12 inches below the lowest adjacent final grade. The footings should also be reinforced with a minimum of two No. 4 bars, one on top and one on the bottom.

b) In order to reduce the potential for unsightly cracking related to the possible effects of differential settlement and/or expansion, construction joints should also be provided in the block walls at each corner and at horizontal intervals of approximately 20 to 25 feet. The separations should be provided in the blocks and not extend through the footings. The footings should be poured monolithically with continuous rebars to serve as effective "grade beams" below the walls.

12.6 Corossivity

Results of the laboratory tests indicate that near-surface soils contain water soluble sulfate content of less than 0.10 percent. Accordingly, a negligible exposure to sulfate could be expected for concrete placed in contact with the onsite soils. Type II cement or equivalent may therefore be used for concrete.

12.7 Pavement Section Design

a) The table on the following page provides a preliminary pavement design based upon an estimated R-Value of 15 for the proposed pavement areas. The assumed values of Traffic Index for type of traffic listed in the following table should be reviewed and approved by the project civil engineer. Final pavement design should be based on R-Value testing of the subgrade soils near the conclusion of rough grading.

Type of Traffic	Traffic Index	Asphaltic Concrete (in)	Base Material (in)
Automobile Parking Stalls	4.0	3.5	4.0
Light Vehicle Drive Circulation Areas	5.5	5.0	6.0
Heavy Truck Access Areas	7.0	7.0	8.0

b) All concrete slabs to be utilized for pavement shall be a minimum of six inches in thickness and placed on approved subgrade soils. In addition, the above recommendations are based upon estimated traffic loads. The actual traffic loadings should be reviewed when available and the sections adjusted as necessary. Positive drainage toward an approved outlet should be provided for all pavement areas.

c) Approved base material shall be used, consisting of a Class II aggregate or equivalent and should be compacted to a minimum of 95% relative compaction. All pavement materials shall conform to the requirements set forth by the City of Torrance. The base material and asphaltic concrete should be tested prior to delivery to the site and during placement to determine conformance with the project specifications.

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13. LIMITATIONS

a) Soils over an area show variations in geological structure, type, strength and other properties from what can be observed, sampled and tested from specimens extracted from necessarily limited exploratory excavations. Therefore, there are natural limitations inherent in making geologic and soil engineering studies and analyses. Our findings, interpretations, analyses and recommendations are based on observation, and our professional experience; and the projections we make are professional judgments conforming to the usual standards of the profession. No other warranty is herein expressed or implied.

b) In the event that during construction, conditions are exposed which are significantly different from those described in this report, they should be brought to the attention of the Geotechnical Engineer.

The opportunity to be of service is sincerely appreciated. If you have any questions or if we can be of further assistance, please call.

Very truly yours,

G. A. NICOLL & ASSOCIATES, INC.

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President, Engineering Geologist
CEG 34
(Exp. December 31, 2015)

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GAN/AG/GDH:cs

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APPENDIX A

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12. State of California, Division of Mines and Geology, Special Studies Zones, Newport Beach Quadrangle, 1986.

13. Truxaw, Joseph C. and Associates, Inc., 4/24/14, Proposed Site Plan, Sheet A0.1.

14. U.S.D.A., 5/30/1953, Aerial Photographs AXK-6k-7 and 8 (Newport Beach, Costa Mesa area).

15. U.S.G.S., 1938, Topographic Map of the Newport Beach 7.5 Min. Quadrangle.

16. U.S.G.S. Earthquake Hazards Program, Seismic Design Maps and Tools for buildings and Bridges, Java Ground Motion Parameter Calculator.

17. U.S.G.S., Topographic Map of Newport Beach Quadrangle, 7.5 Minute Series, 1964 photo revised 1981.

APPENDIX B

Field Exploration

a) The site was explored utilizing a CME-75 Hollow-Stem Auger drill rig to excavate 16 borings to depths ranging from 7 to 51.5 feet below the existing ground surface. The locations of the borings are shown on the *Geologic Map, Figure B-1.*

b) Profiles of the geologic conditions are shown in the *Geologic Cross Sections A-A' and B-B', in Figure B-2.*

c) The soils encountered in the borings were logged and sampled by our Project Geologist. The soils were visually classified in accordance with the Unified Soil Classification System described in *Figure B-3.* The Logs of Borings are presented in *Figures B-4* through *B-19.* The logs, as presented, are based on the field logs, modified as required from the results of the laboratory tests. Driven ring and bulk samples were obtained from the excavations for laboratory inspection and testing. The depths at which the samples were obtained are indicated on the logs. The number of blows to drive a 12-inch sample is shown on the logs.

d) Standard Penetration Tests (SPT) were taken at various levels and the "N" values and bulk samples were obtained.

e) Unconfined strength tests were conducted at various depths in the cohesive soils using a Soil Test Pocket Penetrator, Model CL-700. The test results are shown on the logs.

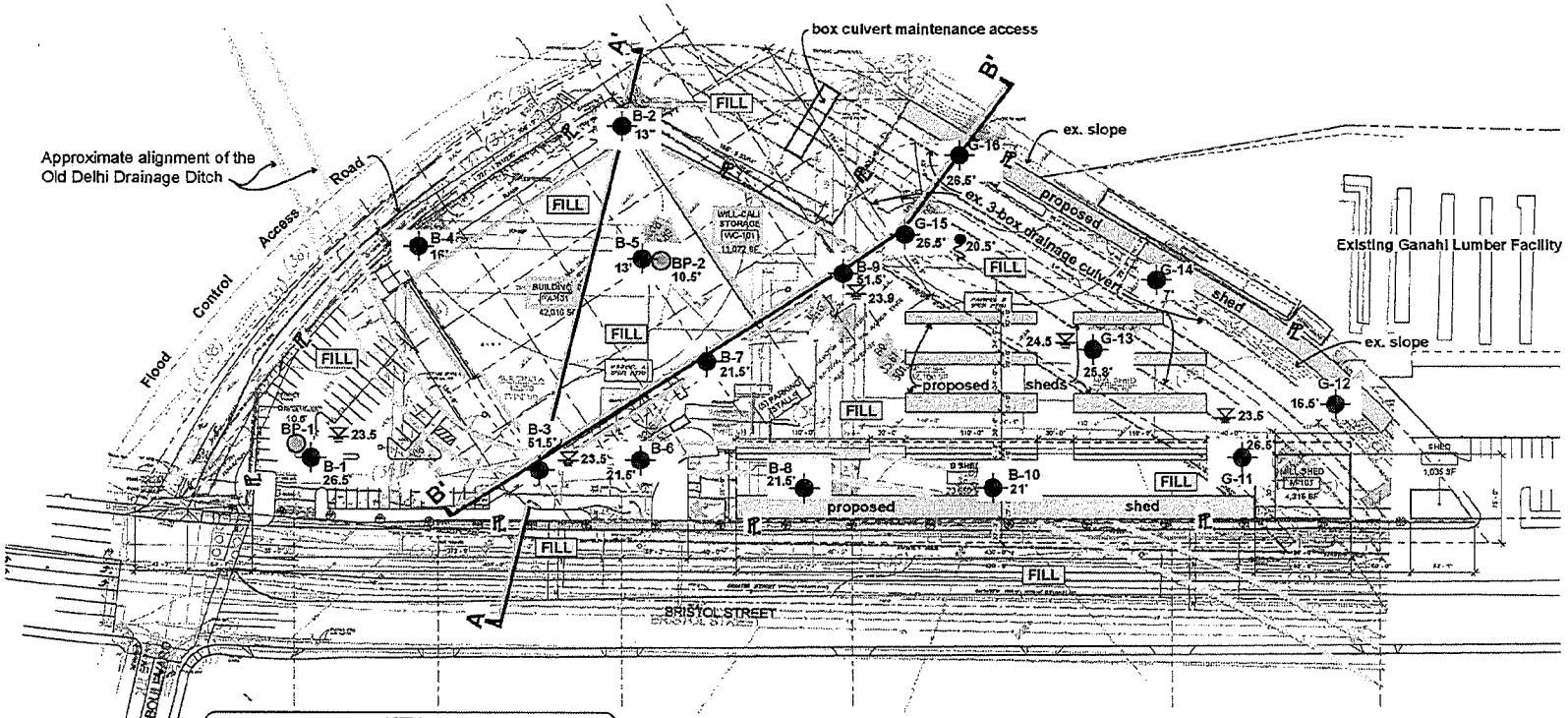
f) Some caving occurred within sandy layers below the ground water level when the augers were pulled, as indicated in the Boring logs.

g) Ground water was encountered and stabilized at 23.5 to 26.5 feet below the ground surface.

h) All borings were backfilled and tamped. The deeper borings were backfilled with grout.

i) The boring logs and details for our percolation study are presented in *Appendix D.*

GEOLOGIC MAP



KEY

FILL	Compacted Fill
Qal	Alluvium
Qt	Terrace Deposits (see geologic cross sections)
B — B'	Geologic Cross Section
23.5'	Ground Water Level, showing depth in boring
20.5'	Seepage, showing depth in boring
B-9 51.5' / G-16 26.5'	Location of Geotechnical Borings, showing total depths
BP-2 10.5'	Location of Percolation Test Boring, showing total depth

NOTE: Base Map modified from Onyx Architects Proposed Site Plan, printed 4/24/14, Sheet A0.1

N

100 0 100 200
scale feet

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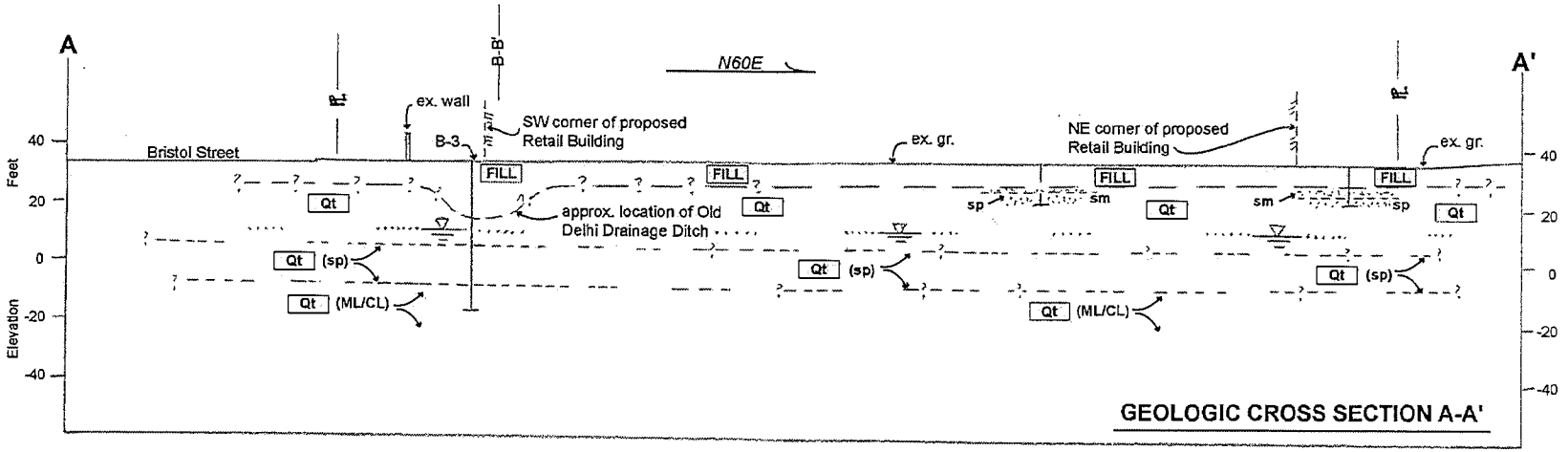
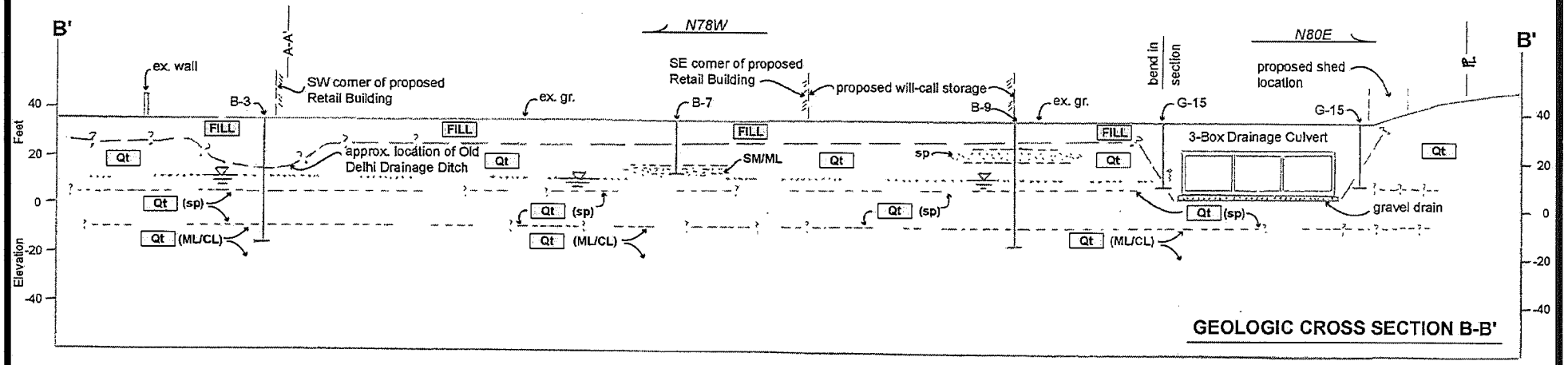
6848-04	June 2014	Fig. B-1



GEOLOGIC CROSS SECTION A-A'



GEOLOGIC CROSS SECTION B-B'

NOTE:
1) See the Key on the Geologic Map, Figure B-1 for identification of symbols
2) Dimensions of the 3-Box Culvert are based on the Structural Plans and not on any As-Built Plans. The box dimensions and fill cover are considered approximate

40 0 40 80
scale feet

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6848-04	June 2014	Fig. B-2

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS		DESCRIPTIONS
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size.)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size.)	CLEAN GRAVELS (Little or no fines)		GW	Well graded gravels, gravel-sand mixtures, little or no fines.
				GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amount of fines)		GM	Silty gravels, gravel-sand-silt mixtures.
				GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size.)	CLEAN SANDS (Little or no fines)		SW	Well graded sands, gravelly sands, little or no fines.
				SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)		SM	Silty sands, sand-silt mixtures.
				SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size.)	SILTS AND CLAYS (Liquid limit LESS than 50)			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
				OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
				CH	Inorganic clays of high plasticity, fat clays.
				OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS				Pt	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

PARTICLE SIZE LIMITS

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		
	No. 200	No. 40	No. 10	No.4	¾ in.	3 in.	12 in.

U.S. STANDARD SIEVE SIZE

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Date: June 2014

Project No.: 6848-04 | Figure No.: B-3

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34 feet	B-1

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: dark grayish-brown, moist FILL
		22	12.3	119.6					Sandy CLAY/Clayey SAND: dark to medium yellowish-brown, very moist, firm @ 2.5 feet, more sandy, stiff (4T/ft²), dense
						5		CL/	@ 5 feet, firm (2.25 T/ft²)
		31	20.9	109.7				SC	@ 5.5 feet, more sandy and less moisture @ 6 feet, very moist to saturated layer FILL
		29	10.5	124.1		10		SM	Silty SAND with Gravel: fine- to coarse-grained, light greenish-brown, very moist, dense @ 10 feet, dense
		36	3.9	103.5		15			@ 15 feet, very fine- to fine-grained, light yellowish-brown, slightly moist to moist, medium dense to dense, silty
S	P S P	23							@ 16 feet, medium dense TERRACE DEPOSITS
S	P S P	17				20		ML	Sandy SILT: greenish-brown, very moist, stiff TERRACE DEPOSITS
S	P S P	41				25		SP	SAND: fine- to coarse-grained, light yellowish-brown, wet, dense, few pea gravels TERRACE DEPOSITS
									Bottom of Boring at 26.5 feet. NOTE: 1) Ground water stabilized at 23.5 feet 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-4

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.05 feet	B-2

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								CL	Silty SAND: dark brown, dry to moist, some concrete debris, loose FILL
								ML	Sandy SILT: light yellowish-brown, moist FILL
		21	11.6	127.2		5		CL	Sandy CLAY with Silt: dark yellowish-brown, moist, very stiff to hard (4.5 + T/ft²) @ 4 feet, some pale white Sandy SILT FILL
		76	10.1	133.5				SM	Silty SAND: very light yellowish-brown, fine-grained, slightly moist, very silty, dense @ 6.5 feet, slightly cemented, slightly clayey
S P	S P	22				10		SM/SP	@ 10 feet, medium dense, slightly moist, some firm to coarse SAND and Sandy SILT layers TERRACE DEPOSITS
		38	1.1	104.9				SP	SAND: fine- to coarse-grained, dry to slightly moist, dense, few pea gravels TERRACE DEPOSITS
						15			Bottom of Boring at 13 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped
						20			
						25			

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Project No.:	Figure No.:
6848-04	B-5

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.5 feet	B-3

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
		9	14.1	111.5				CL	Sandy CLAY with Silt: dark brown, very moist, soft to firm, some gravel FILL
		8	24.5	97.8		5		CL	Sandy CLAY with Silt: light yellowish-brown, very moist to saturated, firm to stiff (2.5-3.0 T/ft²)
		5	17.7	109.4					@ 7 feet, soft, more sandy, very moist, some gray clay inclusions FILL
		11	13.1	116.0		10		SM	Silty SAND with Clay: fine- to medium-grained, very moist to saturated, medium dense
		22	19.2	95.9		15		CL	@ 15 feet, dense, some pea gravel, coarser, clayey, very moist, some very stiff (4.0T/ft²), Silty CLAY layers FILL
		28	16.9	108.9		20		ML	Sandy SILT: light greenish-brown, stiff to very stiff (3.5-4.0 T/ft²), some Clayey SILT layers TERRACE DEPOSITS
S	P S P	17	17.2					SM	Silty SAND: fine-grained, light yellow-brown, some orange oxide staining, very moist to saturated, medium dense, very silty @ 24 feet, wet
		23	23.6	95.6		25			@ 25 to 26 feet, fine- to medium-grained with Gravelly SAND layers, wet TERRACE DEPOSITS
S	P S P	9	24.3					CL	Silty CLAY with Sand; light greenish-gray, stiff, (2.5 T/ft²), very moist to saturated; the sand is fine grained

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Project No.:	Figure No.:
6848-04	B-6.1

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.5 feet	B-3

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
S P	S P	76+	21.1 13.3	105.1					SAND: fine-grained, light greenish-gray, dense to very dense, saturated @ 30 feet, Slightly silty, mostly medium-grained (poorly graded)
S P	S P	43				35		SP	@ 35 feet, fine- to coarse-grained, dense, wet
S P	S P	23	20.7			40			@ 40 feet, fine- to medium-grained (poorly graded) medium dense, some orange oxide staining, wet, slightly silty
									TERRACE DEPOSITS
S P	S P	11	33.7			45		CL	Silty CLAY: medium to dark greenish-gray, soft (.5-1.0 T/ft²) at 45 feet, some shell fragments; some fine sand
S P	S P	5	35.7			50			@ 50 feet, numerous shells and shell fragments, soft to firm, saturated
									MARINE TERRACE DEPOSITS
						55			Bottom of boring at 51.5 feet. NOTE: 1) Ground water stabilized at 23.5 feet 2) Some caving when augers pulled 3) Boring backfilled with grade

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Project No.:	Figure No.:
6848-04	B-6.2

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	33.65 feet	B-4

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LBJ/CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
		8	15.1	110.2				SC/ CL	Clayey SAND with Silt/Sandy CLAY: fine- to coarse-grained, brown, very moist, soft to firm (1.5 T/45²), some gravel, some greenish-brown Silty CLAY layers FILL
		18	13.5	113.7		5		CL	Sandy CLAY with Silt: grayish-brown, firm (1.5 T/ft²), moist to very moist @ 5 feet, more sandy (fine to coarse SAND), yellowish-brown, firm to stiff (3.0 T/45²), very moist
		11	14.3	118.0				CL/ SC	@ 7 feet, some fine gravel, more sandy, greenish-brown @ 10 feet, more sandy FILL
		42	2.9	126.0		10		SP	SAND: fine- to coarse-grained, light yellowish-brown, dry to slightly moist, dense, some fine gravel TERRACE DEPOSITS
		17	22.8	87.2		15		ML	Sandy SILT: light greenish-brown, very moist, very stiff, (4.5 T/ft²) TERRACE DEPOSITS
						20			Bottom of Boring at 16 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped
						25			

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Project No.:	Figure No.:
6848-04	B-7

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34.89 feet	B-5

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
						0		SM	Silty SAND with Gravel: fine- to coarse-grained, dark grayish-brown, slightly moist to moist
									@ 3 feet, coarse gravel FILL
		24	16.1	103.8					
						5			Sandy CLAY: greenish-gray, moist, very stiff (4.5 T/ft²), some pale greenish-gray carbonate
		14	20.9	104.3					@ 5 feet, very moist, stiff (3.0 T/ft²), light gray carbonate inclusions
								CL	@ 7 feet, some coarse SAND pockets FILL
		35	21.2	97.6					
						10		SP	SAND: fine- to coarse-grained, light greenish-gray to light yellowish-brown, slightly moist to dry, dense
									@ 12 feet, dry to slightly moist
		35	1.3	111.0					TERRACE DEPOSITS
						15			Bottom of Boring at 13 feet.
									NOTE:
									1) No ground water encountered
									2) Caving below 10 feet
									3) Boring backfilled and tamped
						20			
						25			

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Project No.:	Figure No.:
6848-04	B-8

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.52 feet	B-6

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									ASPHALT/BASE: 2" AC over 6" base rock PAVEMENT
									Sandy CLAY with Silt to Clayey SAND:: brown, very moist, firm
		13	16.5	110.5					@ 3 feet, firm to stiff (2.5 T/ft²), more sandy, dark greenish-brown and yellowish-brown
		21	13.4	111.6		5			@ 5 feet, light yellowish-brown, very moist, stiff @ 5.5 feet, firm yellow-brown Silty SAND layer
		16	20.6	108.0				CL/	@ 7 feet, light yellowish-brown, very moist, firm, some isolated pebbles, mottled, medium dense
								SC	@ 7.5 feet, layer of brown, moist, dense Silty SAND
						10			
		16	16.9	98.3					@ 12 feet, less clayey, mixture of stiff Clayey SILT and Sandy CLAY
S	P S P	4							@ 12.8 to 13.5 feet, layer of fine to coarse SAND
									@ 13.5 feet, dark brown, Clayey SAND: dense, very moist
		28	15.6	117.4		15		SC	@ 15 feet, very moist, dense
S	P S P	28							@ 15.5 feet, dense FILL
								ML	Sandy SILT: light yellowish-brown, very moist, very stiff (3.5 T/ft²) TERRACE DEPOSITS
S	P S P	35				20		SP	SAND: fine- to medium-grained, light yellowish-brown, slightly moist, dense, some thin, coarse SAND layers @ 21 feet, 1-inch layer Sandy SILT TERRACE DEPOSITS
						25			Bottom of Boring at 21.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-9

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.8 feet	B-7

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									Sandy CLAY with Silt: dark brown, very moist, firm, some Clayey Sand layers
									@ 2.5 feet, becomes very dark greenish-brown and more Sand, very stiff to hard (4.5 + T/ft²)
									@ 3.5 feet, dark brown, slightly moist, Silty SAND layers
		29	10.6	123.8					
						5			
		12	28.3	91.0				CL/	@ 5 feet, less SAND, still mostly greenish-brown, very stiff, (3.5.T/ft²) very moist
								SC	@ 7 feet, dark yellowish-brown, more sand, very stiff, moist to very moist
		27	16.8	109.3					
									@ 10 feet, Clayey SAND: very moist, dense
						10			
		26	16.2	128.6					FILL
S	P S P	17							Sandy CLAY with Silt/ Clayey SAND: greenish-brown, very moist, very stiff, some coarse sand partings
								CL/	
								SC	@ 15 feet, more SAND, very stiff
						15			
S	P S P	23							TERRACE DEPOSITS
									SAND and Sandy SILT: fine SAND, light yellowish-brown, medium dense; Sandy SILT is firm/medium dense
								SP/	
						20		ML	
S	P S P	17							TERRACE DEPOSITS
									Bottom of Boring at 21.5 feet.
									NOTE:
									1) No ground water encountered
									2) No caving
						25			3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-10

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.79 feet	B-8

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
		18	11.2	121.7					Sandy CLAY with Silt: dark brown, very moist, some grayish-brown mottling
									@ 2 feet, more SAND, fine to coarse, very moist, very stiff (4.0 T/ft²)
						5		CL	
		8	25.1	99.9					@ 5 feet, greenish-gray to green-brown, more moisture, firm to stiff (3.0 T/ft²)
		10	18.3	110.2					@ 7 feet, greenish-brown with brown mottling, firm to stiff (1.5 to 2.75 T/ft²), very moist
									@ 10 feet, greenish-brown, stiff (3.0 T/ft²)
									@ 10.5 feet, greenish-brown, fine to coarse Clayey SAND
		27	18.1	110.4		10		SC	FILL
S P	S P	18						SP	SAND: fine- to coarse-grained, light yellowish- to greenish-brown, slightly moist, medium dense, some SILT and thin Gravelly SAND layers
									TERRACE DEPOSITS
S P	S P	15				15		ML	Sandy SILT: light greenish-brown, moist, stiff (3.0 T/ft²), some light gray carbonate
									TERRACE DEPOSITS
S P	S P	27				20		SP/ ML	SAND: fine-grained and fine- to medium-grained, light yellowish- to greenish-brown, slightly moist, with some greenish-brown, moist, Sandy SILT layers
									TERRACE DEPOSITS
						25			Bottom of Boring at 21.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-11

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36 feet	B-9

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SC	Clayey SAND with Gravel: dark grayish-brown, slightly moist FILL
		21	13.4	114.0				CL	Sandy CLAY with Silt: dark grayish-brown, moist, very stiff (4.5 + T/ft²)
		21	21.4	101.4		5			@ 4 feet, more moisture FILL
		9	18.7	108.7				CL	Silty CLAY with Sand: light greenish-gray, moist to very moist, very stiff to hard (4.5 + T/ft²), pale green carbonate @ 7 feet, sandy FILL
								ML	Sandy SILT with Clay: greenish-gray, very moist, stiff (4.0 T/ft²)
		22	15.1	113.9		10		CL	@ 10 feet, Sandy Clay layer TERRACE DEPOSITS
		42	2.9	105.3		15		SP	SAND: fine- to coarse-grained, slightly moist, light yellowish-brown, medium dense to dense, some fine gravel @ 15 feet, dry to slightly moist, medium dense TERRACE DEPOSITS
S	P S P	9						ML	Clayey SILT: yellowish-brown, moist to very moist, very stiff to hard (4.5 T/ft²), some medium gray mottling
		24	18.3	109.9		20			@ 20 feet, more clayey, some SAND, very moist, very stiff TERRACE DEPOSITS
S	P S P	15							Sandy CLAY with Silt: medium greenish-gray and yellowish-brown, very moist, very stiff (4.25 T/ft²), some light gray carbonate
							▽		@ 23.9 feet, ground water stabilized
S	P S P	12				25		CL	@ 25 to 26.5 feet, few peaty stringers, very stiff, very moist TERRACE DEPOSITS
								SP	SAND: fine- to medium-grained, yellowish-brown, wet, dense, slightly silty

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Project No.:	Figure No.:
6848-04	B-12.1

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36 feet	B-9

Date Drilled: 5/19/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
S P	S P	33							@ 30 feet, fine-grained, wet, dense
S P	S P	64				35		SP	@ 35 feet, thin CLAY layer @ 35 to 36.5 feet, medium greenish-brown, wet, very dense, fine SAND with Silt
S P	S P	78				40			@ 40 feet, fine-grained, lots of fine biotite, slightly silty, wet, very dense
									TERRACE DEPOSITS
S P	S P	8				45		CL	Silty CLAY: dark greenish-gray, very moist to saturated, firm to stiff (2.5 T/ft²) @ 46 to 51.5 feet, layer of shells and shell fragments
S P	S P	4				50			@ 50 feet, soft, numerous shell fragments, saturated TERRACE DEPOSITS
						55			Bottom of boring at 51.5 feet. NOTE: 1) Ground water stabilized at 23.9 feet 2) Some caving in sandy layers 3) Boring backfilled with grout and tamped

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Project No.:	Figure No.:
6848-04	B-12.2

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.55 feet	B-10

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									SANDY CLAY with SILT: dark brown, very moist, some gravel in upper 12 inches
		23	11.3	118.5					@ 3 feet, very stiff (3.75 T/ft²), moist
									@ 3.5 feet, dark brown, less SAND
						5			
		19	11.5	127.2				CL	@ 6 feet, very stiff (3.75-4.5 T/ft²), moist, mix brown and greenish-brown
		22	15.4	113.9		10			@ 10 feet, mostly dark brown Silty CLAY with Sand, very stiff (4.5 T/ft²), very moist with greenish-brown Silty CLAY
									FILL
		5	21.5	100.7		15		CL/ CH	Silty CLAY: very dark greenish-gray, with some dark gray carbon stringers, soft, very moist to saturated, odorous (2.25 T/ft²), some very decayed roots
S	P S P	12							ALLUVIUM
								ML	Sandy SILT: light yellowish-brown, moist, stiff (2.75 T/ft²)
									TERRACE DEPOSITS
		80	8.1	111.7		20		SP	SAND: fine- to medium-grained, light yellowish-brown, slightly moist, dense to very dense TERRACE DEPOSITS
									Bottom of Boring at 21 feet.
									NOTE:
									1) No ground water encountered
									2) No caving
						25			3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-13

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34.34 feet	G-11

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: dark grayish-brown, slightly moist FILL
		25	10.6	120.1		5		CL	Sandy CLAY with Silt: dark brown, very moist, firm to stiff (4.25 T/ft²) at 5 feet @ 5.5 feet, layer of Silty SAND FILL
		28	7.9	107.5		10		SM	Silty SAND with Clay: yellowish-brown, very moist, medium dense to dense, some scattered gravel
S	P	14				15			@ 15 feet, more clayey and very moist, some gravel, medium dense
		39	10.0	118.4					@ 17 feet, less clayey, moist to very moist, dense
S	P	23				20			@ 20 feet, more silty, very moist, medium dense, some gravel
									@ 25 feet, sandy layer, wet, loose FILL
									SAND: fine to coarse, wet, loose, greenish-brown @ 26 feet, very dark grayish-brown, soft, Sandy SILT
S	P	5				25		SP	ALLUVIUM
									Bottom of Boring at 26.5 feet. NOTE: 1) Ground water stabilized at 23.6 feet 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-14

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	39.5 feet	G-12

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND: fine- to coarse-grained, yellowish-brown, slightly moist to moist FILL
		58	8.1	124.3		5		SC	Clayey SAND: dark brown, fine- to coarse-grained, moist, dense, some isolated, round gravel FILL
		94	7.4	119.1					Silty SAND with Clay: yellowsih-brown, moist, dense
		35	16.1	120.1		10		SM	@ 10 feet, very moist, dense FILL
S	P S P	35				15		SM SP	Silty SAND: yellowish-brown, slightly moist, dense @ 16 feet, fine, light yellowish-brown SAND TERRACE DEPOSITS
						20			Bottom of Boring at 16.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped 4) Boring 14 feet SW for survey stake
						25			

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Project No.:	Figure No.:
6848-04	B-15

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.35 feet	G-13
Date Drilled: 5/20/2014 GDH	This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.		

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: fine- to coarse-grained, dark grayish-brown FILL
		31	9.1	126.2		5		CL	Sandy CLAY: yellowish- to greenish-brown, very moist, very stiff to hard (4.5 + T/ft²), some Clayey SAND layers, some gravel FILL
		58	6.9	121.7		10			Silty SAND with Clay: fine- to coarse-grained, greenish- to yellowish-brown, moist, dense, some gravel
		30							@ 12.5 feet, layer of stiff, moist, Sandy CLAY
S	P S P	26				15		SM	
		7				20			@ 20 feet, very moist, light yellowish-brown, moderately dense, Silty
									@ 22 feet, Clayey SAND: very moist, medium dense
									@ 25 feet, fine, wet SAND
	S P	3				25		SP	@ 25.8 feet, refusal on something hard, possible footing? FILL
									Bottom of Boring at 25.8 feet. NOTE: 1) Ground water stabilized at 24.5 feet 2) No caving 3) Boring backfilled and tamped ** No Recovery

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Project No.:	Figure No.:
6848-04	B-16

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	35.22 feet	G-14

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE										
	BULK	TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									SM	Silty SAND: fine- to coarse-grained, yellowish-brown, slightly moist to moist, dense at 2 feet FILL
			28	12.7	114.1				CL	Sandy CLAY with Silt: dark greenish-brown, moist, stiff (2.75-3.0 T/ft²) FILL
			31	9.8	111.9		5		SM	Silty SAND: fine- to coarse-grained, yellowish-brown, moist, dense, some gravel @ 7 feet, refusal on hard object FILL
							10			Bottom of Boring at 7 feet. NOTE: 1) No ground encountered 2) No caving 3) Boring backfilled and tamped
							15			
							20			
							25			

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Project No.:	Figure No.:
6848-04	B-17

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36.03 feet	G-15

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									Silty SAND with Gravel: fine- to coarse-grained, slightly moist to moist, very dark grayish-brown
		36	11.2	121.8					@ 2 feet, greenish-brown, no gravel, moist, dense
									@ 3 feet, piece of coarse gravel in sample
						5		SM	
		28	9.8	117.9					@ 5.5 feet, less SILT, dense, moist
									@ 7 feet, dark greenish-brown, moist, dense, thin SAND layer at 7.5
		27	9.0	127.0					FILL
		25	11.4	122.9		10			Clayey SAND: fine- to coarse-grained, greenish-brown, very moist, dense
S	P S P	2							
						15		SC	@ 15 feet, Clayey SAND: loose, very moist
								SM	@ 20 feet, wet, loose Silty SAND: slight seepage
S	P S P	3				20			FILL
		NO RECOVERY						ML	Sandy SILT: greenish-brown, stiff, very moist
S	P S P	3				25			@ 25 feet, loose/soft, no sample recovery
									FILL?
									Bottom of Boring at 26.5 feet.
									NOTE:
									1) Slight seepage at 20.5 feet
									2) No caving
									3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-18

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	36.02 feet	G-16

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
									Silty SAND: fine- to coarse-grained, dark yellowish-brown, moist
		31	9.2	126.0					@ 2 feet, slightly clayey, some pea gravel, dense, moist
		40	6.9	120.7		5			@ 5 feet, no CLAY, some isolated coarse gravels, moist, dense
								SM	
		48	6.6	117.9		10			@ 10 feet, dark brown, moist, dense
									@ 10.5 feet, light yellowish-brown, slightly moist SAND, slightly silty,
S	P S P	12				15			@ 15 feet, Silty SAND with Clay: moist, medium dense
									FILL
		18	6.6	117.9		20		ML/ CL	Clayey SILT/Silty CLAY: light yellowish- to greenish-brown, very moist, stiff to very stiff (4.0 T/ft²), orange mottling
S	P S P	15				25			@ 25 feet, very stiff, greenish-brown, moist
									TERRACE DEPOSITS
									Bottom of Boring at 26.5 feet. NOTE: 1) No ground water encountered 2) No caving 3) Boring backfilled and tamped

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Project No.:	Figure No.:
6848-04	B-19

APPENDIX C

Laboratory Testing Program

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples considered representative of those obtained in the field were tested as described below.

a) Moisture-Density

Moisture-density information usually provides a gross indication of soil consistency. Local variations at the time of the investigation can be delineated, and a correlation obtained between soils found on this site and nearby sites. The dry unit weights and field moisture contents were determined in the laboratory for selected samples. The results are shown on the Logs of *Borings.*

b) Compaction

Representative soil samples were tested in the laboratory to determine the maximum dry density and optimum moisture content, using the ASTM D1557 compaction test method. Generally, this test procedure requires 25 blows of a 10-pound hammer falling a height of 18 inches on each of five layers, in a 1/30 cubic foot cylinder. The results of the tests are presented below:

Boring No.	Sample Depth (ft.)	Soil Description	Optimum Moisture Content (%)	Maximum Dry Density (lb/ft^3)
B-3	1 to 4	Clayey SAND	8.0	131.0
B-6	3 to 5	Sandy CLAYS	9.0	131.5
B-9	3 to 5	Sandy CLAY	11.0	120.0
G-11	3 to 6	Clayey SAND	8.5	128.5
G-12	3 to 7	Clayey SAND	8.5	132.5

c) Sieve Analysis

As part of the engineering classification of the on-site coarse-grained soil, samples representative of the major soil types were used to determine their distribution of particle size. Basically, a sieve analysis is conduced by passing the soil through a number of different sized sieves and measuring the amount of soil retained on each sieve. A grain-size distribution curve is plotted relating percent of soil passing each sieve (calculated from the amount retained) and the grain size as shown on the enclosed *Grain Size Distribution Charts, Figure C-1 through C-7*

d) Consolidation

The apparatus used for the consolidation test is designed to receive the brass ring of soil as it comes from the field. Loads were applied to the test specimen in several increments, and the resulting deformations were recorded at selected time intervals for a specified load. Porous stones were placed in contact with the top and bottom of the specimen to permit the ready addition or release of water. Sample was tested at the field and increased moisture contents and the results are presented in the consolidation test sheets, *Figures C-8 and C-9.*

e) Direct Shear

Direct shear tests were made on undisturbed and remolded ring soil samples obtained from the field. The soil samples were submerged in the water overnight before shearing at a constant rate of 0.032 in./min. on the next day as quick unconsolidated test. The results are shown in the *Direct Shear Test Diagram, Figure C-10.*

f) Expansion Index (ASTM D4829)

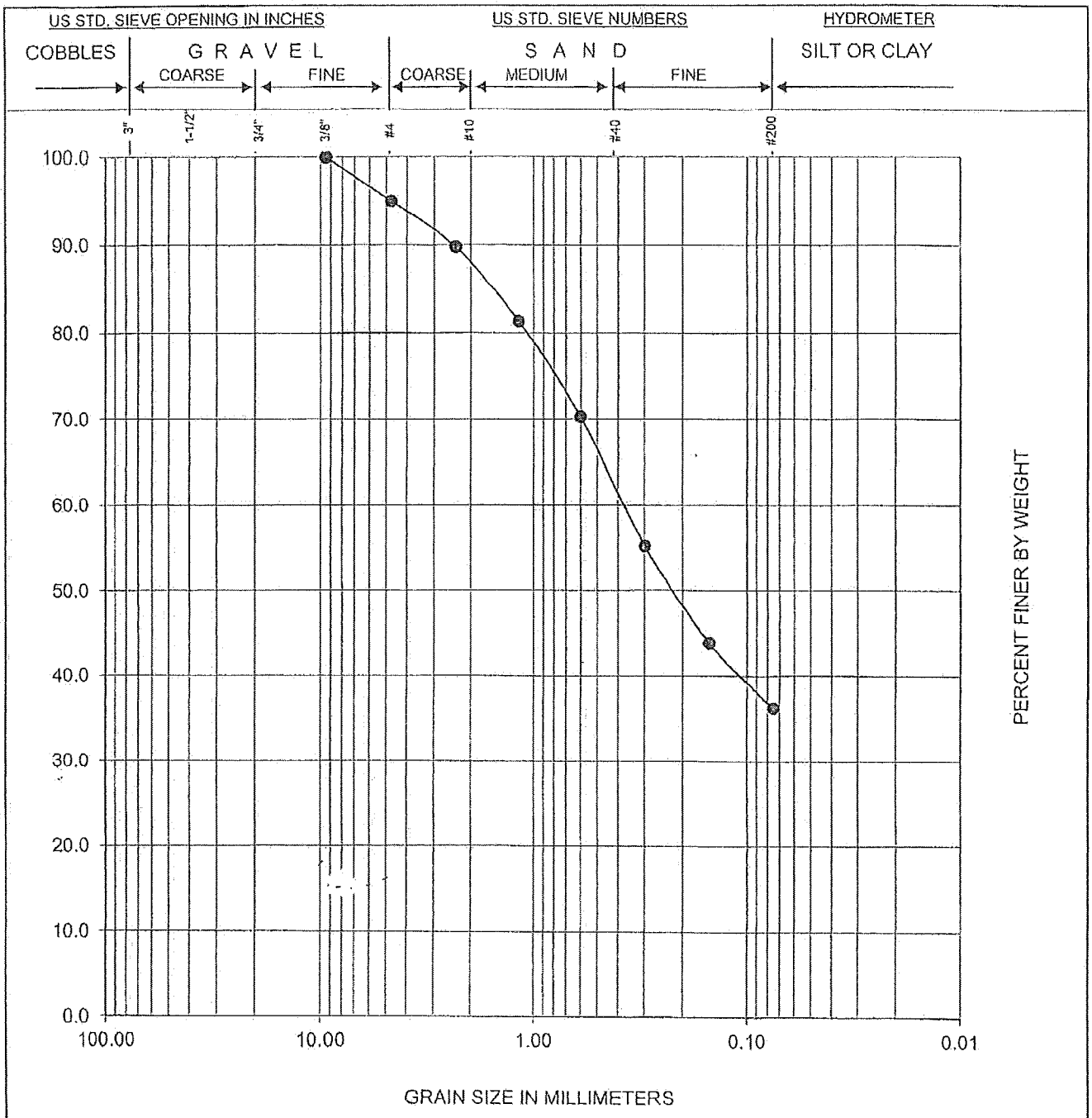
The sample was tested in accordance with ASTM D04829 Test Method. The laboratory expansion test results are shown in *Figures C-11 through C-13.*

g) Atterberg Limits (ASTM D4318)

The results of the Atterberg Limits tests are presented in *Figures C-1*4 through 16.

h) Corrosion Series

A representative soil sample was tested for pH, soluble sulfates, soluble chlorides and minimum resistivity. The results of the tests are shown in *Figure C-17.*



Project No. : 6848-04 Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	1' - 4'	SC	BROWN CLAYEY SAND		-	-	-

GRAIN SIZE CURVE

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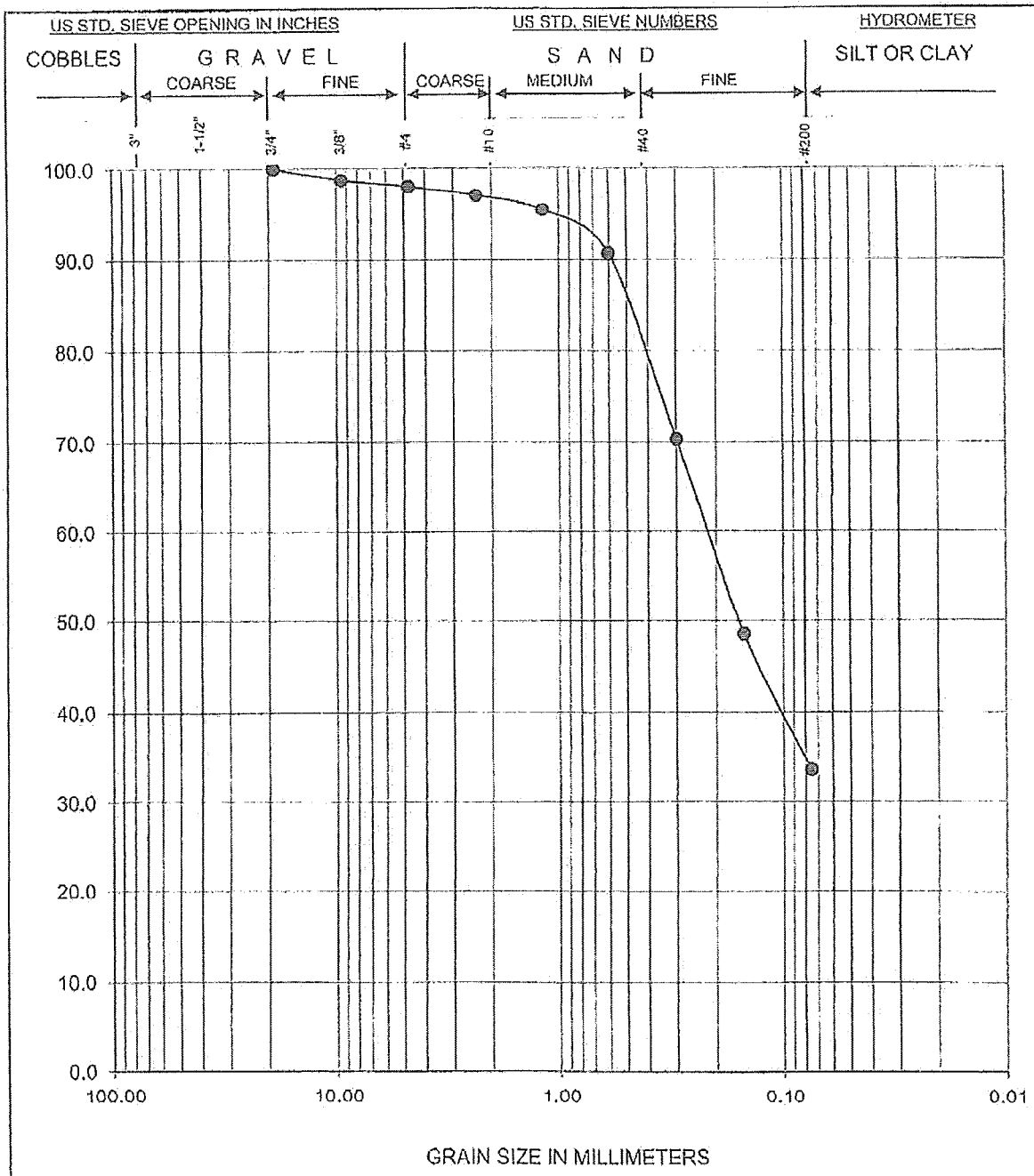
Fig. C-1



Project No. : 6848-04 Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	21'-22.5'	SM	BROWN SILTY SAND		-	-	-

GRAIN SIZE CURVE

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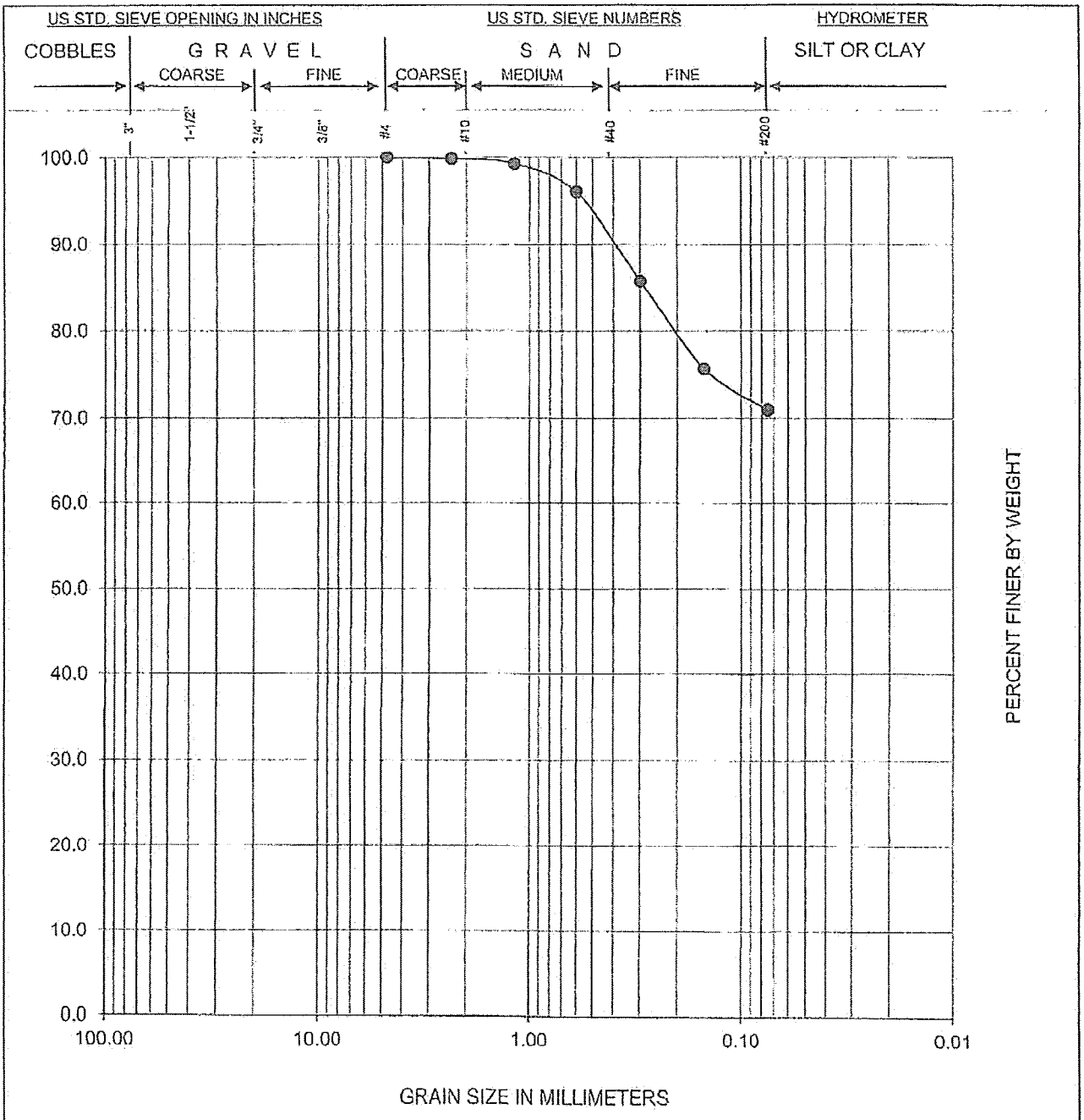
Fig. C-2



Project No. : 6848-04

Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	26'-27.5'	CL	GRAYISH BROWN SANDY CLAY		45	17	27

GRAIN SIZE CURVE

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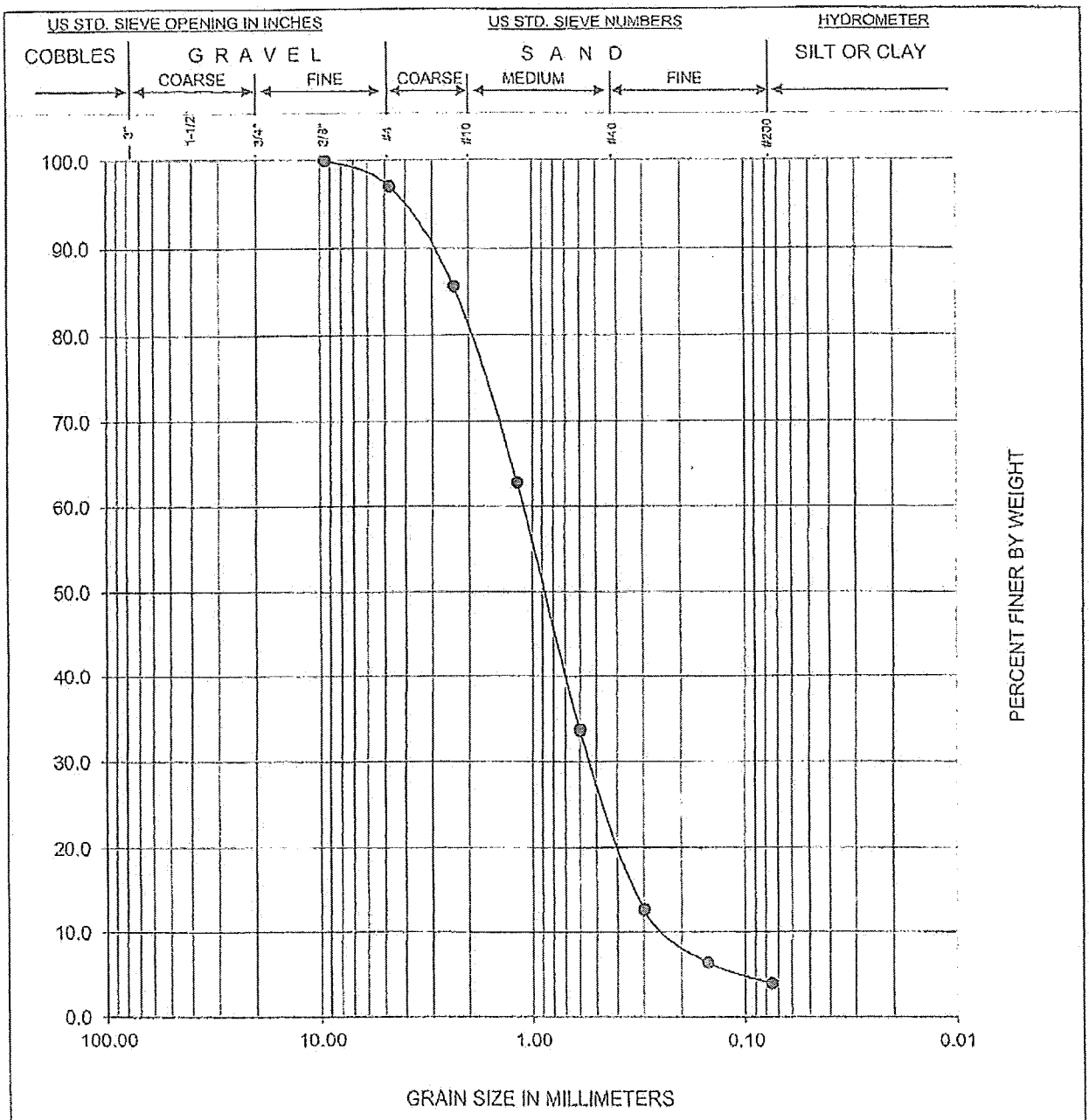
Fig. C-3



Project No. : 6848-04 Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	31'-32.5'	SP	BROWN POORLY GRADED SAND		-	-	-

GRAIN SIZE CURVE

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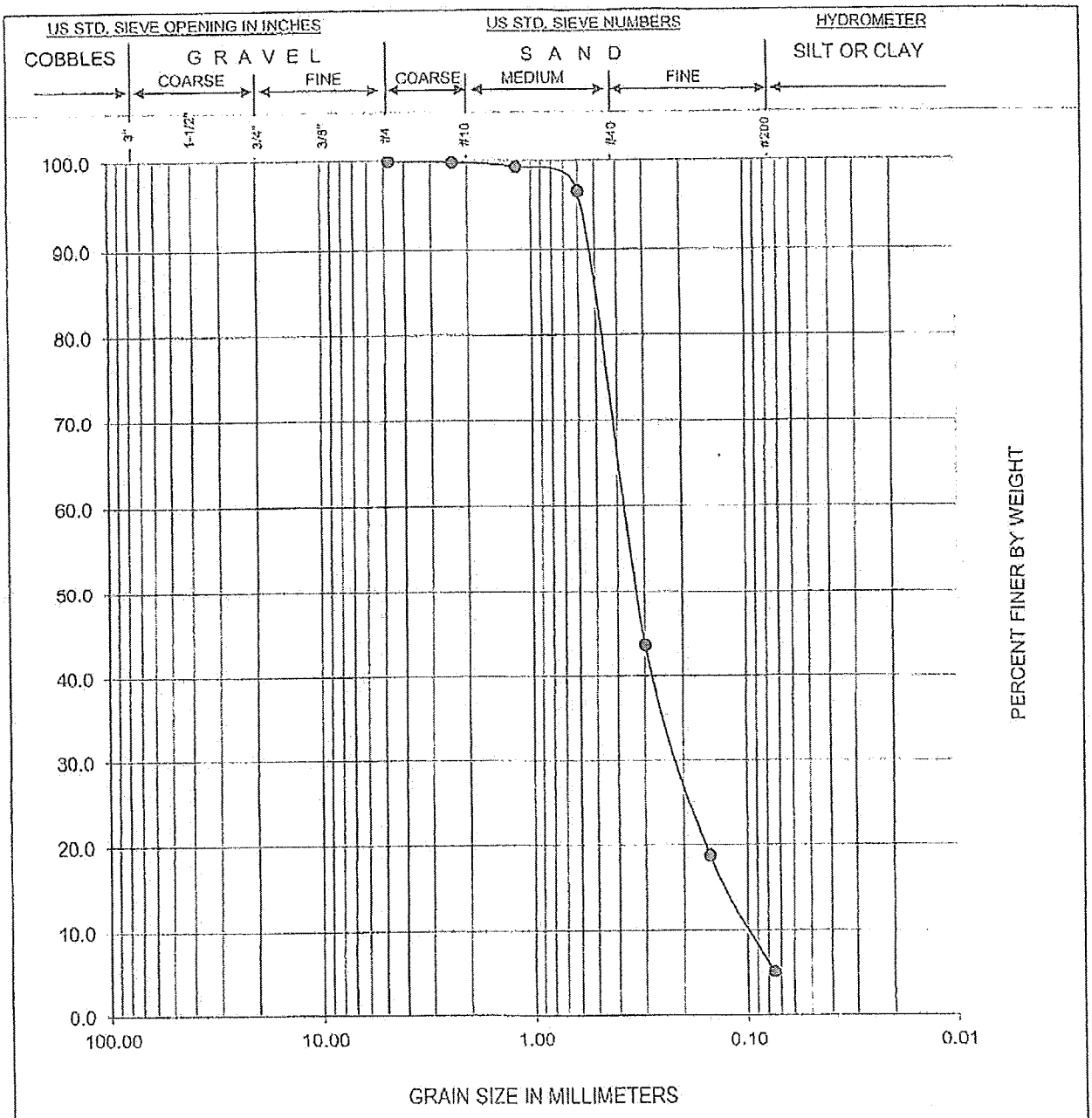
Fig. C-4



Project No. : 6848-04 Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	40'-41.5'	SP-SM	LT. BROWN POORLY GRADED SAND WITH SILT		-	-	-

GRAIN SIZE CURVE

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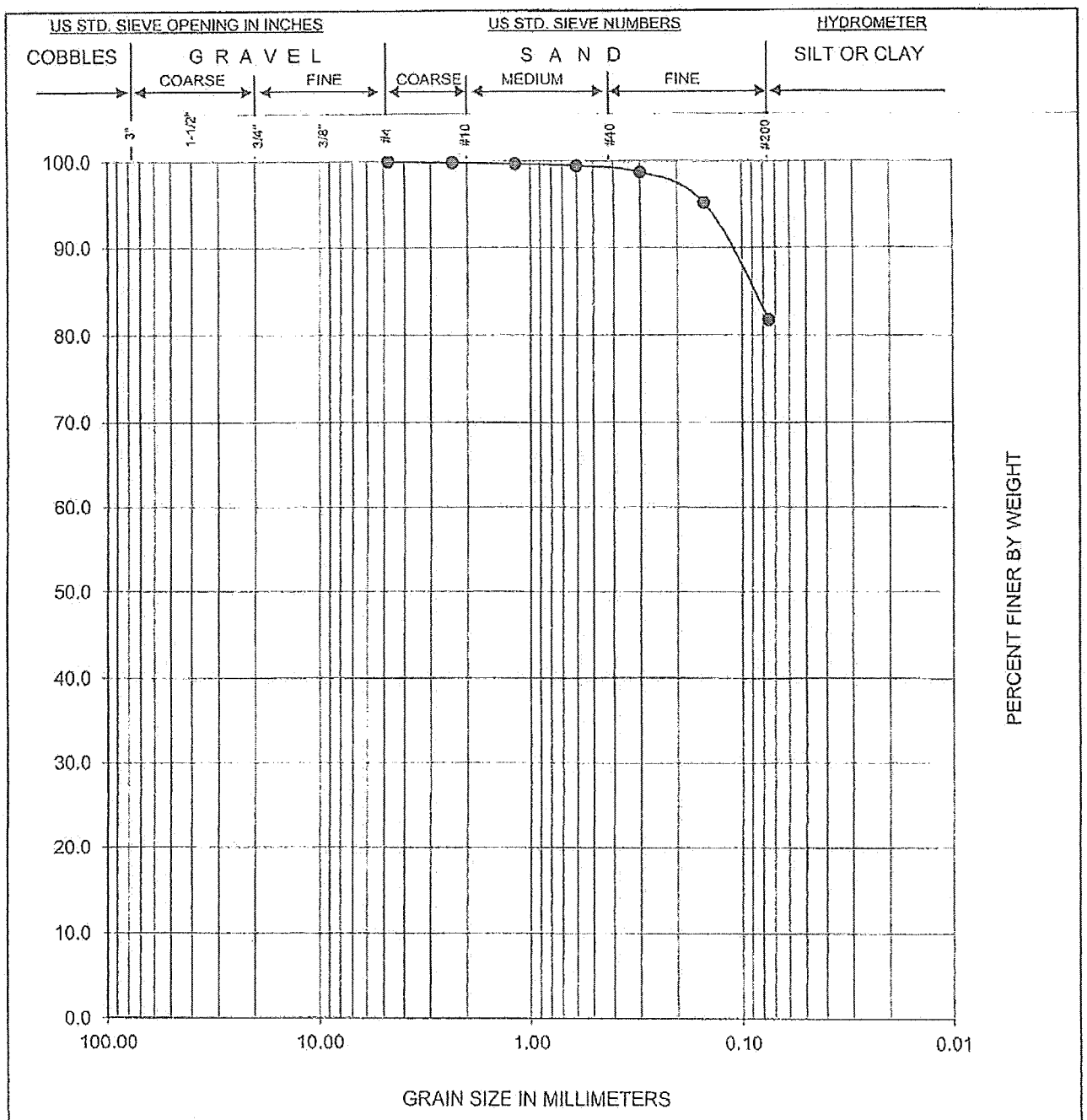
Fig. C-5



Project No. : **6848-04**

Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
B-3	-	45'-46.5'	CL	GRAYISH BROWN SANDY CLAY		-	-	-

GRAIN SIZE CURVE

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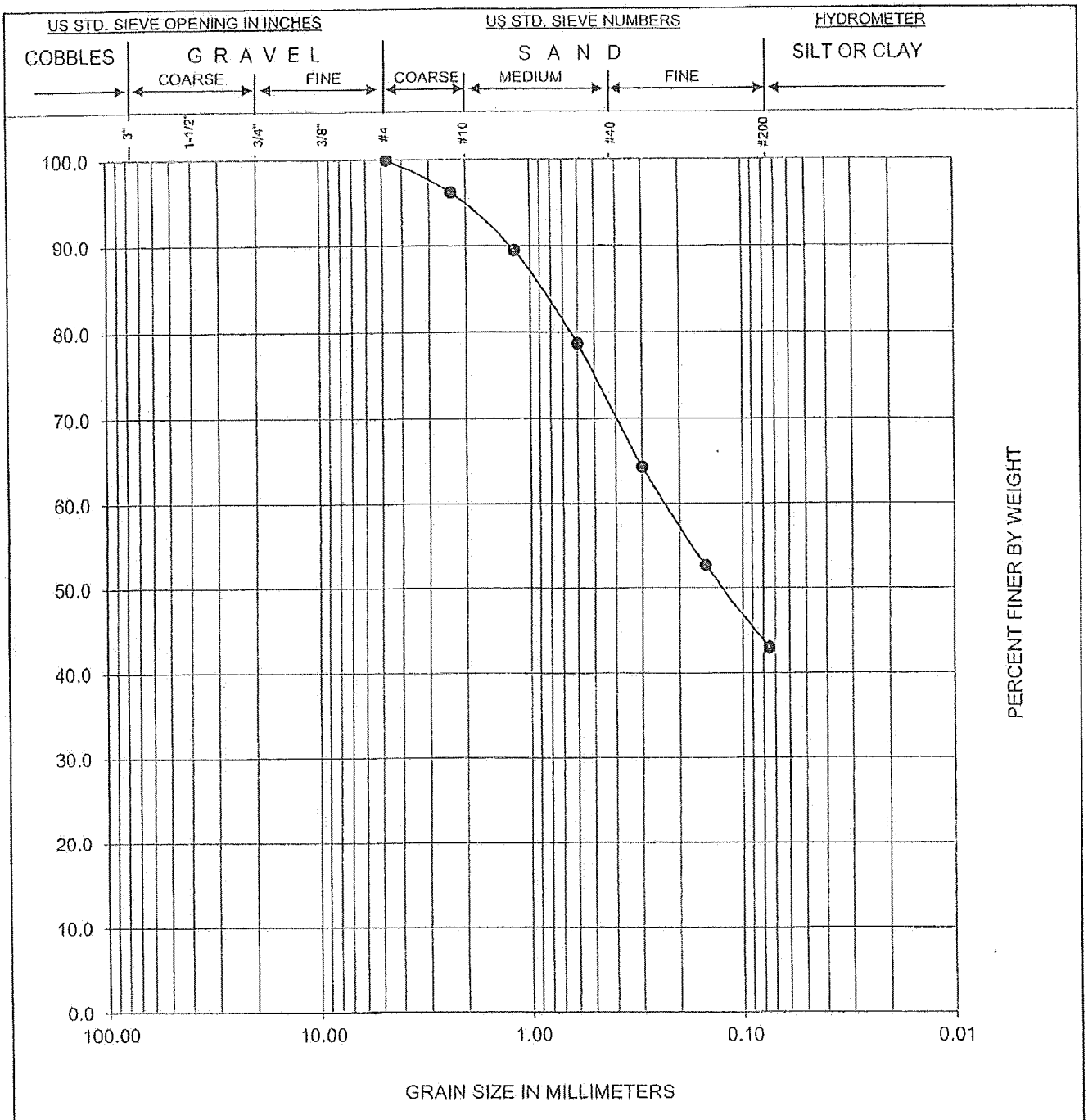
Fig. C-6



Project No. : 6848-04

Project Name : GANAHL - COSTA MESA

Boring No.	Sample No.	Depth	Symbol	Classification	Nat.W %	LL	PL	PI
G-11	-	3' - 6'	SC	BROWN CLAYEY SAND		-	-	-

GRAIN SIZE CURVE

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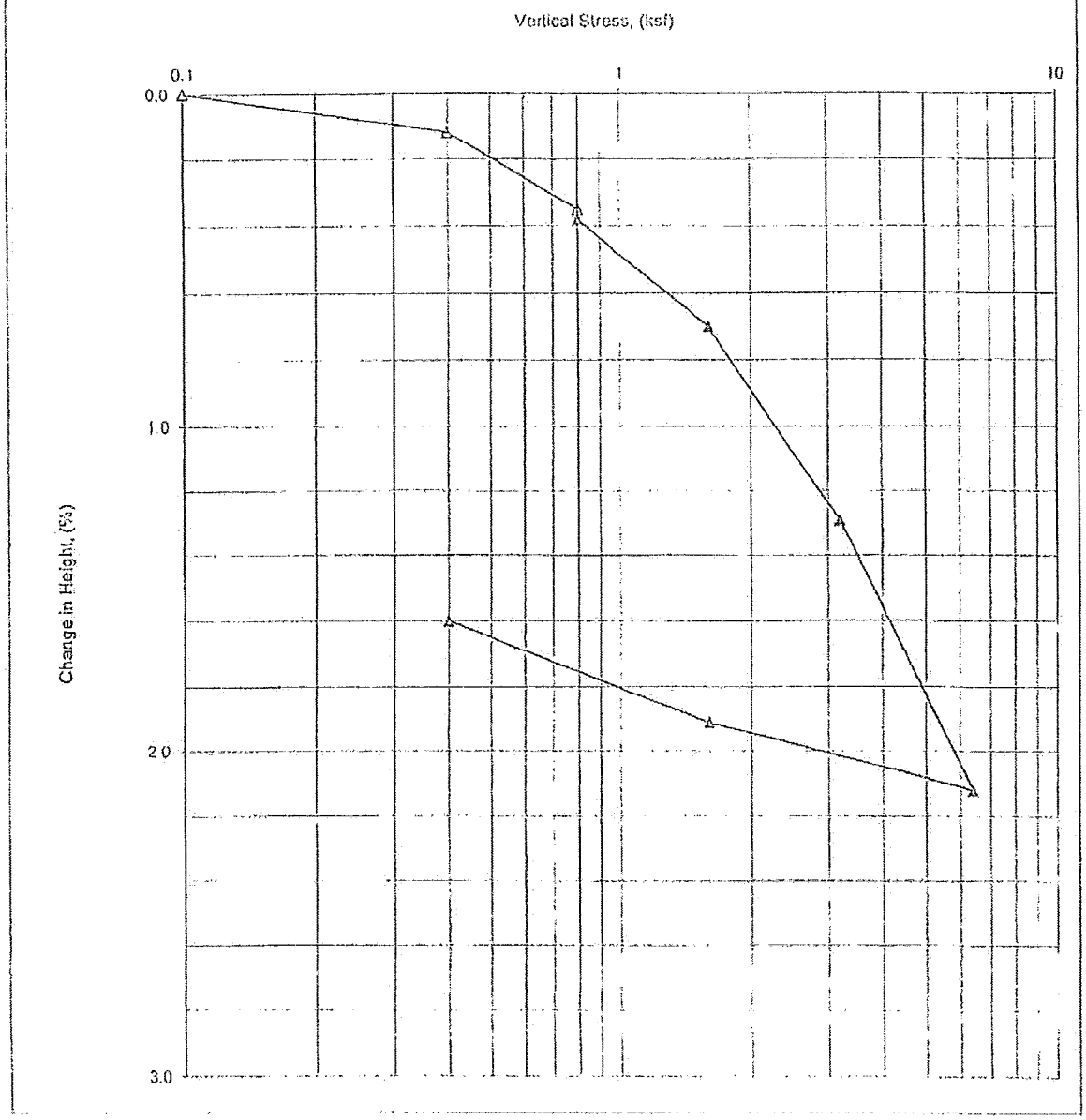
Fig. C-7



Boring No. : B-3 Sample No / Depth : 10' Liquid Limit -

Sample Descriptions / Classification : BROWN SILTY TO CLAYEY SAND (SM/SC) Plastic Limit -

Sp Gravity : 2.68 (Assumed) Compression Index, C_c 0.028 Swell Index, C_s 0.004

	Specimen Height (inches)	Moisture Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
Initial	1.0000	13.5	117.7	85.9	0.421
Final	0.9840	14.7	119.6	99.2	0.398

Consolidation Test
(ASTM D2435)

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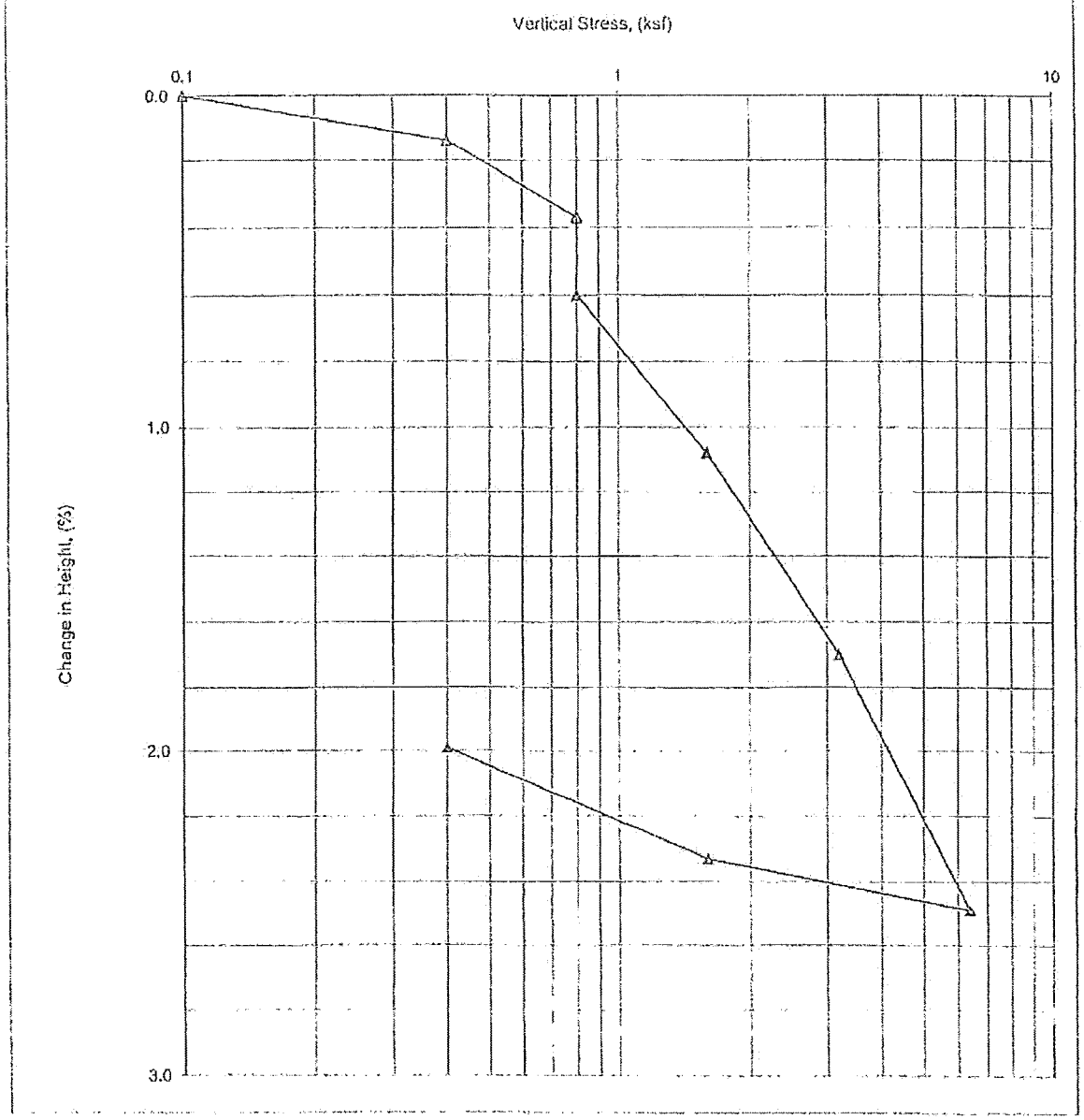
Fig. C-8

GANAHL - COSTA MESA

Project No. 6848-04

Date: 6/03/2014



Boring No : G-11 Sample No. / Depth : 17' Liquid Limit -

Sample Descriptions / Classification : LT BROWN SILTY SAND (SM) Plastic Limit -

Sp. Gravity : 2.68 (Assumed) Compression Index, C_c 0.026 Swell Index, C_s 0.004

Specimen Height (inches)		Moisture Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
Initial	1.0000	10.7	119.3	71.5	0.402
Final	0.9801	13.9	121.6	99.7	0.375

Consolidation Test
(ASTM D2435)

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Fig. C-9

GANAHL - COSTA MESA

Project No. 6848-04

Date: 6/03/2014

Project Name : GANAHL - COSTA MESA

Project No. G. A. NICOLL 6848-04

Boring / Sample No : B-3 Depth : ' (ft.)

Tested By : RMC Date: 9-Jun-14

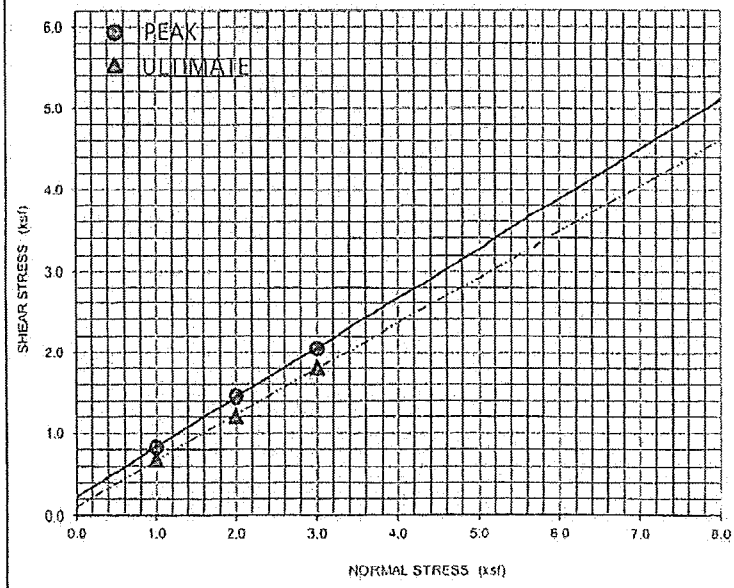
Sample Descriptions / Classification : Brown Clayey Sand (SC)

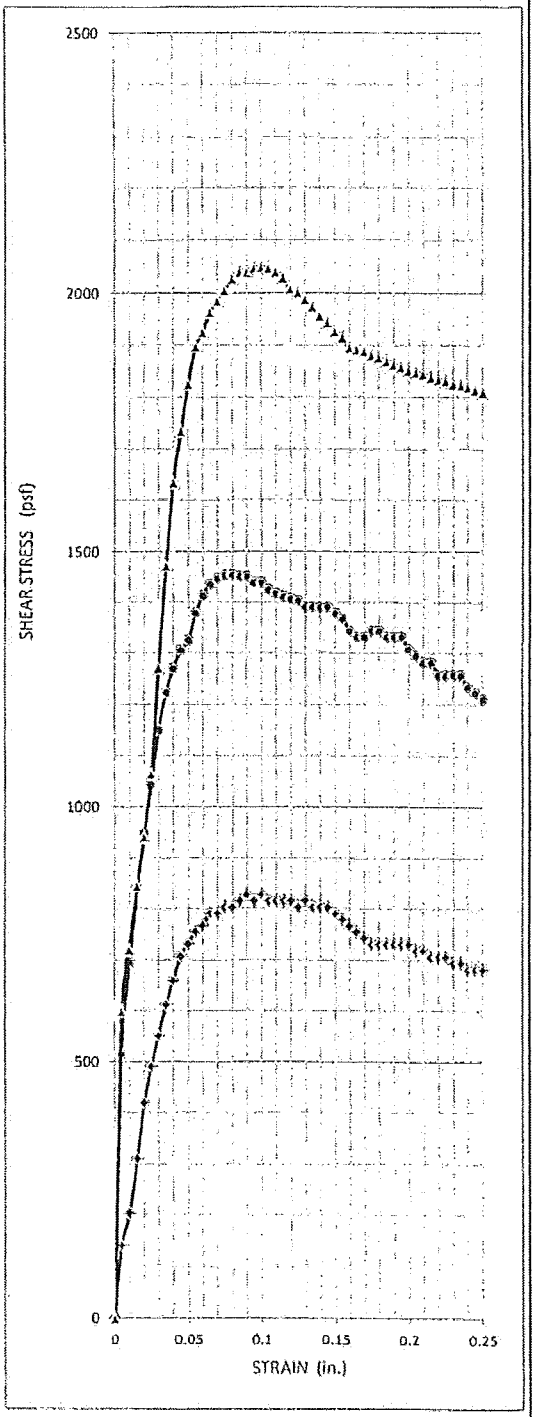
Sampled By : Date:

Applied Normal Load (ksf)	1.0		2.0		3.0	
Shear Stress,Peak (ksf)	0.828		1.455		2.050	
Shear Stress,Ultimate(ksf)	0.684		1.212		1.810	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Wt. of Soil + Ring,(g)	198.1	208.2	196.2	206.5	191.4	201.6
Dry Wt. of Soil + Ring,(g)		186.8		184.9		180.1
Weight of Water, (g)		21.4		21.6		21.5
Weight of Ring, (g)		45.4		43.7		39.0
Weight of Dry Soil (g)		141.4		141.2		141.1
Moisture Content, (%)	8.0	15.1	8.0	15.3	8.0	15.2
Wet Density (pcf)	127.43	135.9	127.3	135.9	127.2	135.7
Dry Density (pcf)	-	118.0	-	117.9	-	117.8
Specific Gravity,G_s (assumed)	2.68					
Specimen Thickness, (in.)	1.00					
Degree of Saturation, (%)	51.4	97.2	51.2	97.9	51.0	97.1
Void Ratio	-	0.417	-	0.419	-	0.420

Lateral Displacement, d_h (in.)		0.25
Displacement Rate, d_r (in./min)		0.02
Elapsed Time of Test, t_0 (min.)		12.50
Specimen	Undisturbed	-
	Remolded	90% RC @ OMC
	Reconstituted	-

SHEAR STRESS	PEAK	ULTIMATE
Cohesion,c (psf)	300	100
Friction Angle, ϕ	31	29





Remarks : _____

DIRECT SHEAR TEST

(ASTM D3080)

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Fig. C-10

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER : G. A. NICOLL #6848-04

TRACT NUMBER :

TESTED BY : RMC DATE : 2-Jun-14

LOT NUMBER :

SAMPLED BY: DATE :

SAMPLE NO. : LOCATION : B-3 @ 1' - 4'

SOIL DESCRIPTIONS / CLASSIFICATION : BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3
WET WT. OF SOIL + RING	(g)	615.2		
WEIGHT OF RING	(g)	200.46		
WET WEIGHT OF SOIL	(g)	414.74		
FACTOR		0.303		
INITIAL WET UNIT WEIGHT	(pcf)	125.7		
DRY DENSITY	(pcf)	115.6		
% SATURATION (Assumed Sp.Gr. = 2.70)		51.3		
MOISTURE DETERMINATION				
WET WEIGHT OF SOIL	(g)	127.51		
DRY WEIGHT OF SOIL	(g)	117.31		
MOISTURE CONTENT	(%)	8.7		

RACK NO. : 1

SURCHARGE : 144 psf

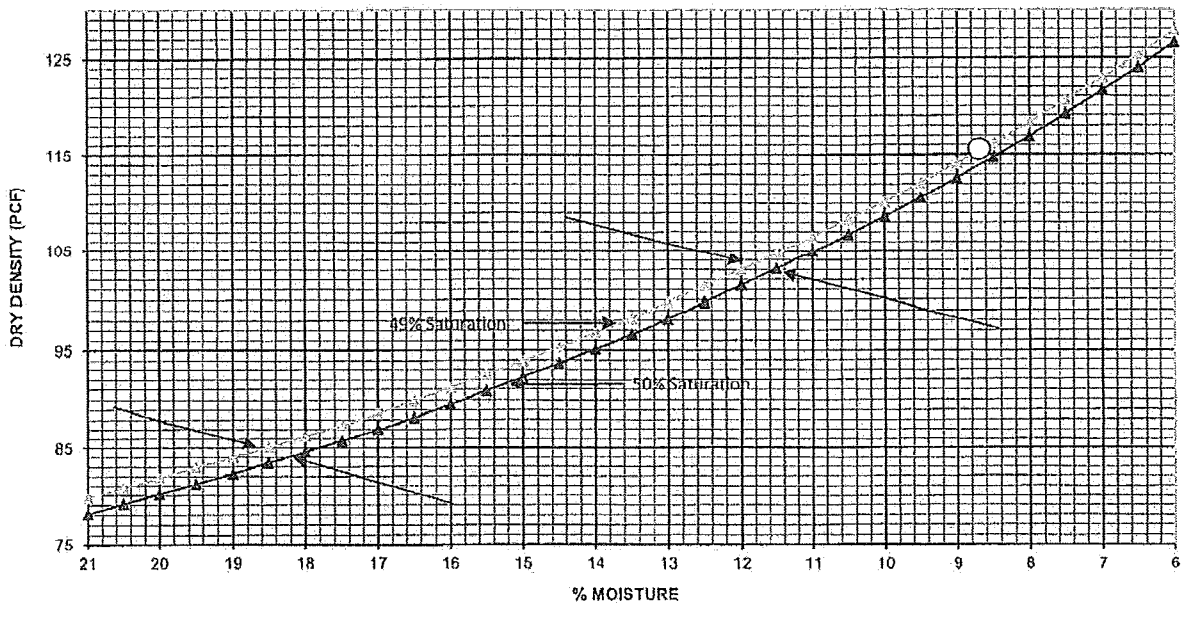
DATE	TIME	DIAL READINGS (In.)
2-Jun	12:50	0.125
10-May	11:31	0.151
	2:35	0.151
% RETAINED ON #4 SIEVE		-

EXPANSION INDEX : 26

SOLUBLE SULFATE (SO_4) : - ppm

REMARKS :

SATURATION CURVE



EXPANSION INDEX OF SOILS

(ASTM D 4829-11)

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Fig. C-11

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER G. A. NICOLL 6848-04

TRACT NUMBER : _____

TESTED BY : RMC DATE : 6-Jun-14

LOT NUMBER : _____

SAMPLED BY: _____ DATE : _____

SAMPLE NO. : _____ LOCATION : B-6 @ 3' - 6'

SOIL DESCRIPTIONS / CLASSIFICATION : LT. BROWN SANDY CLAY TO CLAYEY SAND (CL/SC)

TRIAL NUMBER		1	2	3
WET WT. OF SOIL + RING	(g)	610.71		
WEIGHT OF RING	(g)	198.52		
WET WEIGHT OF SOIL	(g)	412.19		
FACTOR		0.303		
INITIAL WET UNIT WEIGHT	(pcf)	124.9		
DRY DENSITY	(pcf)	115.1		
% SATURATION (Assumed Sp.Gr. = 2.70)		49.488		
MOISTURE DETERMINATION				
WET WEIGHT OF SOIL	(g)	186.54		
DRY WEIGHT OF SOIL	(g)	171.93		
MOISTURE CONTENT	(%)	8.5		

RACK NO. : 1

SURCHARGE : 144 psf

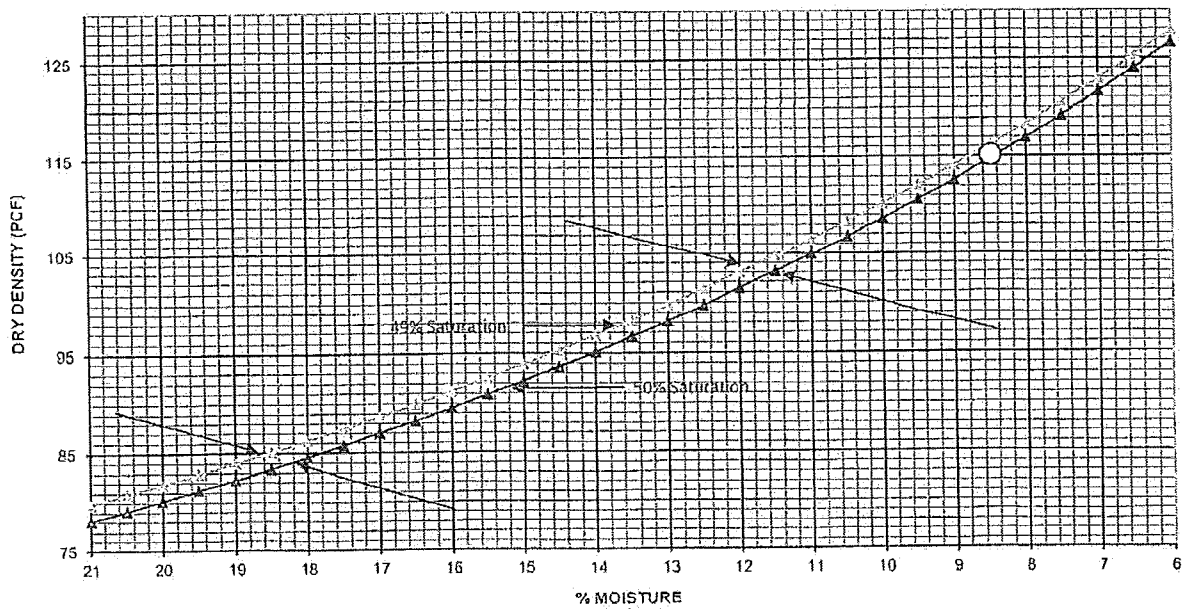
DATE	TIME	DIAL READINGS (in.)
6-Jun	12:32	0.163
9-Jun	7:02	0.214
% RETAINED ON #4 SIEVE		-

EXPANSION INDEX : 51

REMARKS : _____

SOLUBLE SULFATE (SO_4) : - ppm

SATURATION CURVE



EXPANSION INDEX OF SOILS
(ASTM D 4829-11)

G. A. Nicoll & Associates, Inc.
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Fig. C-12

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER : G. A. NICOLL #6848-04

TRACT NUMBER : _____

TESTED BY : RMC DATE : 5-Jun-14

LOT NUMBER : _____

SAMPLED BY: _____ DATE : _____

SAMPLE NO. : _____ LOCATION : G-11 @ 3' - 6'

SOIL DESCRIPTIONS / CLASSIFICATION : LT. BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3
WET WT. OF SOIL + RING	(g)	595.85	616.1	
WEIGHT OF RING	(g)	200.54	200.54	
WET WEIGHT OF SOIL	(g)	395.31	415.56	
FACTOR		0.303	0.303	
INITIAL WET UNIT WEIGHT	(pcf)	119.8	125.9	
DRY DENSITY	(pcf)	112.5	116.6	
% SATURATION (Assumed Sp.Gr. = 2.70)		34.9	48.3	
MOISTURE DETERMINATION				
WET WEIGHT OF SOIL	(g)	164.47	185.55	
DRY WEIGHT OF SOIL	(g)	154.54	171.88	
MOISTURE CONTENT	(%)	6.4	8.0	

RACK NO. : 1

SURCHARGE : 144 psf

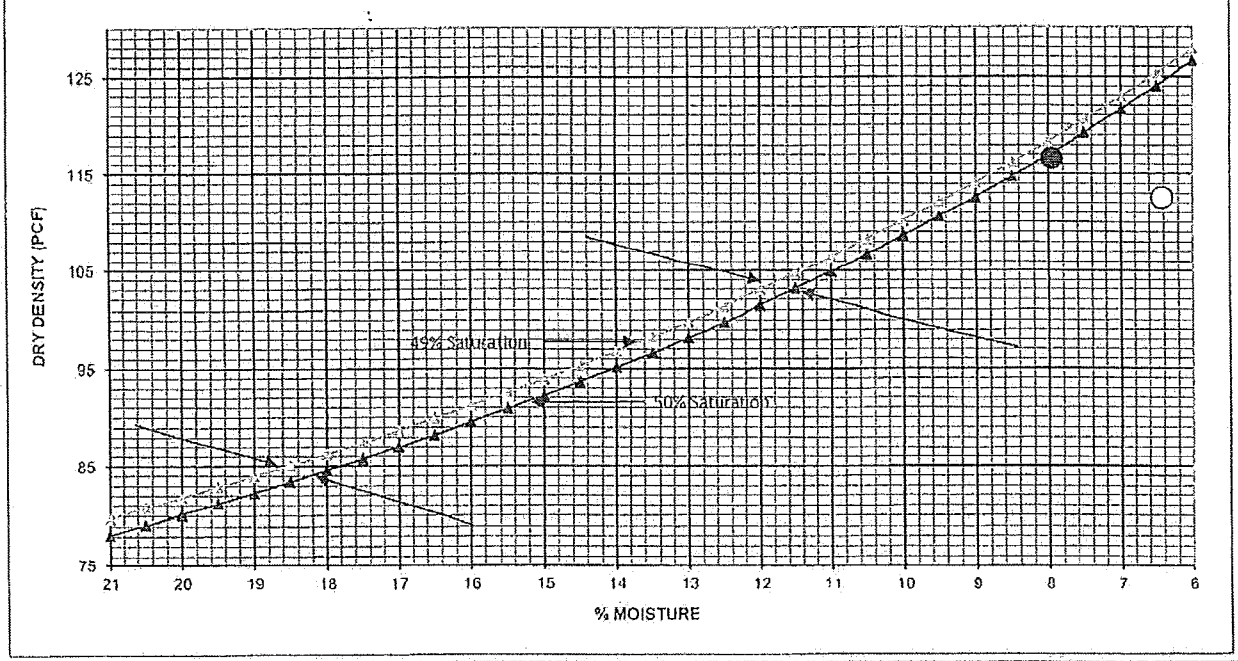
DATE	TIME	DIAL READINGS (In.)
5-Jun	8:19	0.120
6-Jun	6:59	0.162
	8:30	0.162
% RETAINED ON #4 SIEVE		-

EXPANSION INDEX : 42

SOLUBLE SULFATE (SO_4) : - ppm

REMARKS : _____

SATURATION CURVE



EXPANSION INDEX OF SOILS

(ASTM D 4829-11)

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Fig. C-13

PROJECT NAME : GANAHL - COSTA MESA PROJECT NO : G. A. NICOLL 6848-04

BORING NO. : B-3 SAMPLE NO./DEPTH : 1' - 4' TESTED BY : RMC DATE: 9-Jun-14

SAMPLE DESCRIPTIONS/CLASSIFICATION : BROWN LEAN CLAY (CL)

PLASTIC LIMIT

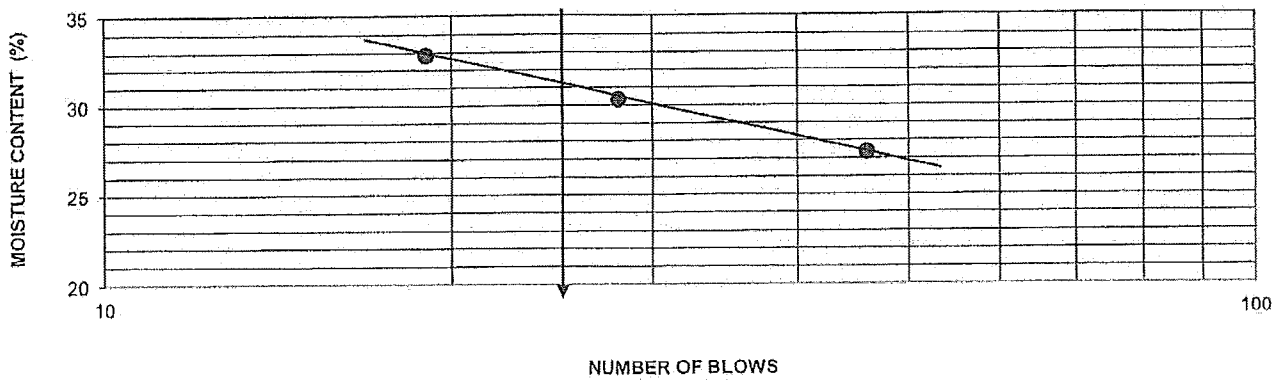
DETERMINATION NO.		1	2
DISH NO.		8	
MASS, DISH + WET SOIL	(g)	26.62	
MASS, DISH + DRY SOIL	(g)	25.85	
MASS OF WATER	(g)	0.77	
MASS OF DISH	(g)	20.21	
MASS OF DRY SOIL	(g)	5.64	
MOISTURE CONTENT	(%)	13.7	

LIQUID LIMIT

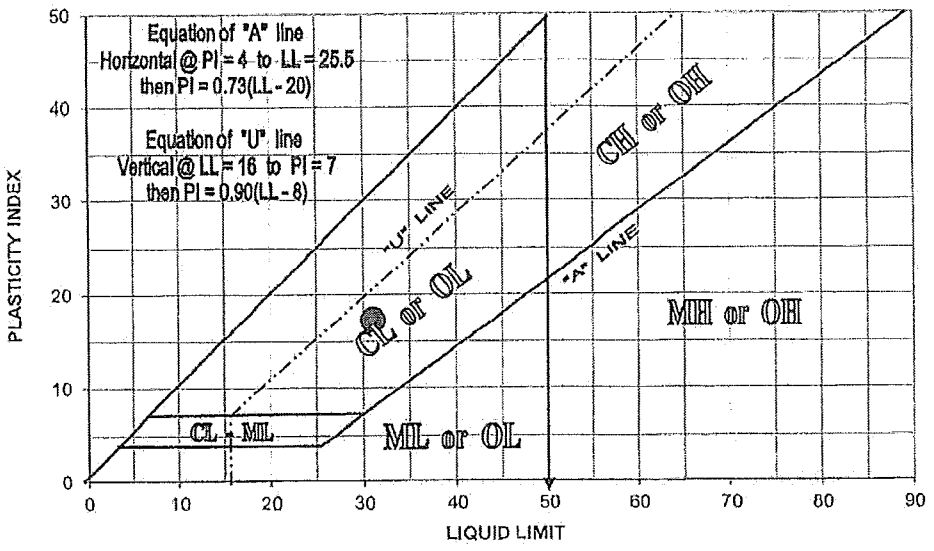
DETERMINATION NO.		1	2	3
DISH NUMBER		14	17	13
MASS, DISH + WET SOIL	(g)	40.23	39.28	32.92
MASS, DISH + DRY SOIL	(g)	36.81	35.56	31.18
MASS OF WATER	(g)	3.42	3.72	1.74
MASS OF DISH	(g)	26.40	23.30	24.82
MOISTURE CONTENT	(%)	32.9	30.3	27.4
NUMBER OF BLOWS		19	28	46

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	31
PLASTIC LIMIT (PL)	14
PLASTICITY INDEX (PI)	17
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

ATTERBERG LIMITS

(ASTM D4318)

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Fig. C-14

PROJECT NAME : GANAHL - COSTA MESA PROJECT NO :G. A. NICOLL 6848-04

BORING NO. : B-3 SAMPLE NO./DEPTH : 26' - 27.5' TESTED BY : RMC DATE: 16-Jun-14

SAMPLE DESCRIPTIONS/CLASSIFICATION : GRAYISH BROWN LEAN CLAY (CL)

PLASTIC LIMIT

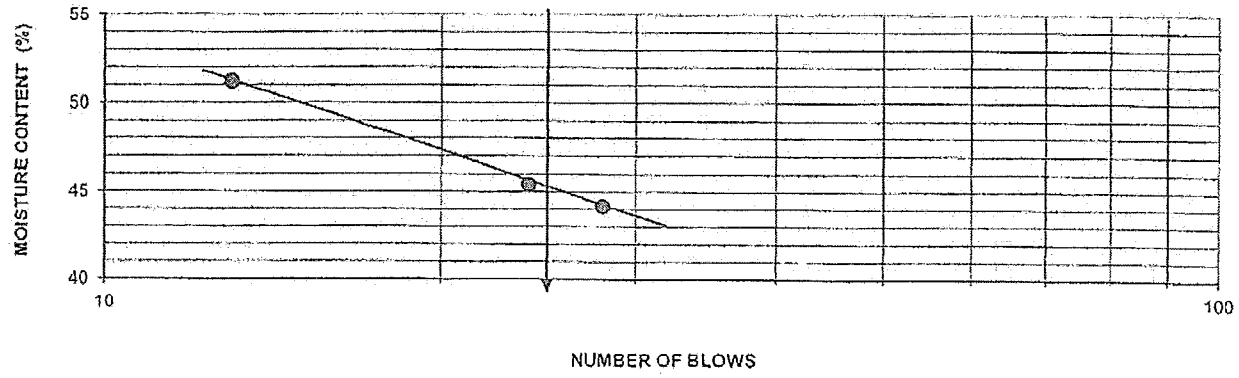
DETERMINATION NO.		1	2
DISH NO.		2	
MASS, DISH + WET SOIL	(g)	45.44	
MASS, DISH + DRY SOIL	(g)	43.26	
MASS OF WATER	(g)	2.18	
MASS OF DISH	(g)	30.38	
MASS OF DRY SOIL	(g)	12.88	
MOISTURE CONTENT	(%)	16.9	

LIQUID LIMIT

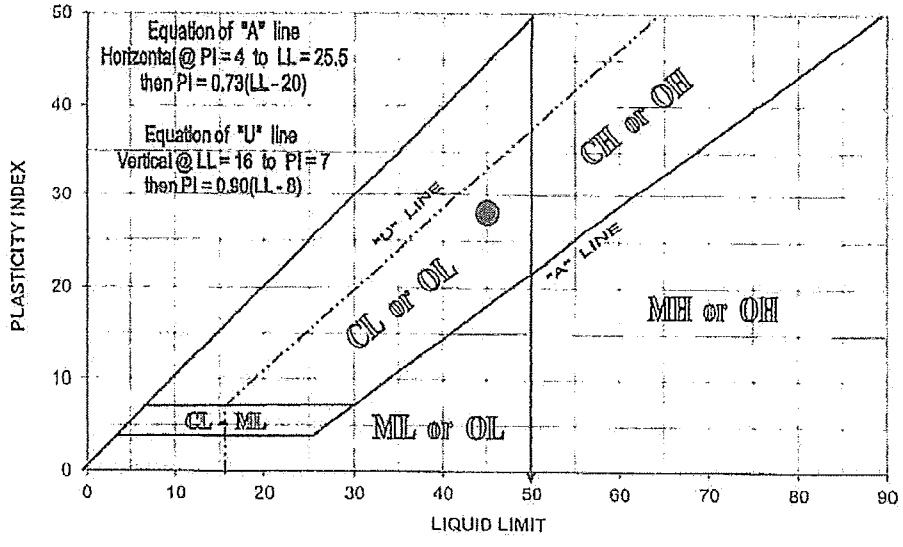
DETERMINATION NO.		1	2	3
DISH NUMBER		10	8	17
MASS, DISH + WET SOIL	(g)	36.12	32.45	36.97
MASS, DISH + DRY SOIL	(g)	33.31	28.63	32.35
MASS OF WATER	(g)	2.81	3.82	4.62
MASS OF DISH	(g)	26.95	20.22	23.33
MOISTURE CONTENT	(%)	44.2	45.4	51.2
NUMBER OF BLOWS		28	24	13

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	45
PLASTIC LIMIT (PL)	17
PLASTICITY INDEX (PI)	28
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS : SAMPLE WAS RECEIVED OVEN-DRIED

ATTERBERG LIMITS

(ASTM D4318)

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Fig. C-15

PROJECT NAME : GANAHL - COSTA MESA PROJECT NO : G. A. NICOLL 6848-04

BORING NO. : B-3 SAMPLE NO./DEPTH : 45' - 46.5' TESTED BY : RMC DATE: 12-Jun-14

SAMPLE DESCRIPTIONS/CLASSIFICATION : GRAYISH BROWN LEAN CLAY (CL)

PLASTIC LIMIT

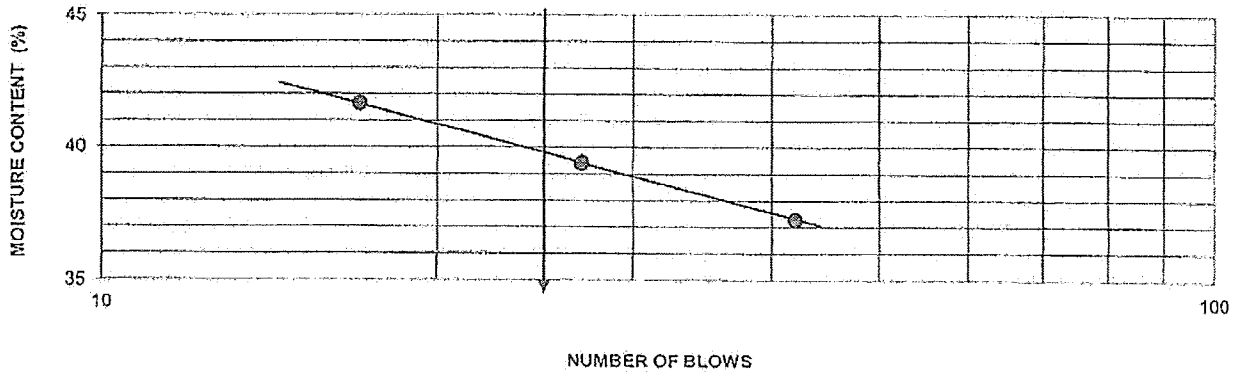
DETERMINATION NO.		1	2
DISH NO.		4	
MASS, DISH + WET SOIL	(g)	37.96	
MASS, DISH + DRY SOIL	(g)	35.37	
MASS OF WATER	(g)	2.59	
MASS OF DISH	(g)	22.22	
MASS OF DRY SOIL	(g)	13.15	
MOISTURE CONTENT	(%)	19.7	

LIQUID LIMIT

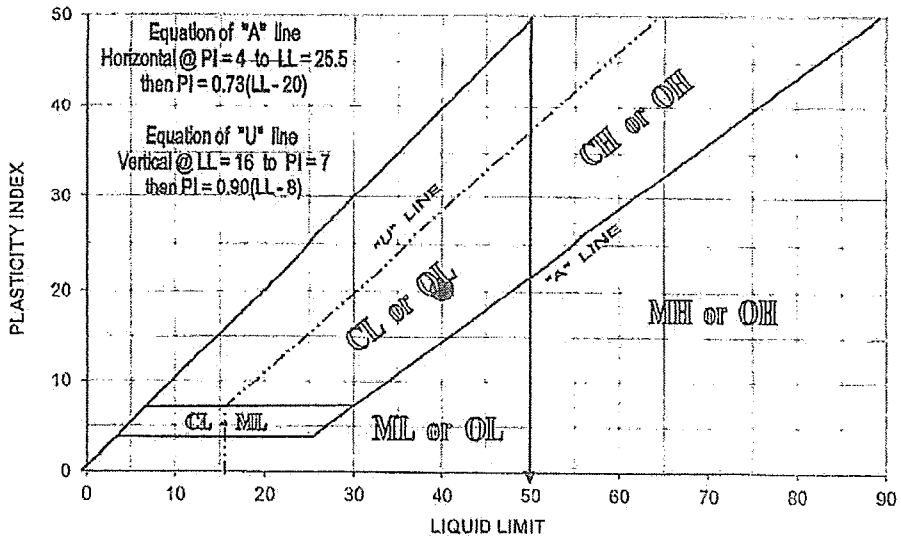
DETERMINATION NO.		1	2	3
DISH NUMBER		22	20	10
MASS, DISH + WET SOIL	(g)	34.58	36.52	34.18
MASS, DISH + DRY SOIL	(g)	31.36	33.43	32.22
MASS OF WATER	(g)	3.22	3.09	1.96
MASS OF DISH	(g)	23.63	25.59	26.96
MOISTURE CONTENT	(%)	41.7	39.4	37.3
NUMBER OF BLOWS		17	27	42

NATURAL MOISTURE CONTENT,%

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	40
PLASTIC LIMIT (PL)	20
PLASTICITY INDEX (PI)	20
SYMBOL FROM PLASTICITY CHART	CL

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS : SAMPLE WAS RECEIVED OVEN - DRIED

ATTERBERG LIMITS

(ASTM D4318)

G. A. Nicoll & Associates, Inc.
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Fig. C-16

PROJECT NAME : GANAHL - COSTA MESA

PROJECT NUMBER : G. A. NICOLL 6948-04

LOCATION :

TESTED BY : RMC DATE : 10-Jun-14

SAMPLED BY: DATE :

SAMPLE IDENTIFICATION	B-3 @ 1' - 4'	B - 6 @ 3' - 6'		
VISUAL SOIL CLASSIFICATION	BROWN CLAYEY SAND (SC)	LT. BR. SANDY CLAY TO CLAYEY SAND (CL/SC)		
WATER-SOLUBLE SULFATE $_{CA\ TEST\ 417}$ (ppm)	150	270		
WATER SOLUBLE CHLORIDE $_{CA\ TEST\ 422}$ (ppm)	210	240		
MINIMUM RESISTIVITY, ($R_{min\ -\ 15.5}$) (ohms-cm)	2197	1306		
pH VALUE ON (-)#10 MAT'LS. $_{ASTM\ D4972Mtd\ A}$	-	-		
pH VALUE ON (-)#8 MAT'LS. $_{CA\ TEST\ 643}$	8.5	8.7		
REMARKS				

CORROSITIVITY OF SOILS

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Fig. C-17

APPENDIX D

Percolation Study for Infiltration Systems

FIELD INVESTIGATION / PERCOLATION TESTING

a) In conjunction with our geotechnical investigation, we have conducted a percolation study for the purpose of determining the feasibility of utilizing on-site infiltration system for the disposal surface water at the proposed development.

b) The percolation test results will assist in the design of infiltration basins, in conjunction with a future drainage study for the site.

c) Based on the subsurface characteristics of the soils found during our geotechnical investigation, two areas were selected to conduct the percolation tests. Two 8-inch diameter borings were drilled to depths of 10.5 feet. The boring locations are shown on the *Boring / Percolation Test Location Map, Figure D-1.* The borings were backfilled and compacted at the completion of percolation testing.

d) The materials encountered consisted of approximately 7.5 to 8 feet of fill, overlying fine- to coarse-grained Silty SAND in Boring BP-1, and fine- to coarse-grained SAND in Boring BP-2. The logs of the two borings are presented in *Figures D-2 and D-3.*

e) The percolation tests were conducted where it was estimated that suitable materials were present at the shallowest depths beneath the existing fill.

f) The second consideration was the 10-ft. separation requirement between the bottom of an infiltration system to the ground water level.

g) Ground water was encountered during our geotechnical investigation and stabilized at a level of 23.5 feet in Borings B-1 and B-3; a level of 10.5 to 12 feet above mean sea level (amsl). The historically highest ground water level was found to be at 30 feet during our review of the Seismic Hazard Zone Report for the Anaheim and Newport Beach Quadrangle (SHZR-030).

h) Two percolation tests were conducted for a period of 4.5 hours, measured in increments of 30 minutes. The borings were refilled to the previous levels at the end of each half-hour measurement. The details and results of the percolation tests are shown in *Percolation Test Results, Figure D-4.*

CONCLUSIONS

a) The percolation rates stabilized after the third hour. The percolation rates for the two tests are calculated using the following equation for the infiltration rate:

$$I_R \quad \frac{D \cdot 60 \cdot r}{2T \cdot (r + 2\,AWD)} \quad = \quad \text{inches / hour}$$

Where I_R = Infiltration Rate, T = Time Interval

D = Drop in final hour, r = Radius of boring

AWD = Average Wetted depth, 60 min/hr

b) Infiltration Rate for BP-1 = 0.68 in/hr
Infiltration Rate for BP-2 = 0.79 in/hr

RECOMMENDATIONS

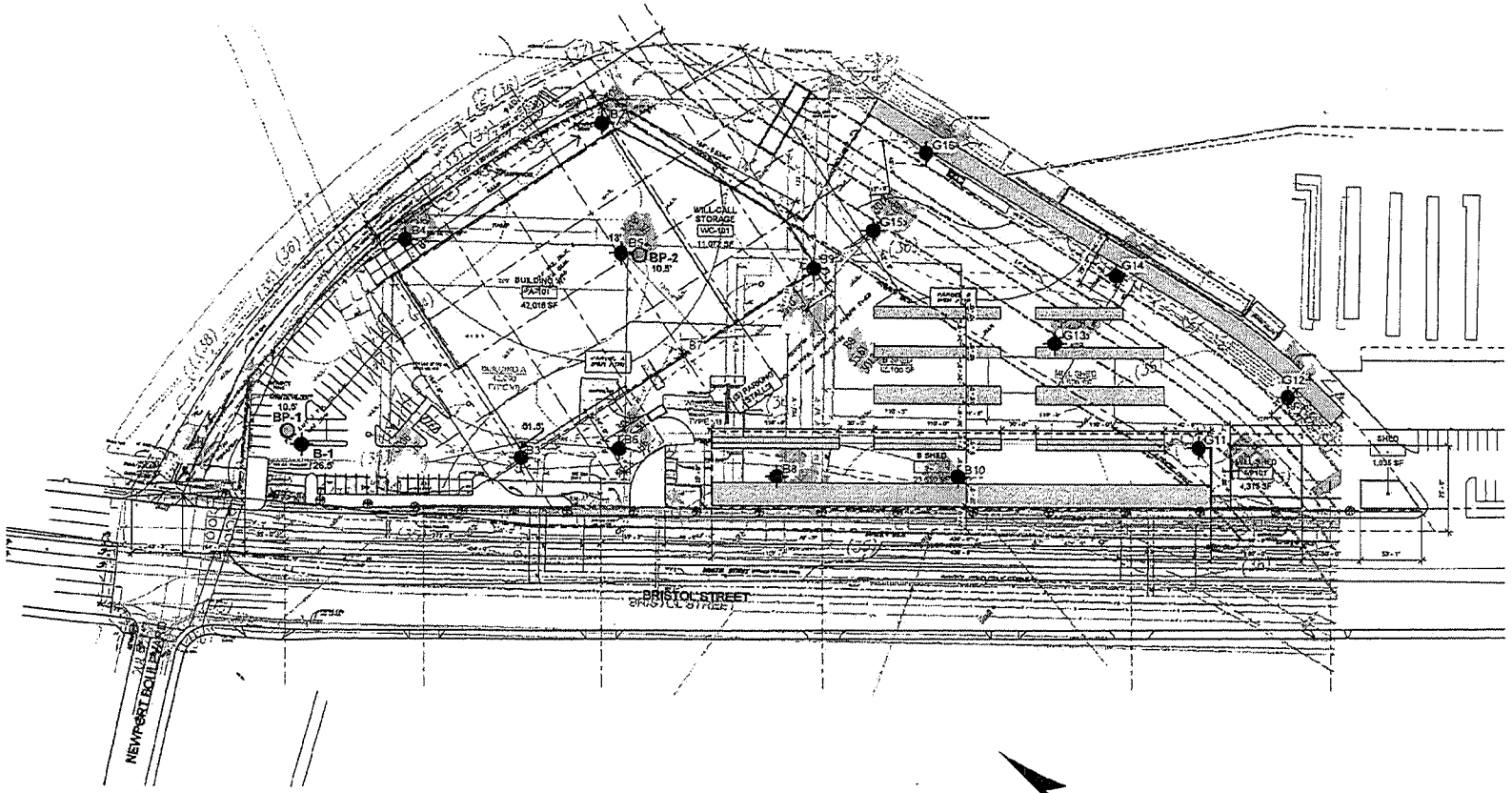
a) Based on our test results we took the average of the two test results and arrived at a recommended infiltration rate of 0.73 inches per hour.

b) The design infiltration rate is applicable for the material tested and the systems should be constructed where materials with similar infiltration rates are present. The subsurface soils should be observed, and tested if necessary, in the area where an infiltration system is to be constructed.

c) The infiltration system should be constructed so that there is at least 10 feet of materials beneath the bottom and the ground water, which is at the shallowest amsl of 12 feet.

d) The design and construction of the infiltration system is not within the purview of this investigation.

PERCOLATION BORING LOCATION MAP



KEY

- BP-2 (10.5') — Location of Percolation Test Boring, showing total depth
- B-9 / G-16 — Location of Geotechnical Borings

100 0 100 200
scale feet

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GANAHL CONSTRUCTION CORPORATION
New Costa Mesa Facility
1100 Southeast Bristol Street
Costa Mesa, California

6848-04	May 2014	Fig. D-1

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34 feet	PB-1

Date Drilled: 5/20/2014 GDH

This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.

SAMPLE									
BULK	TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel FILL
						5		CL	Silty CLAY with Sand: dark brown, very moist, stiff @ 5 feet, more SAND @ 6 feet, more moisture FILL
						10		SM	Silty SAND: fine- to coarse-grained, light greenish-brown, medium dense to dense, some gravel TERRACE DEPOSITS
									Bottom of Boring at 10.5 feet. NOTE: 1) No ground water encountered. 2) No caving. 3) Percolation test conducted at 8 to 10.5 feet. 4) Boring backfilled and tamped.

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Tustin, California

GANAHL - Costa Mesa, CA

Project No.:	Figure No.:
6848-04	D-2

LOG OF BORING

Drill Rig:	Boring Diameter:	Boring Elevation:	Boring No.
CME-75 HSA	8 inches	34.90 feet	PB-2
Date Drilled: 5/20/2014 GDH	This log is a representation of subsurface conditions at the time and place of drilling. With the passage of time or at any other location, there may be consequential changes in conditions.		

SAMPLE BULK	SAMPLE TUBE	BLOWS/FT.	FIELD MOISTURE % DRY WEIGHT	DRY DENSITY LB./CU. FT	SHEAR RESISTANCE KIPS/SQ. FT	DEPTH FEET	SOIL/ROCK SYMBOL	SOIL/ROCK TYPE	Descriptions and Remarks
								SM	Silty SAND with Gravel: dark brown, fine- to coarse-grained
									@ 3 feet, coarse Gravel
									FILL
						5		CL	Silty CLAY: greenish-gray, moist, very stiff
									@ 5 feet, very moist
									@ 7 feet, some pockets of coarse SAND
									FILL
								SP	SAND: fine- to coarse-grained, light greenish-gray to yellowish-brown, dry to slightly moist, dense
						10			TERRACE DEPOSITS
									Bottom of Boring at 10.25 feet. NOTE: 1) No ground water encountered. 2) Minor caving during percolation testing. 3) Percolation testing at 8 to 10.25 feet. 4) Boring backfilled and tamped.

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GANAHL - Costa Mesa, CA

Project No.:	Figure No.:
6848-04	D-3

PERCOLATION TEST RESULTS

TEST NO. 1	Boring elevation at 34 feet	SOIL/BEDROCK DESCRIPTION:	Silty SAND: fine- to coarse-grained with fine gravel (QT)
BACKHOE PIT/ BORING NO. PB-1	TEST DATE: 5/20/2014	DEPTH OF TEST HOLE:	10.5 feet, 126 inches

BEGIN TIME T_1 (hr:min)	END TIME T_2 (hr:min)	TIME INTERVAL $T = T_1 - T_2$ (min)	READINGS R_1 (inches)	READINGS R_2 (inches)	DROP $D = R_2 - R_1$ (inches)	DEPTH OF HOLE AT END OF INTERVAL (inches)	AVERAGE WETTED DEPTH (inches)
10:45	11:15	30	96	103	7	126	26.5
11:15	11:45	30	96	102.5	6.5	126	
11:45	12:15	30	96	102	6	126	27
12:15	12:45	30	96	101.5	5.5	126	
12:45	1:15	30	96	101.25	5.25	126	
1:15	1:145	30	96	101.25	5.25	126	
1:45	2:15	30	96	101	5.0	126	27.5
2:15	2:45	30	95.5	100.5	5.0	126	
2:45	3:15	30	96	101	5.0	126	
3:15	3:45	30	96	101	5.0	126	27.5
	TOTAL TIME	270		FINAL DROP	5.0	FINAL DEPTH	27.5

PERCOLATION TEST RESULTS

TEST NO. 2	Boring elevation at 34.9 feet	SOIL/BEDROCK DESCRIPTION:	SAND: fine- to coarse-grained, slightly moist, medium dense to dense
BACKHOE PIT/ BORING NO. PB-2	TEST DATE: 5/20/2014	DEPTH OF TEST HOLE:	10.5 feet, 123 inches

BEGIN TIME T_1 (hr:min)	END TIME T_2 (hr:min)	TIME INTERVAL $T = T_1 - T_2$ (min)	READINGS R_1 (inches)	READINGS R_2 (inches)	DROP $D = R_2 - R_1$ (inches)	DEPTH OF HOLE AT END OF INTERVAL (inches)	AVERAGE WETTED DEPTH (inches)
11:00	11:30	30	96	104	8	123	23
11:30	12:00	30	96	102.25	6.25	123	
12:00	12:30	30	95	101	6.0	118	20
12:30	1:00	30	96	101.5	5.5	116	
1:00	1:30	30	96	100.5	4.5	115	
1:30	2:00	30	96	100	4.0	115	17
2:00	2:30	30	96	100	4.0	115	
2:30	3:00	30	96	99.75	3.75	115	3:00
3:00	3:30	30	96	99.75	3.75	115	
3:30	4:00	30	96	99.75	3.75	115	17.125
	TOTAL TIME	270		FINAL DROP	3.75	FINAL DEPTH	17

APPENDIX G

NOISE IMPACT ANALYSIS

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KUNZMAN ASSOCIATES, INC.

GANAHL LUMBER
COSTA MESA RELOCATION PROJECT

NOISE IMPACT ANALYSIS

June 25, 2014

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

GANAHL LUMBER
COSTA MESA RELOCATION PROJECT

NOISE IMPACT ANALYSIS

June 25, 2014

Prepared by:

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I. Introduction and Setting

A. Purpose and Objectives

This study was performed to address the possibility of significant impacts due to noise. The objectives of the study include:

- documentation of existing noise conditions
- discussion of noise modeling methodology and procedures
- analysis of noise and vibration generated by the construction of the project
- analysis of noise and vibration generated by the typical operation of the project
- analysis of noise affecting nearby sensitive receptors due to increased traffic produced by the project
- recommendations for mitigation measures

B. Project Location

The approximately 5.93 acre project site is located north of Bristol Street and west of the existing Ganahl Lumber facility in the City of Costa Mesa, California.The subject property's street address is 1100 Bristol Street. The site is zoned "C1 Local Business" and has a land use designation of "General Commercial" on the City of Costa Mesa Zoning Map and General Plan Land Use Map, respectively. The subject property is now vacant but was previously developed with a self storage facility. The project location is shown on Figure 1.

C. Project Description

As shown on Figure 2, the project includes the development of 64,000 square feet of building area to accommodate a 50,115 square foot building materials retail store and a new 13,885 square foot building for will call storage; and up to 47,000 square feet of ancillary support "shed" buildings to house a 32,000 square foot "B" storage shed, 10,000 square feet of shed space and a 4,000 square foot mill shed. Access to the site will be provided via three driveways on Bristol Street. Primary access is proposed via a full access signalized driveway along Bristol Street to be constructed opposite northbound Newport Boulevard (Driveway No. 1), with secondary access to be provided via two proposed un-signalized driveways on Bristol Street that are to be located in the middle of the site (Driveway No. 2) and at the eastern property line (Driveway No. 3). Driveway No. 2 will provide access to customer, employee and contractor-related traffic, while Driveway No. 3 will provide access to truck-related traffic.

The proposed project is expected to be completed by late 2015 or early 2016. Upon completion of the new facility, the existing Ganahl Lumber facility will be closed; there are no plans to reuse or continue to operate the existing site once the new store is operational. Store hours will be 6:00 AM to 6:00 PM Mondays through Fridays, 7:00 AM to 6:00 PM on Saturdays, and 9:00 AM - 5:00 PM on Sundays.

Figure 1
Project Location Map

Legend

= Existing Project Site

= Proposed Project Site

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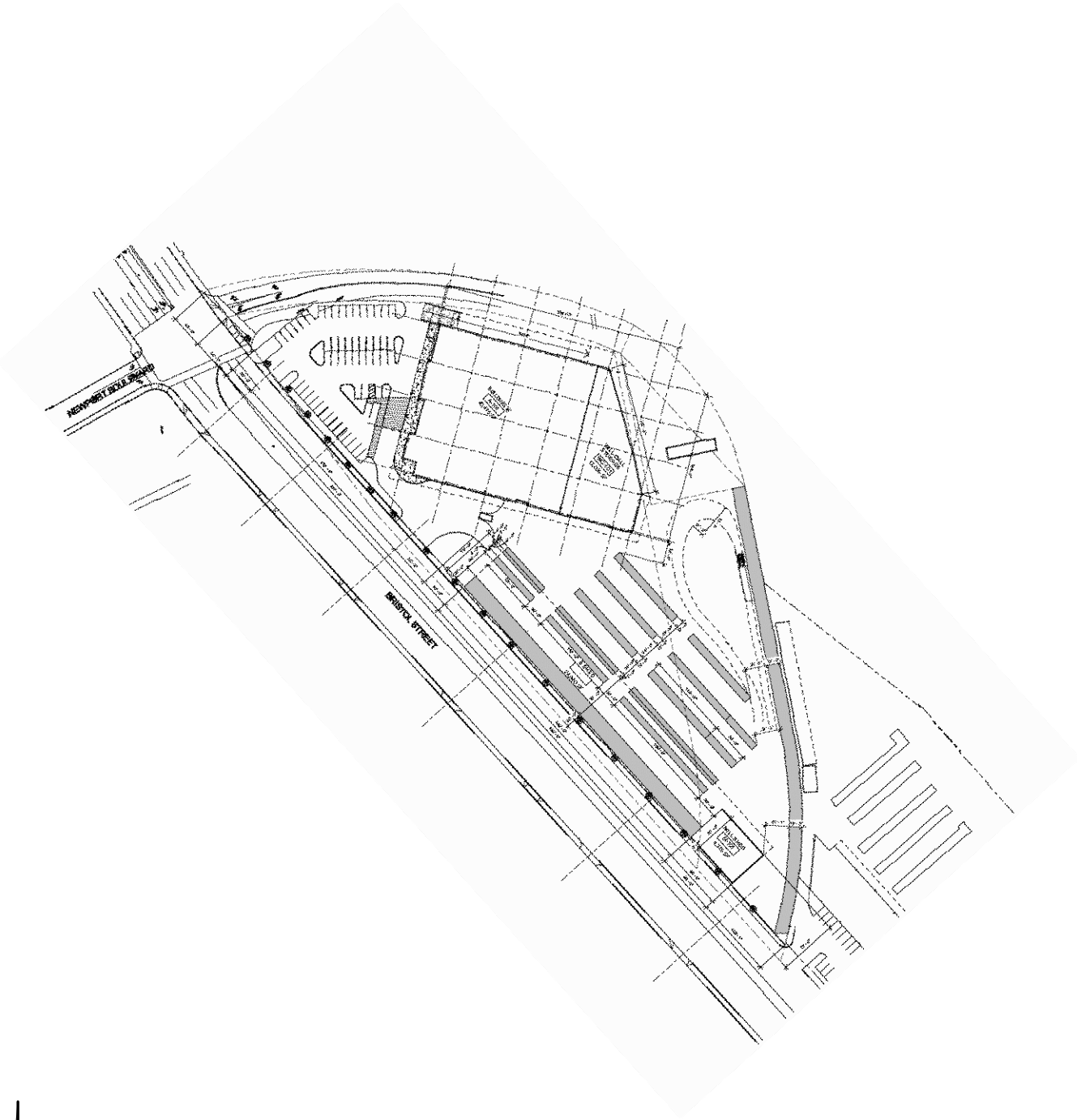
Figure 2
Site Plan



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II. Definition of Terms

Sound is a pressure wave created by a moving or vibrating source that travels through an elastic medium such as air. Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in extreme circumstances, hearing impairment.

Commonly used noise terms are presented in Table 1. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written with dBA or dB(A).

Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA; halving of the energy would result in a 3 dBA decrease. Figure 3 shows the relationship of various noise levels to commonly experienced noise events.

Average noise levels over a period of minutes or hours are usually expressed as dBA $L_{eq,}$or the equivalent noise level for that period of time. For example, $L_{eq(3)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (L_{dn}). CNEL is a 24-hour weighted average measure of community noise. CNEL is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours. L_{dn} is a very similar 24-hour average measure that weights only the nighttime hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation's Traffic Noise Analysis Protocol for New Highway and Reconstruction Projects.

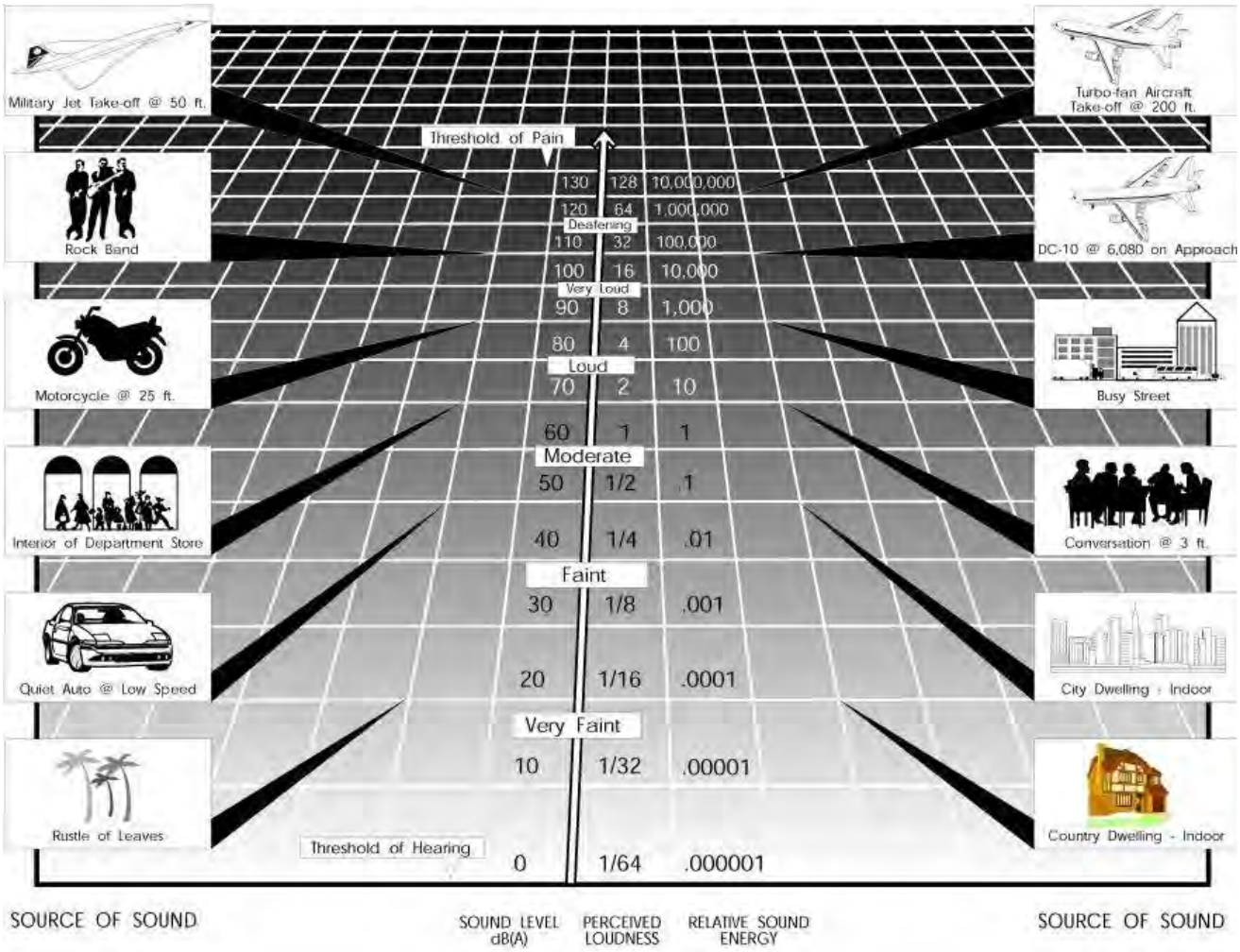
Table 1

Definitions of Acoustical Terms[1]

Term	Definition
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the 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.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
L_{02}, L_{08}, L_{50}, L_{90}	The 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, respectively.
Equivalent Continuous Noise Level, L_{eq}	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
L_{max}, L_{min}	L_{max} is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. L_{min} is the minimum level.
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
Offensive/ Offending/ Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.

[1] Adapted from: Cyril M. Harris; Handbook of Acoustical Measurement and Noise Control, 1991.

Figure 3
Common Noise Sources and Noise Levels



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III. Existing Noise Environment

A. Sensitive Noise Receptors

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, and residential uses make up the majority of these areas. The nearest noise sensitive receptors to the project site are single family residential units located west of Bristol Street approximately 335 feet west of the proposed Ganahl Lumber facility on Master's Circle.

B. Existing Noise Environment

1. Ambient Noise Measurements

An American National Standards Institute (ANSI Section SI4 1979, Type 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels in the project area. Measurement locations are shown on Figure 4. One 15-minute daytime noise measurement was taken to document existing operational noise at the existing Ganahl Lumber facility (NM1) and another was taken near the closest sensitive receptors (single-family residential units located west of the project site (NM2).Measurements were taken between 11:53 AM and 12:33 PM on March 18, 2014.

On-site noise measurements taken in the existing Ganahl Lumber facility (NM1) yielded an L_{eq} of 70.3 dBA and an L_{max} of 86.3 dBA. Dominant noise sources included traffic noise associated with State Route 73 and a variety of wood processing equipment, trucks, forklifts and sounds associated with the loading of materials, e.g. dropping wood).

Ambient noise levels near the existing sensitive receptors (NM2) were measured at 63.9 dBA L_{eq} and 82.2 dBA L_{max}. Vehicle and road noise associated with SR 55, SR 73, and Bristol Street were the dominant noise sources during the measurement.

Ambient noise levels are presented in Table 2 and measurement output data is included within Appendix A.

2. John Wayne Airport Noise

The John Wayne Airport is located approximately 1/2 mile eastof the project site. Although the site may be subject to occasional flyovers, it is not located within the 65 dBA CNEL noise contour (Orange County Airport Land Use Commission 2008).

Table 2

Ambient Noise Levels[1]

Name	Land Use	Time Period	Measurement Period	Existing Ambient Noise Levels (dBA)					
				L_{eq}	L_{max}	L_2	L_8	L_{25}	L_{50}
NM1	Existing Ganahl Lumber Facility	11:53 AM - 12:08 PM	15 minutes	70.3	86.6	79.8	74.2	68.3	65.7
NM2	Single-Family Residential	12:18 PM - 12:33 PM	15 minutes	63.9	82.2	73.9	65.6	59.9	57.7

[1] Site Visit, Kunzman Associates, Inc., August 27, 2013.

Figure 4
Ambient Noise Measurement Locations

Legend

⊗ = Noise Measurement Location

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IV. Analytical Methodology and Model Parameters

A. Noise Modeling and Input

1. Federal Highway Administration (FHWA) Traffic Noise Prediction Model

Existing and Existing Plus Project noise levels along area roadways that will handle project generated trips were modeled utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. This model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the REMEL to account for: total average daily trips (ADT), roadway classification, width, speed and truck mix, roadway grade and site conditions (hard or soft ground surface). Surfaces adjacent to all modeled roadways were assumed to have a "hard site" to predict worst-case, conservative noise levels. A hard site, such as pavement, is highly reflective and does not attenuate noise as quickly as grass or other soft sites. Possible reductions in noise levels due to intervening buildings were not accounted for in the analysis.

For future buildout conditions, it is important to evaluate potential impacts of the noisiest possible conditions. These conditions occur when the maximum amount of vehicles pass at the greatest speed. This scenario usually corresponds to Level of Service C (LOS C) Conditions, or about 75% of buildout capacity.

For project generated increases in vehicle traffic, project traffic volumes and vehicle mix were obtained from the project's traffic study (LL&G 2014). Existing Plus Project mixes were calculated by adding the proposed project trips to existing conditions. The City of Costa Mesa does not have a Day/Evening/Night (D/E/N) split published for use in acoustical studies so a vehicle mix and D/E/N split for arterial roadways provided by Doug Friedman of the County of Orange Development Services was utilized to model existing traffic noise along Bristol Street (Email communication December 8, 2014). Truck mix provided by Caltrans was utilized for Highway 73 (Caltrans, 2012).

2. Road Construction Noise Model (RCNM)

A worst-case construction noise scenario was modeled using the Federal Highway Administration's Roadway Construction Noise Model (RCNM). Modeling parameters and output are provided in Appendix B. RCNM utilizes standard noise emission levels for many different types of equipment and includes utilization percentage, impact, and shielding parameters.

3. Stationary Noise Modeling and Calculations

The proposed project is expected to create noise sources typical of industrial land uses including heavy trucks, backup alarms, truck/trailer disconnects, trailer dropping, truck idling, truck acceleration, forklifts, dumping of materials, metal hitting metal, air compressors and possibly conveyor belts. As mentioned previously, representative

noise measurements were collected and applied to the project site in order to estimate project noise at the nearest sensitive receptors.

V. Applicable Standards

A. City of Costa Mesa General Plan

It is the goal of the City of Costa Mesa to protect its citizens and property from injury, damage, or destruction from noise hazards and to work towards improved noise abatement. Objectives and policies applicable to the proposed project are presented below.

Objective N-1A. Control noise levels within the City for the protection of residential areas and other sensitive land uses from excessive and unhealthful noise.

Policy N-1A.1 Require, as a part of the environmental review process, that full consideration be given to the existing and projected noise environment.

The Noise Element also establishes the noise/land use compatibility criteria to be used in determining whether a new use is appropriate within a given noise environment. The proposed land use can be considered both an industrial land use (outdoor mill and wood processing yard) and a commercial land use (retail store). As shown in Table 3, industrial land uses are considered to be normally acceptable in environments with noise levels of up to 70 dBA CNEL and conditionally acceptable in environments with noise levels of up to 75 dBA CNEL.Commercial land uses are considered normally acceptable in environments with noise levels of up to 67.5 dBA CNEL and conditionally acceptable in environments with noise levels of up to 77.5 dBA CNEL.

B. City of Costa Mesa Municipal Code

City Noise Ordinance standards for both outdoor and indoor noise levels are presented in Tables 4 and 5. These standards are intended to control unnecessary, excessive and annoying sounds generated on one piece of property from impacting an adjacent property, and to protect residential areas from noise sources other than transportation sources. These standards will be utilized to evaluate whether operation of the proposed project is likely to impact nearby sensitive receptors.

In addition to the base noise standards shown in Tables 4 and 5, the ordinance provides exterior noise standards that allow higher noise levels for shorter periods of time. These are explained underneath each Table.

The Noise Ordinance exempts several categories of noise sources, including construction activities which take place between the hours of 7:00 AM and 8:00 PM Monday through Saturday, excluding federal holidays.

C. Increases in Ambient Noise Levels

The California Environmental Quality Act Guidelines (Appendix G) establishes thresholds for noise impact analysis. Two of these standards apply to what is referred to as a "substantial

increase, nor does CEQA establish a numerical value for this threshold. Noise generated by transportation sources propagates differently than noise generated by point sources. Therefore, for purposes of this analysis, the following two thresholds were utilized to evaluate the project's potential to result in substantial increases in ambient noise levels.

Traffic Noise

Roadway noise impacts would be considered significant if the project increases noise levels at a noise sensitive land use by 3 dBA CNEL and if: (1) the existing noise levels already exceed the residential land use compatibility standard for "normally acceptable" (65 dBA CNEL), or (2) the project increases noise levels from below the 65 dBA CNEL standard to above 65 dBA CNEL.

Stationary Noise

Project operations, including noise from on-site trucks, may produce an increase noise levels which disturbs the peace and quiet of adjacent residential areas or cause discomfort/annoyance to area residents. A 5 dBA increase is considered to be "readily audible", which seems to correlate most closely to "substantial increase." For the purposes of this report, a substantial increase in noise levels due to stationary noise sources shall be considered 5 dBA L_{eq}.

Table 3

City of Costa Mesa Noise and Land Use Compatibility Matrix[1]

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential- Low Density	50-60	60-70	70-75	75-85
Residential -Multiple Family	50-65	65-70	70-75	75-85
Transient Lodging-Motel,	50-65	65-70	70-80	80-85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-65	65-80	80-85
Auditoriums, Concert Halls, Amphitheaters	N/A	50-70	N/A	70-85
Sports Arenas, Outdoor Spectator Sports	N/A	50-75	N/A	75-85
Playgrounds, Neighborhood Parks	50-67.5	N/A	67.5-75	75-85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-70	N/A	70-80	80-85
Office Buildings, Business Commercial and Professional	50-67.5	67.5-77.5	77.5-85	N/A
Industrial, Manufacturing, Utilities, Agriculture	50-70	70-80	80-85	N/A

Notes:

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should 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.

Clearly Unacceptable: New construction or development should generally not be undertaken.

[1] Source: (City of Costa Mesa 2002)

Table 4

Costa Mesa Exterior Noise Standards[1]

Noise Level	Time Period
55 dB(A)	7:00 AM - 11:00 PM
45 dB(A)	11:00 PM - 7:00 AM

A. In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) dB(A).

B. It shall be unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level when measured within any other dwelling unit on any residential property, either within or outside the city, to exceed:

The interior noise standard for a cumulative period of more than five (5) minutes in any hour;

The interior noise standard plus five (5) dB(A) for a cumulative period of more than one (1) minute in any hour; or

The interior noise standard plus ten (10) dB(A) for any period of time.

C. In the event the ambient noise level exceeds either of the first two (2) noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise limit category the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

D. The exterior noise standards shown in subsection (a) shall not apply to the following exterior areas of multi-family residential development or live/work units located within a mixed-use overlay district where the base zoning district is nonresidential, approved pursuant to a master plan, and subject to the land use regulations of an urban plan:

Private balconies or patios regardless of size;

Private or community roof decks/roof terraces;

Internal courtyards and landscaped walkways that do not include resident-serving, active recreational uses such as community pool, spa, tennis courts, barbeque, and picnic areas.

[1] Source: City of Costa Mesa Municipal Ordinance, 2014

Table 5

Costa Mesa Interior Noise Standards[1]

Noise Level	Time Period
55 dB(A)	7:00 AM - 11:00 PM
45 dB(A)	11:00 PM - 7:00 AM

A. In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) dB(A).

B. It shall be unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level when measured within any other dwelling unit on any residential property, either within or outside the city, to exceed:

The interior noise standard for a cumulative period of more than five (5) minutes in any hour;

The interior noise standard plus five (5) dB(A) for a cumulative period of more than one (1) minute in any hour; or

The interior noise standard plus ten (10) dB(A) for any period of time.

C. In the event the ambient noise level exceeds either of the first two (2) noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise limit category the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

[1] Source:City of Costa Mesa Municipal Ordinance, 2014

VI. Impact Analysis

A. Construction Noise Impacts

Sensitive receptors that may be affected by project construction include the single-family detached residential dwelling units located west of the proposed project and west of Bristol Street on The Masters Circle. The closest single-family detached residential dwelling unit to the project site is approximately 335 feet to the southwest on Masters Circle.

Construction noise varies depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week) and the duration of the construction work. The initial phase of construction would involve mass grading of the site, along with site development activities, including construction of internal roadways which involves fine grading, trenching, and paving activities. Following site preparation activities, the project would include construction of buildings. Construction of the buildings would require the following phases: site development (fine grading, trenching, and paving), building construction, architectural coatings application, and paving associated with buildings.

Mass site grading is expected to produce the highest construction noise levels. Grading of the site is estimated to require a grader, backhoe, dozer, excavator, and water truck (modeled as a dump truck). Typical noise sources and noise levels associated with the site grading phase of construction are shown in Table 6.

A worst-case construction scenario was conducted to estimate construction noise at the closest sensitive receptors using the Road Construction Noise Model (RCNM) provided by the FHWA. Project construction noise levels may reach 64.3 dBA L_{eq} and up to 65.0 dBA L_{max} at the nearest sensitive receptor located southwest of the project site.It should be noted that there is a six foot concrete barrier along the northeastern boundary of the potentially affected single family neighborhood. This barrier can be expected to reduce construction noise at back yards and first floor rooms by 5 dBA.

Project construction activities could temporarily increase ambient noise levels at the nearest sensitive receptor by less than 1 dB during daytime hours. This increase would not result in an audible change. As long as project construction activities are limited to the hours and days listed as exempt from the noise ordinance (7:00 AM to 8:00 PM Monday through Saturday, excluding federal holidays), impacts would not be significant. Evening and nighttime hours (8:00 PM to 7:00 AM) are usually much quieter than the daytime hours and construction activities during these periods would be more noticeable than construction activities that occur during the day.

B. Operational Noise Impacts

1. On-Site Operational Noise

As stated previously, the nearest sensitive receptors to the project site are the single-family detached residential dwelling units located approximately 335 feet southwest of the project site. The project would generate different sources of operational noise. For purposes of this analysis, operational noise modeling was conducted in relation to lumber yard noise (modeled 480 feet from the nearest sensitive receptor) as well as for parking lot noise (modeled 335 feet from the nearest sensitive receptor).

As discussed previously, representative operational noise measurements were taken inthe existing lumber yard at the adjacent Ganahl Lumber facility. Average hour noise sources were comprised of trucks, backhoes, wood processing and loading equipment.Measured noise levels reached 70.3 dBA L_{eq} and 86.6 dBA L_{max}.

The above noise source levels were assigned to the proposed project site approximately 80 feet northeast of Bristol Street to represent noise associated with the proposed lumber yard location. This noise was then projected to the nearest sensitive receptors (approximately 480 feet southwest of the lumber yard site) where it is expected to reach 44.6 dBA L_{eq} and 60.9 dBA L_{max}. Project operational noise would not be discernible over existing daytime ambient noise levels (63.9 dBA L_{eq} and 82.2 dBA L_{max}) at sensitive receptors.

The project will also include employee and visitor parking areas. Typical noises that may be generated by the proposed parking lot include landscaping maintenance, conversations and/or yelling in parking lots, vehicle doors closing, and car alarms. These types of activities can generate noise levels between 49 dBA (tire squeals) and 74 dBA (car alarms) at 50 feet and would attenuate to 32.6 dBA and 57.6 dBA at the nearest sensitive receptor to the proposed parking lot (approximately 335 feet). Noise associated with parking lot activities would not be discernable over existing ambient noise levels at the nearest sensitive receptors. No mitigation is required.

2. Project Generated Traffic Noise Impacts to Sensitive Receptors

In order to determine if the project generated vehicle traffic would result in substantial increases in ambient noise levels at sensitive receptors along Bristol Street, Existing and Existing Plus Project vehicle noise were modeled utilizing trip generation provided in the traffic study prepared for the proposed project (LL&G 2014).Modeling output is included in this report as Appendix C.

The existing ADT along the affected portion of Bristol Street is 22,800. The proposed project would add approximately 2,287 ADT. Modeled Existing noise levelsat a distance of 100 feet from the centerline are 69.27 dBA CNEL; and modeled Existing Plus Project traffic noise levels at 100 feet from the centerline are 69.46 dBA CNEL. The proposed project would result in an increase of approximately 0.19 dBA CNEL and would not result in a substantial increase in ambient noise levels. No mitigation is required.

It is important to note that modeled noise levels may be lower than measured ambient noise levels due to other noise sources in the area. The purpose of this analysis is to calculate the project's contribution to an increase in noise levels due to project generated traffic.

3. Traffic Noise Impacts to the Proposed Project

The City of Costa Mesa Noise Element establishes the noise/land use compatibility criteria to be used in determining whether a new use is appropriate within a given noise environment. As shown in Table 3, industrial land uses are considered to be normally acceptable in environments with noise levels of up to 70 dBA CNEL and conditionally acceptable in environments of up to 80 dBA CNEL. Commercial land uses are considered normally acceptable in environments with noise levels of up to 67.5 dBA CNEL and conditionally acceptable in environments with noise levels of up to 77.5.

Noise levels associated with the SR-73 Freeway, the dominant noise source at the project site, are expected to reach up to 74.7 dBA CNEL at the lumber yard and 72.6 at the exterior of the proposed retail store. These noise levels are considered to be conditionally acceptable according to the City of Costa Mesa's Noise Element. This means that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. For the retail portion of the project, conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice. The Ganahl Lumber facility will be subject to Section 1910.95(b)(1) of State of California Code Regulations which establishes noise level exposure criteria at which employees must utilize personal protective equipment.

C. Vibration Impacts

1. Project Generated Vibration

Ground-borne vibration is an oscillatory motion that is often described by the average amplitude of its velocity in inches per second or more specifically, peak particle velocity. Ground-borne vibration is much less common than airborne noise; the ambient peak particle velocity of a residential area is commonly .0003 inches per second or less, well below the threshold of human perception of .0059 inches per second. Nonetheless, human reactions to vibration are highly subjective, and even levels below the threshold can cause minor annoyances like rattling of dishes, doors, or fixtures. Typical human response to vibration is given in Table 7.

Table 8 shows the peak particle velocities of some common construction equipment and haul trucks (loaded trucks). The most vibration-causing piece of equipment that will likely be used on-site is the vibratory roller. This machine can cause vibration strong enough to annoy people over 100 feet away. However, there are no sensitive receptors located within 100 feet of the project site, therefore, there would not be an impact.

Based on the California Department of Transportation data, haul trucks would not be anticipated to exceed 0.10 in/sec peak particle velocity (ppv) at 10 feet (California Department of Transportation 2002). Predicted vibration levels at the nearest off-site structures, which are located in excess of 25 feet from the traveled roadway segments, would not be anticipated to exceed even the most conservative threshold of 0.2 inch/second ppv. Considering that there are no residential dwelling units located within 25 feet of the haul route, there would be no impact. No mitigation is required.

Table 6

Typical Construction Equipment Noise Levels[1]

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft.)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft.)
Rock Drills	83-99	96
Jack Hammers	75-85	82
Pneumatic Tools	78-88	85
Pumps	74-84	80
Dozers	77-90	85
Scrapers	83-91	87
Haul Trucks	83-94	88
Cranes	79-86	82
Portable Generators	71-87	80
Rollers	75-82	80
Tractors	77-82	80
Front-End Loaders	77-90	86
Hydraulic Backhoe	81-90	86
Hydraulic Excavators	81-90	86
Graders	79-89	86
Air Compressors	76-89	86
Trucks	81-87	86

[1] Source: Bolt, Beranek & Newman; Noise Control for Buildings and Manufacturing Plants, 1987.

Table 7

Human Reaction to Typical Vibration Levels[1]

Vibration Level Peak Particle Velocity (ppv) (in/sec)	Human Reaction
0.0059-0.0188	Threshold of perception, possibility of intrusion
0.0787	Vibrations readily perceptible
0.0984	Continuous vibration begins to annoy people
0.1968	Vibrations annoying to people in buildings
0.3937-0.5905	Vibrations considered unpleasant when continuously subjected and unacceptable by some walking on bridges.

[1] Source: Caltrans, 2002

Table 8

Construction Equipment Vibration Source Levels[1]

Equipment	Peak Particle Velocity in inches per second[2]		
	at 25 ft.	at 50 ft.	at 100 ft.
Clam Shovel Drop (slurry wall)	**0.202**	0.071	0.025
Vibratory Roller	**0.210**	0.074	0.026
Hoe Ram	**0.089**	0.031	0.011
Large Bulldozer	**0.089**	0.031	0.011
Caisson Drilling	**0.089**	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Jackhammer	0.035	0.012	0.004
Small Bulldozer	0.003	0.001	0.0004

[1] Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment, 2006.

[2] Bold values are considered annoying to people.

VII. References

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Appendices

Appendix A –Noise Measurement Data Sheets

Appendix B – RCNM Noise Modeling Sheets

Appendix C – FHWA Traffic Noise Prediction Model - FHWA-RD-77-108 Output

APPENDIX A

Noise Measurement Data Sheets

Summary	Ganahl On-Site
Filename	LxT_Data.155
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.112
User	Roma Stromberg
Location	Nearest Sensitive Receptor
Start	18/03/2014 11:53:34
Stop	18/03/2014 12:08:34
Duration	0:15:00.0
Run Time	0:15:00.0
Pause	0:00:00.0

Pre Calibration	13/03/2014 10:59:51
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	C Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
Overload	0.0 dB

Results			
LASeq	**70.3** dB		
LASE	99.9 dB		
EAS	1.082 mPa²h		
EAS8	34.628 mPa²h		
EAS40	173.139 mPa²h		
LCpeak (max)	18/03/2014 11:59:55	106.8 dB	
LASmax	18/03/2014 11:57:26	**86.3** dB	
LASmin	18/03/2014 12:02:20	58.4 dB	
SEA	-99.9 dB		

LCSeq	84.0 dB	**Statistics**	
LASeq	70.3 dB	**LAS1.67**	79.8 dB
LCSeq - LASeq	13.7 dB	**LAS8.33**	74.2 dB
LAIeq	73.2 dB	**LAS25.00**	68.3 dB
LAeq	70.3 dB	**LAS50.00**	65.7 dB
LAIeq - LAeq	2.8 dB	**LAS66.67**	64.4 dB
# Overloads	0	**LAS90.00**	61.7 dB
Overload Duration	0.0 s		

Summary	Ganahl Off-Site
Filename	LxT_Data.156
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.112
User	Roma Stromberg
Location	Nearest Sensitive Receptor
Start	18/03/2014 12:18:25
Stop	18/03/2014 12:33:24
Duration	0:15:00.0
Run Time	0:15:00.0
Pause	0:00:00.0

Pre Calibration	13/03/2014 10:59:51
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	C Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
Overload	0.0 dB

Results

LASeq	**63.9** dB	
LASE	92.8 dB	
EAS	211.968 µPa²h	
EAS8	7.927 mPa²h	
EAS40	39.636 mPa²h	
LCpeak (max)	18/03/2014 12:31:28	98.7 dB
LASmax	18/03/2014 12:31:29	**82.2** dB
LASmin	18/03/2014 12:24:11	51.0 dB
SEA	-99.9 dB	

LCSeq	72.1 dB	**Statistics**	
LASeq	63.9 dB	**LAS1.67**	73.9 dB
LCSeq - LASeq	8.2 dB	**LAS8.33**	65.6 dB
LAIeq	65.5 dB	**LAS25.00**	59.9 dB
LAeq	64.0 dB	**LAS50.00**	57.7 dB
LAIeq - LAeq	1.6 dB	**LAS66.67**	56.2 dB
# Overloads	0	**LAS90.00**	53.6 dB
Overload Duration	0.0 s		

APPENDIX B

RCNM Noise Modeling Sheets

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/6/2014
Case Description: Ganahl Costa Mesa

				---- Receptor #1 ----
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Single Family Resident	Residential	65	65	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	340	0
Excavator	No	40		80.7	380	0
Backhoe	No	40		77.6	400	0
Dump Truck	No	40		76.5	420	0

		Calculated (dBA)		Results
Equipment		*Lmax	Leq	
Dozer		65	61	
Excavator		63.1	59.1	
Backhoe		59.5	55.5	
Dump Truck		58	54	
	Total	65	64.3	

*Calculated Lmax is the Loudest value.

APPENDIX C

FHWA Traffic Noise Prediction Model
- FHWA-RD-77-108 Output

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **5615**
Road: **Bristol Street**
Segment: **SR 55 to Red Hill Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22800.00
										SPEED	45.00
										DISTANCE	100.00
INPUT PARAMETERS											
Vehicles per hour	659.87	13.68	22.80	122.53	0.57	0.95	91.16	14.25	23.75	% A	97.42
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	0.74
ADJUSTMENTS											
Flow	21.36	4.52	6.74	14.04	-9.28	-7.06	12.76	4.70	6.92		
Distance	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	**69.27**
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.17
LEQ	62.62	54.06	60.80	55.31	40.26	47.00	54.02	54.24	60.98	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.17		EVENING LEQ	56.02		NIGHT LEQ	62.48		Use hour?	no
										GRADE dB	0.00
	CNEL		69.27								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **5615**
Road: **Bristol Street**
Segment: **SR 55 to Red Hill Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	25087.00
										SPEED	45.00
										DISTANCE	100.00
INPUT PARAMETERS											
Vehicles per hour	729.66	14.59	23.26	135.49	0.61	0.97	100.80	15.20	24.23	% A	92.46
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.91
NOISE CALCULATIONS											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	4.64
ADJUSTMENTS											
Flow	21.79	4.80	6.83	14.48	-9.00	-6.97	13.20	4.98	7.00		
Distance	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	**69.46**
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.47
LEQ	63.06	54.35	60.89	55.75	40.54	47.09	54.46	54.52	61.07	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.47		EVENING LEQ	56.41		NIGHT LEQ	62.65		Use hour?	no
										GRADE dB	0.00
	CNEL		69.46								

FHWA Sound32 Spreadsheet

SR 73 Traffic Noise

Project: **5615 - Ganahl CM**
Road: **Highway 73**
Segment: **SR 55 to Red Hill Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	212000.00
										SPEED	65.00
										DISTANCE	265.00
INPUT PARAMETERS											
Vehicles per hour	6509.11	67.84	33.92	1208.71	2.83	1.41	899.21	70.67	35.33	% A	97.60
Speed in MPH	65.00	65.00	65.00	65.00	65.00	65.00	65.00	65.00	65.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.60
NOISE CALCULATIONS											
Reference levels	75.54	81.71	85.21	75.54	81.71	85.21	75.54	81.71	85.21	% HT	0.80
ADJUSTMENTS											
Flow	29.70	9.88	6.87	22.39	-3.92	-6.93	21.10	10.06	7.05		
Distance	-7.31	-7.31	-7.31	-7.31	-7.31	-7.31	-7.31	-7.31	-7.31	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	**74.68**
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	73.31
LEQ	72.93	59.28	59.76	65.62	45.48	45.96	64.33	59.45	59.94	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	73.31		EVENING LEQ	65.70		NIGHT LEQ	66.61		Use hour?	no
										GRADE dB	0.00
	CNEL		74.68								

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APPENDIX H:

TRAFFIC IMPACT STUDY

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LINSCOTT LAW & GREENSPAN engineers

REVISED FOCUSED TRAFFIC IMPACT STUDY
GANAHL LUMBER COSTA MESA RELOCATION PROJECT

Costa Mesa, California

November 18, 2014

Engineers & Planners
Traffic
Transportation
Parking

LINSCOTT LAW & GREENSPAN engineers

REVISED FOCUSED TRAFFIC IMPACT STUDY

GANAHL LUMBER COSTA MESA RELOCATION PROJECT

Costa Mesa , California
November 18, 2014

Prepared for:

GANAHL CONSTRUCTION CORPORATION
1220 E. Ball Road
Anaheim, CA 92805

and

CITY OF COSTA MESA
77 Fair Drive
Costa Mesa, California 92626

LLG Ref. 2-14-3455

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REVISED FOCUSED TRAFFIC IMPACT STUDY

GANAHL LUMBER COSTA MESA

Costa Mesa, California
November 18, 2014

1.0 INTRODUCTION

This traffic impact analysis addresses the potential traffic impacts associated with the proposed Ganahl Lumber Relocation Project (hereinafter referred to as Project) in the City of Costa Mesa, California. The proposed Project, to be located at 1100 Bristol Street, includes the development of 68,571 square-feet (SF) of building area to accommodate a new building materials retail store and will-call building, plus 43.113 SF of "shed" space. The proposed Project will replace the existing Ganahl Lumber facility located at 1275 Bristol Street, which will be closed upon completion of the new store.

This report documents the findings and recommendations of a traffic impact analysis conducted by Linscott, Law & Greenspan, Engineers (LLG) to determine the potential impacts associated with the proposed Project. The traffic analysis evaluates the existing operating conditions at three (3) key study intersections within the project vicinity, plus two proposed (2) proposed site driveways on Bristol Street, and estimates the trip generation potential of the Project. Where necessary, intersection improvements/mitigation measures are identified.

This traffic report satisfies the *City of Costa Mesa Traffic Impact Analysis Methodology,* dated February 2009 and is consistent with the requirements and procedures outlined in the most current *Congestion Management Program (CMP) for Orange County.* The Scope of Work for this traffic study, which is included in ***Appendix A***, was developed in conjunction with City of Costa Mesa Public Works Department staff. The traffic report has been revised to address the applicable traffic-related comments of City staff provided on November 5, 2014.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at three (3) key study intersections for use in the preparation of level of service calculations. Information concerning cumulative projects (planned and/or approved) in the vicinity of the project has been researched at the City of Costa Mesa and City of Irvine. Based on our research, there are no related projects located within close proximity to the site with two exceptions. To provide a conservative cumulative assessment, this traffic analysis assumes the re-occupancy of the current Ganahl Lumber building materials store with a retail use as well as the re-occupancy of a vacant fast-food restaurant located directly adjacent to the current Ganahl Lumber facility.

This traffic report analyzes existing weekday AM peak hour and PM peak hour traffic conditions for existing plus project traffic conditions and a near-term (Year 2016) horizon year upon completion of the proposed Project. Near-term (Year 2016) cumulative peak hour traffic forecasts were projected by incorporating a one percent (1.0%) annual growth rate.

1.1 Study Area

The three (3) key study intersections selected for evaluation in this report provide both regional and local access to the study area. They consist of the following:

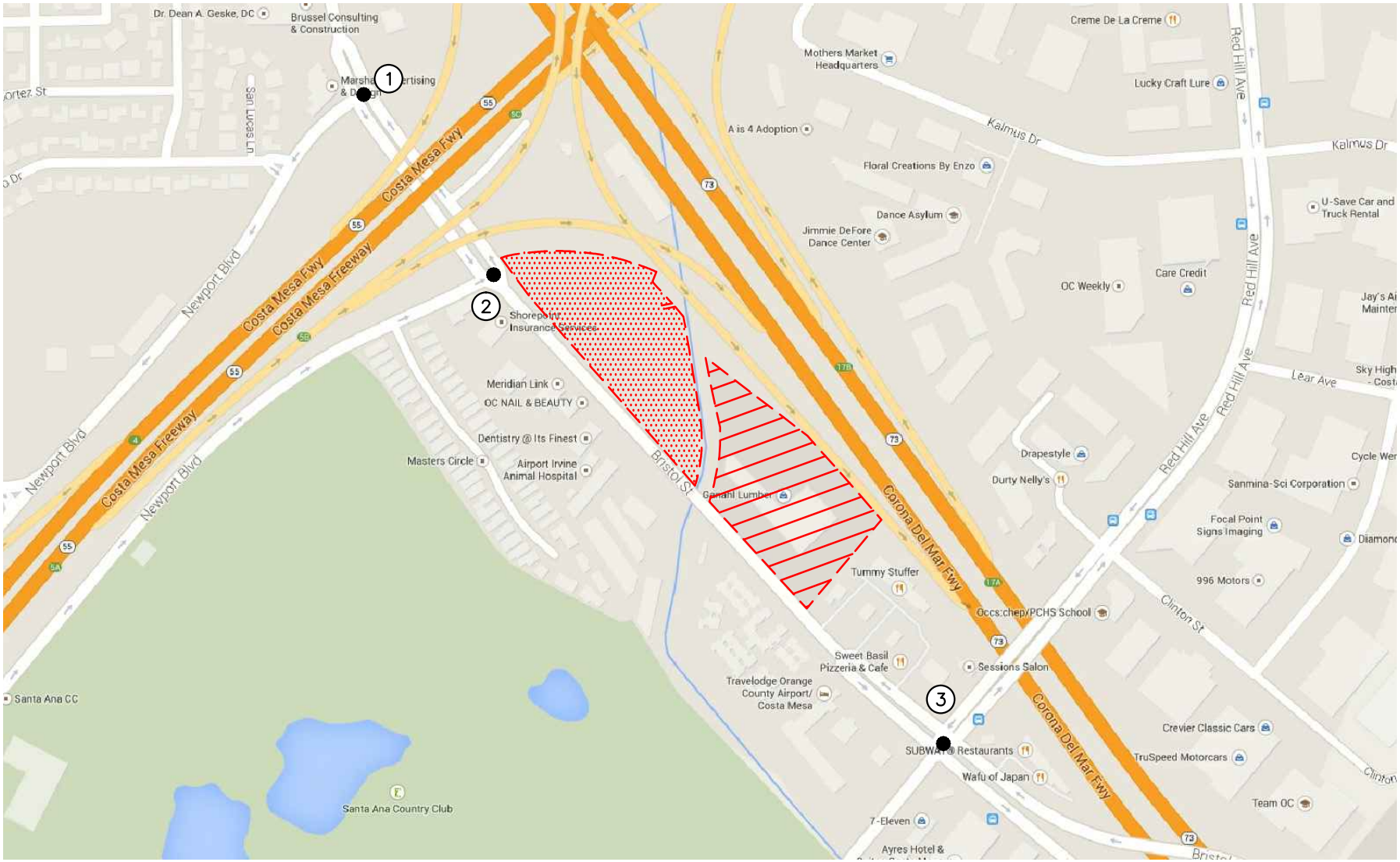
Study Intersections

1. Southbound Newport Boulevard at Bristol Street (Signalized)
2. Northbound Newport Boulevard at Bristol Street (Signalized)
3. Red Hill Avenue/Santa Ana Avenue at Bristol Street (Signalized)

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the existing site and proposed Project and depicts the study locations and surrounding street system. The Level of Service (LOS) investigations at these key locations were used to evaluate the potential traffic-related impacts associated with area growth, cumulative projects and the proposed Project. When necessary, this report recommends intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service and/or mitigate the impact of the project.

Included in this Traffic Impact Analysis are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- AM and PM peak hour capacity analyses for existing conditions,
- AM and PM peak hour capacity analyses for existing plus project conditions,
- AM and PM peak hour capacity analyses for future near-term (Year 2016) traffic conditions without and with the proposed Project, and
- Site Access and Internal Circulation Evaluation.



n:\3400\2143455 - ganahl lumber focused tis, costa mesa\dwg\3455f1-1.dwg LDP 11:49:31 05-19-2014 aguilar

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: GOOGLE

KEY

(#) = STUDY INTERSECTION

= EXISITNG PROJECT SITE

= PROPOSED PROJECT SITE

FIGURE 1-1

VICINITY MAP

GANAHL LUMBER FOCUSED TIS, COSTA MESA

2.0 PROJECT DESCRIPTION

The Project site is a 5.93± acre parcel of land that is located north of Bristol Street and west of the existing Ganahl Lumber facility in the City of Costa Mesa, California. The subject property's street address is 1100 Bristol Street. The Project site is zoned "C1 Local Business" and has a land use designation of "General Commercial" in the City of Costa Mesa Zoning Map and General Plan Land Use Map, respectively. The subject property is now vacant but was previously developed with a self-storage facility. Based on the City of Costa Mesa Industrial Development Standards, the project site could be developed with up to 193,700 square-feet (SF) of "mini-warehouse" floor area[1]. Access to the Project site is now provided via two full access driveways on Bristol Street that are located at the center and eastern portion of property.

2.1 Existing Development

The existing Ganahl Lumber facility, which is located directly east of the project site at 1275 Bristol Street, has a total of 55,540 SF of building/shed area consisting of a 35,650 SF building materials retail store and a 1,637 SF will call storage shed, a 15,905 SF storage shed (B), and a 2,348 SF mill shed (D). Access to the existing site is now provided via two full access unsignalized driveways along Bristol Street. ***Figure 2-1*** presents an aerial depiction of the existing site and the proposed Project. ***Figure 2-2*** illustrates the existing site plan for current Ganahl Lumber facility prepared by Onyx Architects.

2.2 Proposed Project

The proposed Project includes the development of 68,571 SF of building area to accommodate a new 57,287 SF building materials retail store with 11,284 SF of warehouse/will call storage space, and up to 43,113 SF of ancillary support "shed" buildings ("B" storage shed, pole-shed space and a mill shed) for the protection of raw materials/lumber and/or equipment. ***Table 1-1*** summarizes the existing and proposed development totals of the Ganahl Lumber project. A review of this table indicates that a total of 273 spaces will be provided, of which 101 spaces will be provided on a roof-top parking lot on Building A.

The proposed Project is expected to be completed by late 2015/early 2016. Upon completion of the new facility, the existing Ganahl Lumber store will be closed; there are no plans to reuse or continue to operate the existing site once the new store is operational. ***Figure 2-3*** illustrates the proposed site plan for the Project prepared by Onyx Architects.

[1] Source: Floor area estimated assuming a FAR of 0.75 as allowed by the City of Costa Mesa Industrial Development Standards for "Very Low Traffic FAR" land uses, which includes mini-warehouse (self-storage) developments.

LINSCOTT LAW & GREENSPAN engineers

NO SCALE

SOURCE: GOOGLE

KEY

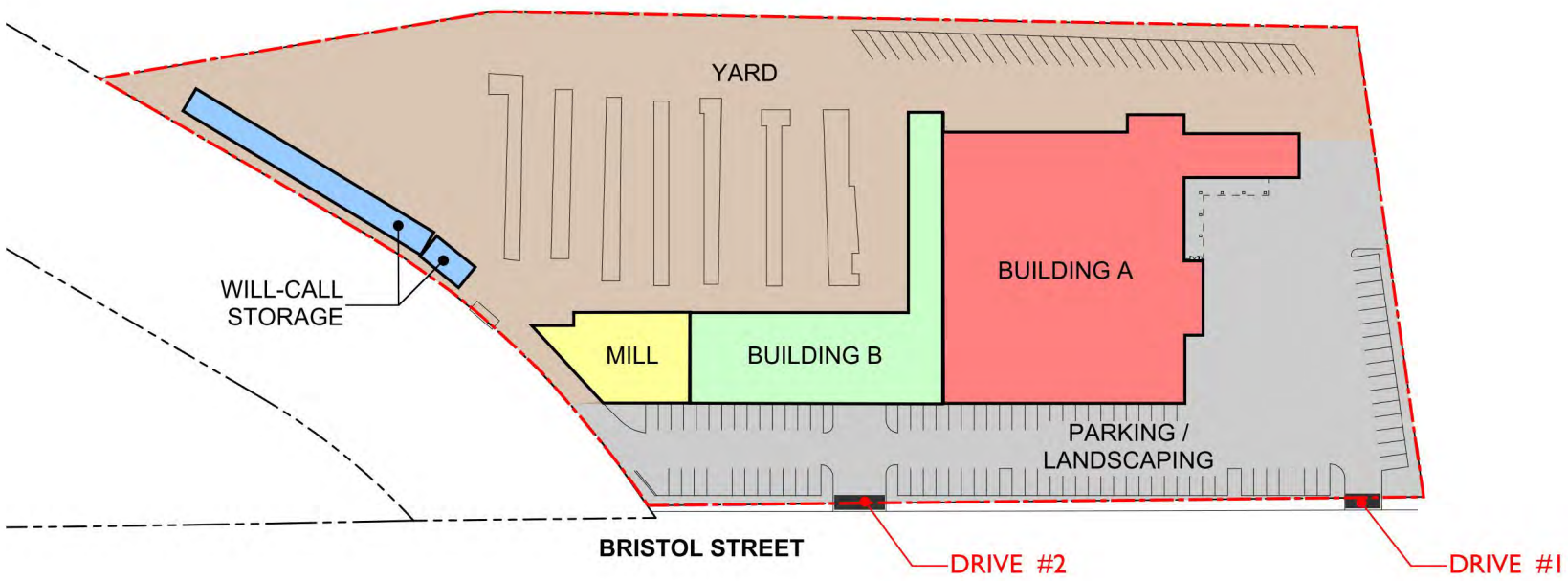
= EXISTING PROJECT SITE

= PROPOSED PROJECT SITE

FIGURE 2-1

EXISTING AERIAL SITE PHOTOGRAPH

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

N

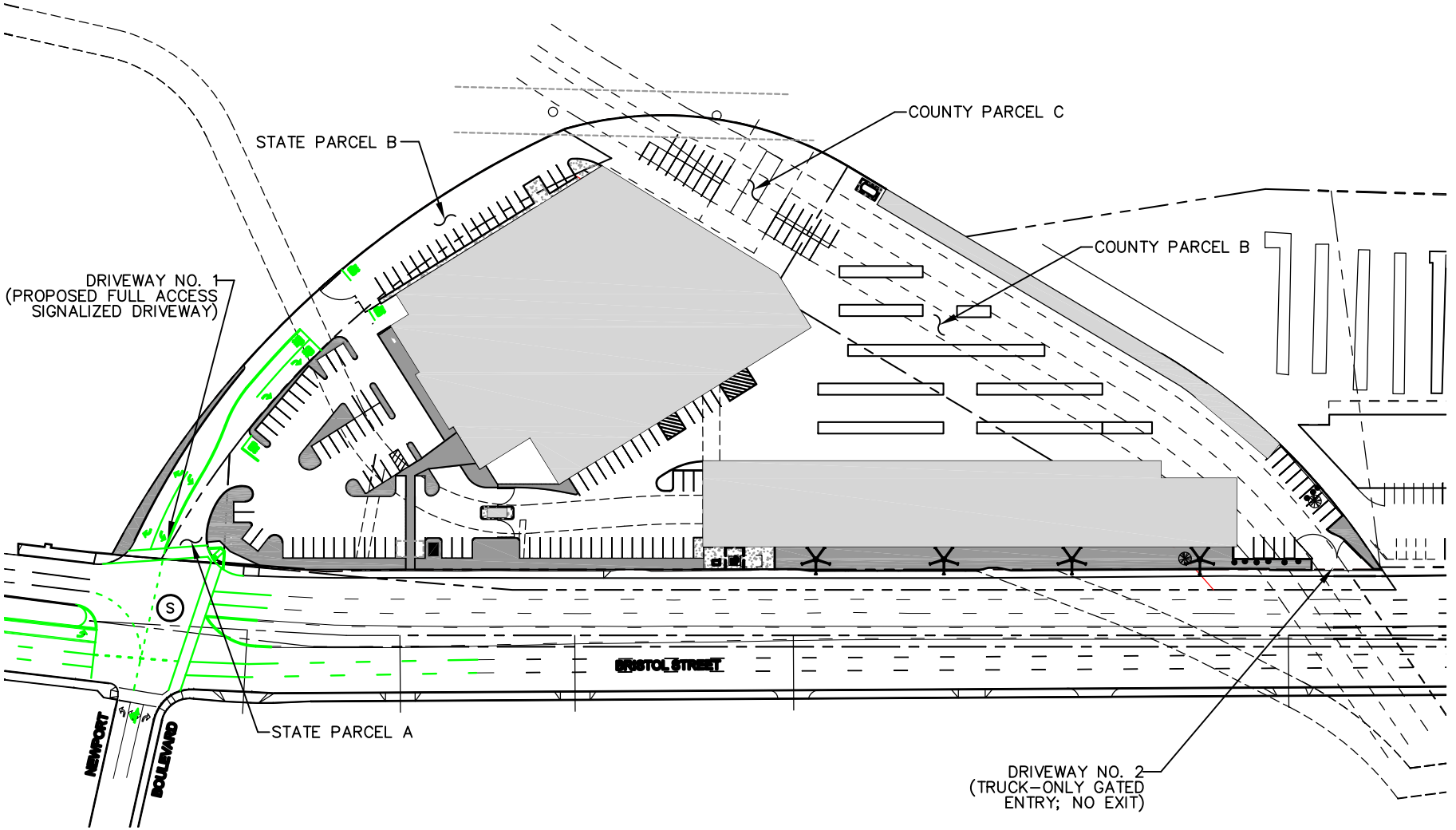
NO SCALE

SOURCE: ONYX ARCHITECTS

FIGURE 2-2

EXISTING SITE PLAN

GANAHL LUMBER FOCUSED TIS, COSTA MESA



SOURCE: ONYX ARCHITECTS

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FIGURE 2-3

PROPOSED SITE PLAN
GANAHL LUMBER FOCUSED TIS, COSTA MESA

2.3 Site Access

As shown in *Figure 2-3*, access to the site will be provided two driveways on Bristol Street. To minimize turning conflicts along the existing two-way left-turn median lane on Bristol Street along the Project frontage, primary access is proposed via a full access signalized driveway along Bristol Street to be constructed opposite northbound Newport Boulevard (Driveway No. 1), with secondary access to be provided via a proposed unsignalized driveway on Bristol Street that is located at the eastern property line (Driveway No. 2). Driveway No. 1, which requires utilization of a Caltrans easement, will provide access to customer, employee and contractor-related traffic, while Driveway No. 2 is proposed as a "truck-only gated entry" driveway (no exit) for truck-related traffic; trucks will exit the site at Driveway No. 1 via the gated access on the northwest corner of Building A. *(Figure 2-3* for proposed location/layout of gates).

Based on information provided by Ganahl Lumber, the gated access at Driveway No. 2 (east gate) will be open at all times during regular hours of operation (Monday through Friday, 6:00 AM to 6:00 PM, Saturday, 7:00 AM to 6:00 PM, Closed Sunday) to prevent trucks from "queuing" in front of the gate and blocking through traffic on Bristol Street. The gate will be manually operated and secured during business hours by employees of Ganahl Lumber. To prevent/deter trucks from using Driveway No. 2 as an exit, "traffic/back-up spikes" will be installed. The exit gate (north gate) on the northwest corner of Building A will be an automated gate that will remain in the "closed position" during regular business hours and remotely activated to open from a camera station in the operations office to allow for trucks to exit the site, as well as allow for the entry/exit of Ganahl Lumber employees.

Potential improvements to be completed as a part of the Project at the Bristol Street/Northbound Newport Boulevard intersection, subject to the approval of the City of Costa Mesa and access across the Caltrans easement is approved include:

- Modification of the existing median on Bristol Street to provide a dedicated eastbound left-turn lane,
- Restriping the northbound approach to provide one left-turn lane, an option left-turn/through lane, and a separate right-turn lane,
- Construction of the new site driveway to provide a southbound (outbound) left-turn lane and southbound (outbound) right-turn lane and one departure (inbound) lane; and.
- Modification of the existing traffic signal, to include split phase operation on Northbound Newport Boulevard/Driveway No. 1.

TABLE 2-1

EXISTING AND PROPOSED PROJECT DEVELOPMENT SUMMARY[2]

Project Description	Existing Development	Proposed Project[3]
▪ Ganahl Lumber		
❖ Building Materials Retail Store	37,287 SF	57,287 SF
❖ Will Call Storage/Warehouse	1,637 SF	11,284 SF
▪ Ganahl Lumber Ancillary Buildings[4]		
❖ B Shed (Building B") plus Shed	15,905 SF	38,781 SF
❖ Mill Shed / Control	2,348 SF	4,332 SF
▪ Parking Supply	153 spaces	273 spaces

Notes:

- SF = Square Footage

2 Source: *Onyx Architects*

3 Subject to final project description, the building floor areas noted below may change upon completion of Project site plan layout.

4 Ancillary buildings are support uses to the Building Materials Retail Store.

3.0 EXISTING CONDITIONS

3.1 Existing Street System

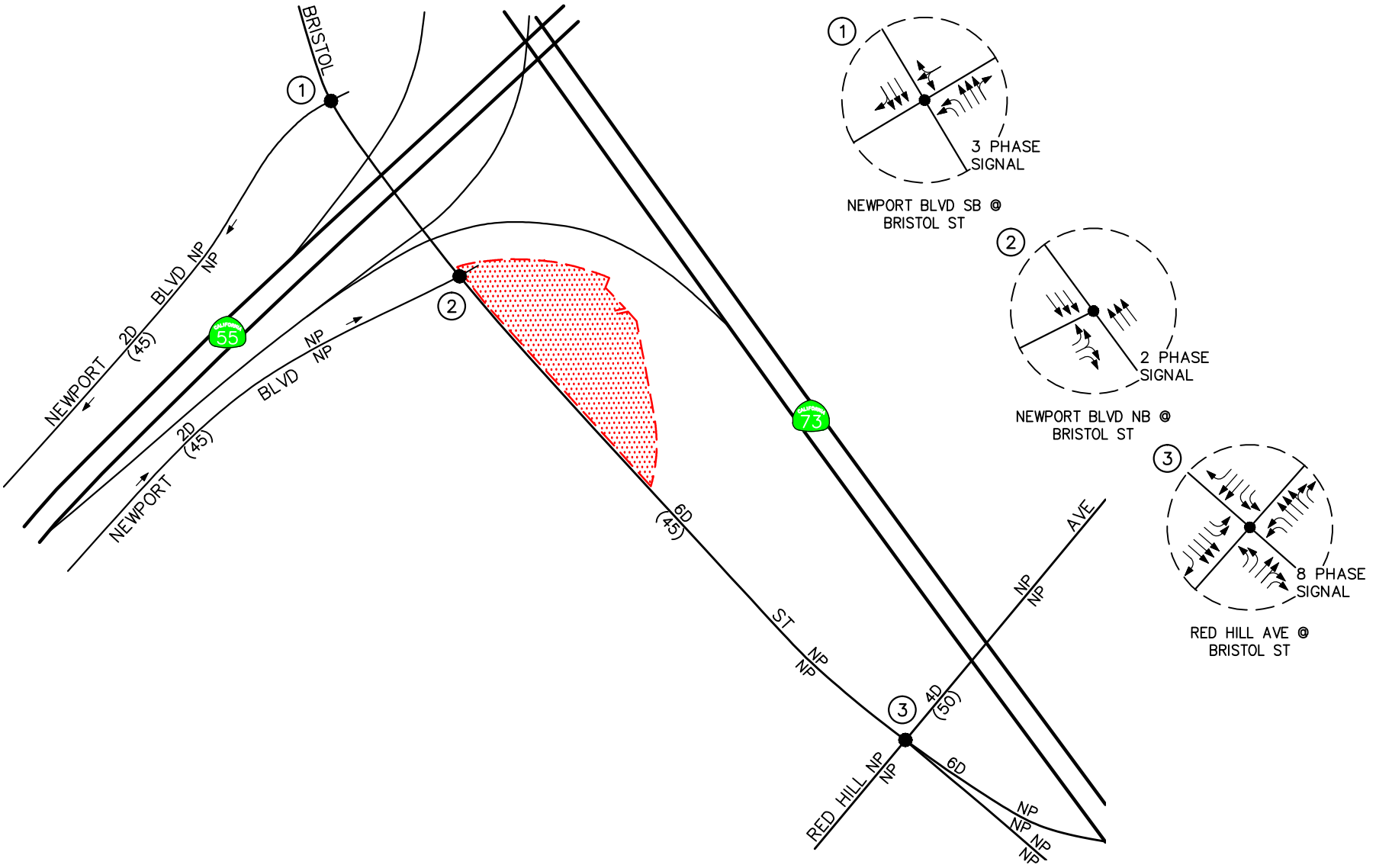
The principal local network of streets serving the project site includes Bristol Street, Red Hill Avenue, and Newport Boulevard. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

Bristol Street is generally a six-lane roadway, divided with a two-way left turn pocket, oriented in the east-west direction. The existing two-way left-turn along the Project frontage and the existing site now serves to provide left-turn ingress and egress to the existing development along the south side as well as the development on the north site. It is classified as a Major Arterial in the City of Costa Mesa Circulation Element. The posted speed limit on Bristol Street is 45 miles per hour (mph). On-street parking is not permitted along this roadway in the vicinity of the project. Traffic signals control the study intersections of Bristol Street at Newport Boulevard (Southbound), Newport Boulevard (Northbound), and Red Hill Avenue. Bristol Street borders the project site to the south.

Red Hill Avenue is generally a four-lane, divided roadway, oriented in the north-south direction. The posted speed limit on Red Hill Avenue is 50 mph. On-street parking is not permitted along this roadway in the vicinity of the project. Red Hill Avenue is classified as a Major Arterial in the City of Costa Mesa Circulation Element.

Newport Boulevard is a one-way, two-lane roadway oriented in the north-south direction. The Newport Boulevard frontage road parallels the Costa Mesa (SR-55) Freeway and provides local access to the development that straddles the freeway on both sides. The posted speed limit on Newport Boulevard is 45 mph. On-street parking is not permitted along this roadway in the vicinity of the project.

Figure 3-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This figure identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area study intersections.



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KEY

(#) = STUDY INTERSECTION
= APPROACH LANE ASSIGNMENT
● = TRAFFIC SIGNAL, ▼ = STOP SIGN
P = PARKING, NP = NO PARKING
U = UNDIVIDED, D = DIVIDED
2 = NUMBER OF TRAVEL LANES
(XX)= POSTED SPEED LIMIT (MPH)
= PROJECT SITE

FIGURE 3-1

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

GANAHL LUMBER FOCUSED TIS, COSTA MESA

3.2 Existing Traffic Volumes

Three (3) key study intersections have been identified as the locations at which to evaluate existing and future traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected relative impacts of the project. These key locations were selected for evaluation based on discussions with City of Costa Mesa staff and in consideration of Orange County CMP requirements.

Existing AM peak hour and PM peak hour traffic volumes for the 3 key study intersections evaluated in this report were obtained from manual turning movement counts conducted by Transportation Studies, Inc in February 2014. It is noted that the existing traffic volumes include traffic that is now generated by the existing Ganahl Lumber facility and current service levels are representative of this condition.

Figures 3-2 and ***3-3*** illustrate the existing AM and PM peak hour traffic volumes at the three (3) key study intersections evaluated in this report, respectively. ***Appendix B*** contains the detailed peak hour and daily traffic count sheets for the key intersections evaluated in this report.

3.3 Existing Intersection Conditions

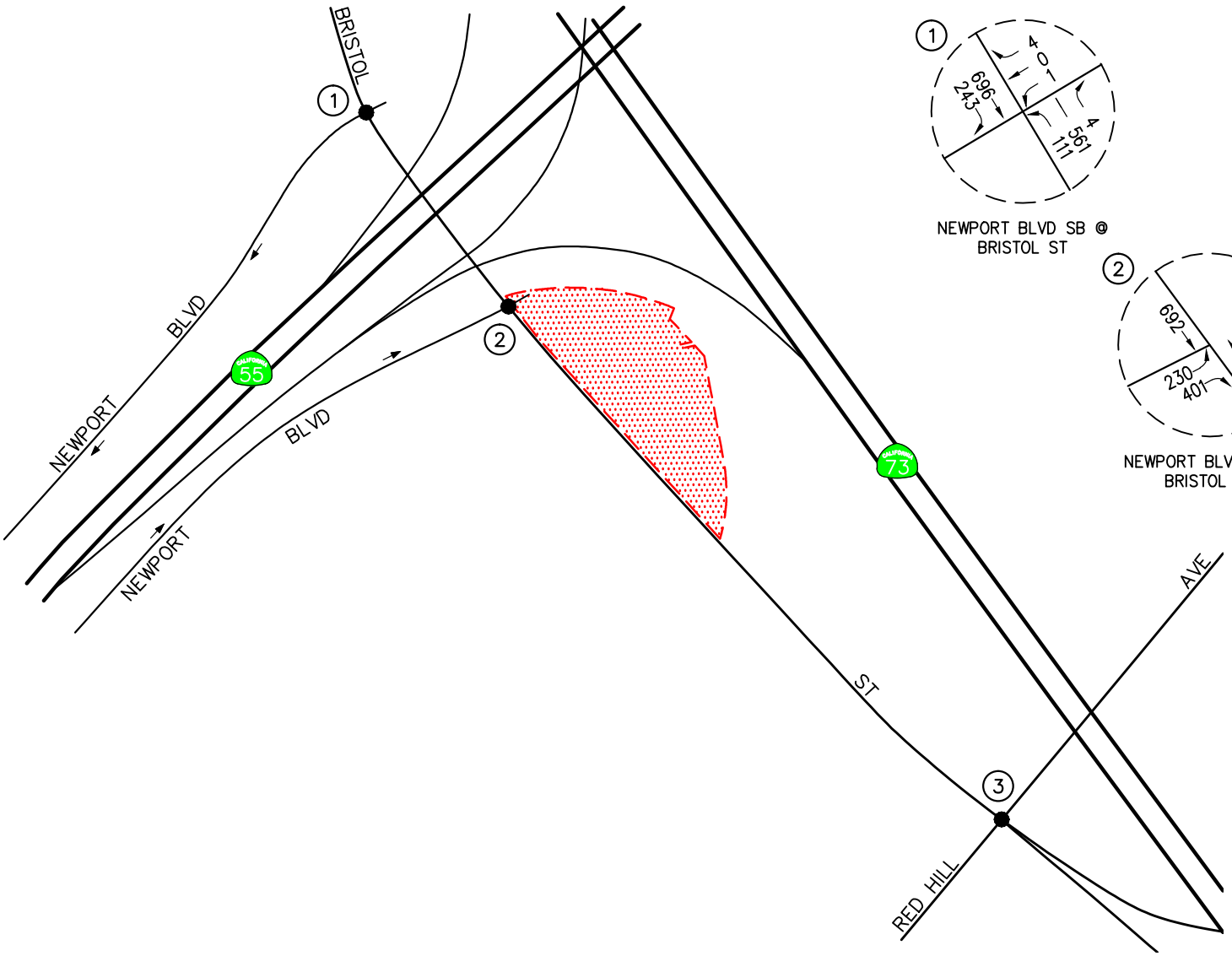
Existing AM and PM peak hour operating conditions for the three (3) key study intersections were evaluated using the *Intersection Capacity Utilization* (ICU) methodology for signalized intersections and the methodology outlined in Chapter 17 of the *Highway Capacity Manual 2000* (HCM2000) for unsignalized intersections.

3.3.1 *Intersection Capacity Utilization (ICU) Method of Analysis*

In conformance with City of Costa Mesa and Orange County CMP requirements, existing AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

Per City of Costa Mesa requirements, the ICU calculations use a lane capacity of 1,600 vph for left-turn lanes, through lanes and right-turn lanes. No adjustments for clearance intervals are made since the assumed lane capacity reflects the effect of lost time.

The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in ***Table 3-1***



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KEY

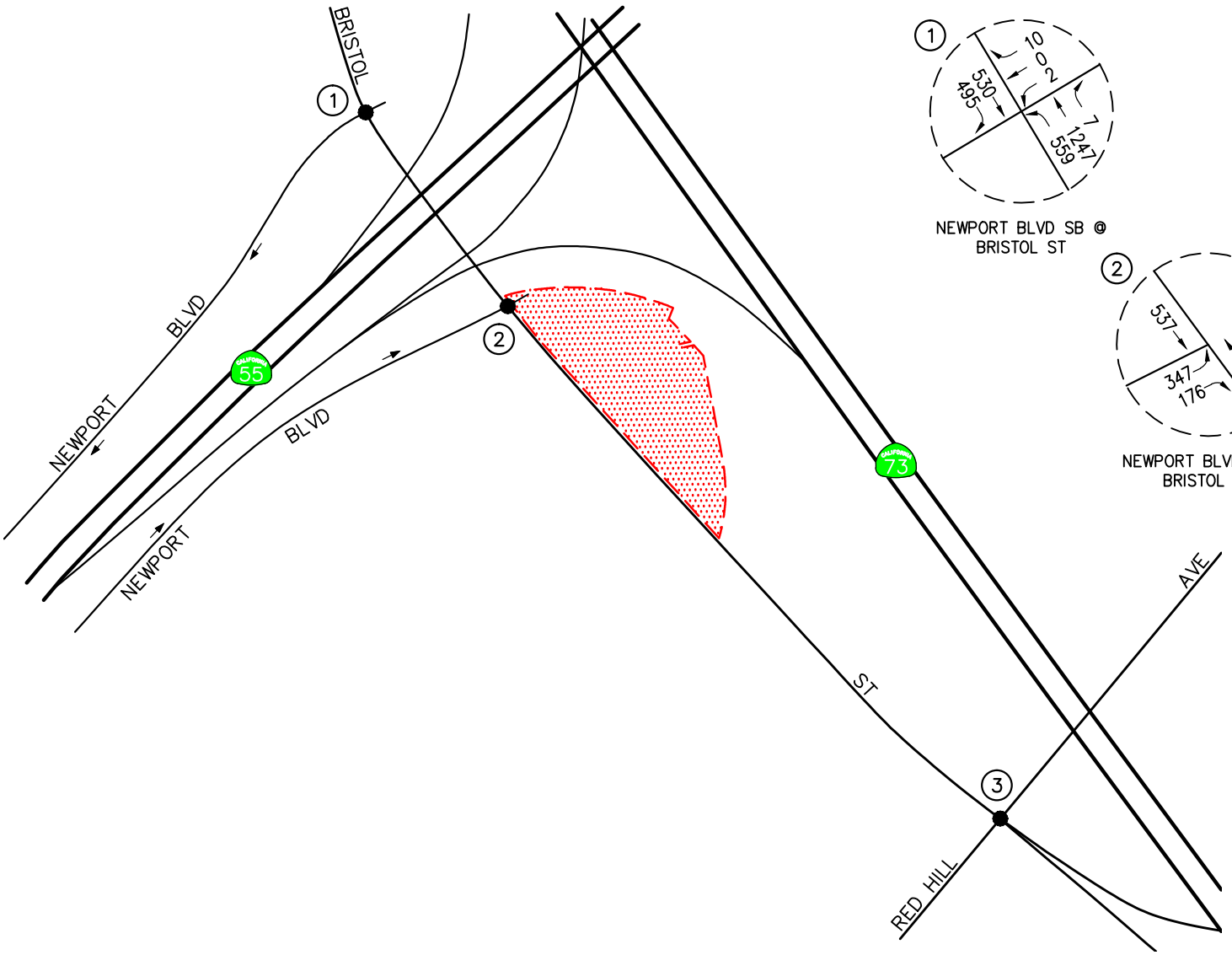
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 3-2

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 3-3

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA

The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. According to City of Costa Mesa criteria, LOS D (ICU = 0.801 – 0.900) is the minimum acceptable condition that should be maintained during the morning and evening peak commute hours.

3.3.2 *Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)*

The 2000 HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. For all-way stop controlled intersections, the overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 3-2.***

3.4 Existing Level of Service Results

Table 3-3 summarizes the existing peak hour service level calculations for the three (3) key study intersections based on existing traffic volumes and current street geometrics. Review of *Table 3-3* indicates that all three (3) key study intersections currently operate at acceptable service levels (LOS D or better) during the AM and PM peak hour. It is noted that the existing traffic volumes include traffic that is now generated by the existing Ganahl Lumber facility and current service levels are representative of this condition.

Appendix C presents the ICU/LOS and HCM/LOS calculation worksheets for the three (3) key study intersections for the AM peak hour and PM peak hour.

TABLE 3-1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

TABLE 3-2

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS[5]

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

[5] Source: *Highway Capacity Manual 2000*, Chapter 17 (Unsignalized Intersections).

TABLE 3-3

EXISTING PEAK HOUR INTERSECTION CAPACITY ANALYSIS[6]

Key Intersection		Time Period	Jurisdiction	Control Type	ICU	LOS
1.	Newport Boulevard (SB) at Bristol Street	AM	City of Costa Mesa	3 Phase Signal	0.233	A
		PM			0.492	A
2.	Newport Boulevard (NB) at Bristol Street	AM	City of Costa Mesa	2 Phase Signal	0.276	A
		PM			0.415	A
3.	Red Hill Avenue at Bristol Street	AM	City of Costa Mesa	8 Phase Signal	0.409	A
		PM			0.287	A

[6] Existing service levels are representative of traffic conditions that includes traffic generated by the existing Ganahl Lumber facility located at 1275 Bristol Street.

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Traffic Generation

The trip generation potential of the proposed Ganahl Lumber facility was forecast based on trip generation studies of the Ganahl Lumber store located in Costa Mesa rather than using trip rates provided in *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE)*, Washington, D.C. (2012) for general building materials and lumber stores.

Trip generation studies were conducted at the existing Costa Mesa facility over a three day period in February 2014. ***Table 5-1*** summarizes the results for each day and identifies the averages for existing Costa Mesa site. An assessment of the trip generation data for the Costa Mesa facility, as well as the information collected at the existing Ganahl Lumber facilities in Anaheim and Los Alamitos site show that despite the vastly different building square-footages and overall sizes, each of these three sites generate a similar amount of traffic on a daily and peak hour basis (***Appendix B*** includes the trip generation data for all three sites). Therefore, the trip generation for the proposed Project was based on a "per site basis" rather than building square-footage. As directed by the City of Costa Mesa Public Works Department staff, the "Wednesday" trip data summarized in *Table 5-1* was used to forecast/assess the potential impacts of the proposed Project.

Table 5-2 summarizes the trip generation potential of the proposed Project, by vehicle type, based on the data collected on Wednesday, February 12, 2014. As shown the proposed Project could be expected to generate, 2,287 daily trips, with 223 trips (112 inbound, 111 outbound) produced in the AM peak hour and 106 trips (46 inbound and 60 outbound) produced in the PM peak hour on a typical weekday. When converted to passenger car equivalents to account for truck-related traffic, the proposed Project's trip generation potential amounts to 2,352 daily PCE trips, with 274 PCE trips (126 inbound, 148 outbound) produced in the AM peak hour and 108 PCE trips (46 inbound and 62 outbound) produced in the PM peak hour on a typical weekday.

TABLE 5-1

EXISTING GANAHL LUMBER COSTA MESA FACILITY TRIP GENERATION[7]

Day/Date of Trip Generation Study	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
❑ Tuesday, 2/11/2014	2,146	96	98	194	46	61	107
❑ Wednesday , 2/12/2014	2,287	112	111	223	46	59	105
❑ Thursday , 2/13/2014	2,197	110	87	197	65	80	145
3-Day Trip Generation Average	***2,210***	***107***	***98***	***205***	***52***	***67***	***119***

[7] Counts took place from Tuesday (2/11/2014) to Thursday (2/13/2014) at the Costa Mesa site located at 1275 Bristol Street.

TABLE 5-2

PROJECT TRIP GENERATION FORECAST[8]

Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Forecast by vehicle type:							
❑ Car (includes light trucks, pick-ups, vans and SUVs)	2,170	101	97	198	46	58	104
❑ Medium (include moving trucks, courier trucks, traffic trucks, transport trucks with small trailers, flatbed trucks, or similar size)	40	11	21	32	0	2	2
❑ Heavies (large tractor trailers with full length or multiple trailers, fire trucks, etc.)	34	1	3	4	0	0	0
Total Ganahl Costa Mesa Trip Generation	***2,287***	***112***	***111***	***223***	***46***	***60***	***106***
Total Ganahl Costa Mesa Trip Generation in PCE[9]	***2,352***	***126***	***148***	***274***	***46***	***62***	***108***

[8] Counts took place from Tuesday (2/11/2014) to Thursday (2/13/2014) at the Costa Mesa site.

[9] Medium Truck P.C.E. = 2.0 vehicles per truck, Heavy Truck P.C.E. = 3.0 vehicles per truck

5.2 Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- location of site access points in relation to the surrounding street system,
- the site's proximity to major traffic carriers and regional access routes,
- physical characteristics of the circulation system such as lane channelization and presence of traffic signals that affect travel patterns,
- presence of traffic congestion in the surrounding vicinity,
- ingress/egress availability at the project site, and
- existing traffic volumes, inclusive of traffic counts collected at the existing Ganahl Lumber driveways on February 20, 2014.

The Project's general traffic distribution pattern is summarized in ***Table 5-3.*** ***Figure 5-1*** presents the traffic distribution patterns for the proposed Project assuming access to the Project site is provided via a signalized entry on Bristol Street opposite Northbound Newport Boulevard, as well as from Driveway No. 2, which will serve as an entry-only access for truck-related traffic. As noted earlier, the gated access at Driveway No. 2 (east gate) will be open at all times during regular hours of operation (Monday through Friday, 6:00 AM to 6:00 PM, Saturday, 7:00 AM to 6:00 PM, Closed Sunday) to prevent trucks from "queuing" in front of the gate and blocking through traffic on Bristol Street. The gate will be manually operated and secured during business hours by employees of Ganahl Lumber. To prevent/deter trucks from using Driveway No. 2 as an exit, "traffic/back-up spikes" will be installed.

The anticipated AM and PM peak hour traffic volumes associated with the proposed Project are illustrated in ***Figures 5-2*** and ***5-3***, respectively. The traffic volume assignments presented in these figures reflect the traffic distribution characteristics shown in *Figure 5-1* and the traffic generation forecast presented in *Table 5-2*. It should be noted that the project volumes illustrated at the intersection of Bristol Street and Southbound Newport Boulevard as well as Bristol Street at Redhill Avenue represent the existing traffic generated by the existing Ganahl Lumber facility.

5.3 Existing Plus Project Traffic Conditions

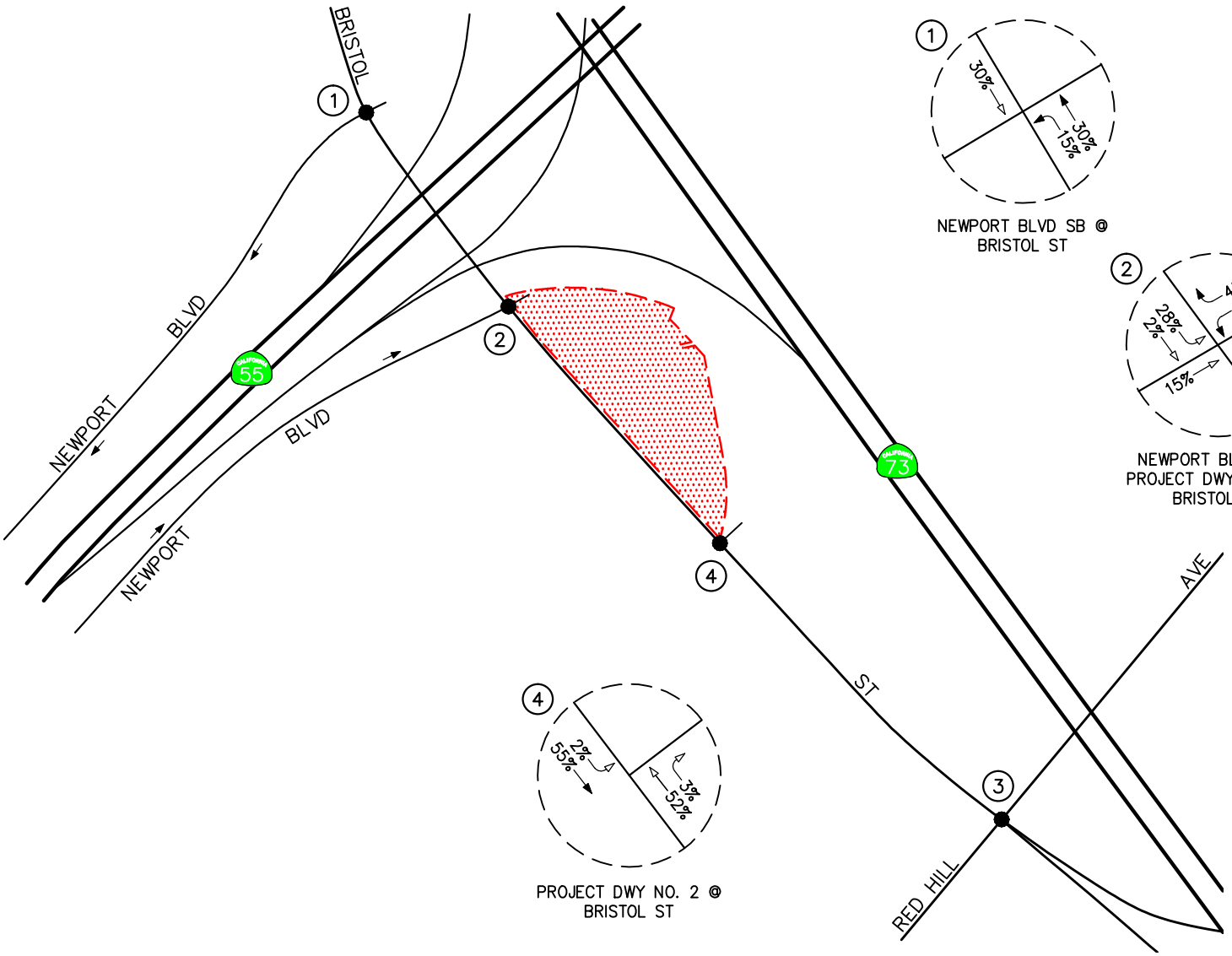
The existing plus project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared pursuant to the California Environmental Quality Act (CEQA) guidelines, which require that the potential impacts of a Project be evaluated upon the circulation system as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to mitigate the direct traffic impacts of the Project, if any. As noted earlier, the existing traffic volumes include traffic that is now generated by the existing Ganahl Lumber facility.

Figures 5-4 through ***5-5*** present projected AM and PM peak hour traffic volumes at three (3) key study intersections and project driveways for Existing Plus Project traffic conditions.

TABLE 5-3

PROJECT DIRECTIONAL DISTRIBUTION PATTERN

Project Distribution Percentage	Orientation/Direction
30%	To/from the southeast via Bristol Street
30%	To/from the northwest via Bristol Street
10%	To/from the north via Red Hill Avenue
15%	To/from the south via Red Hill Avenue
15%	To/from the south via Newport Boulevard
100%	**Total**



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KEY

= INBOUND PERCENTAGE

= OUTBOUND PERCENTAGE

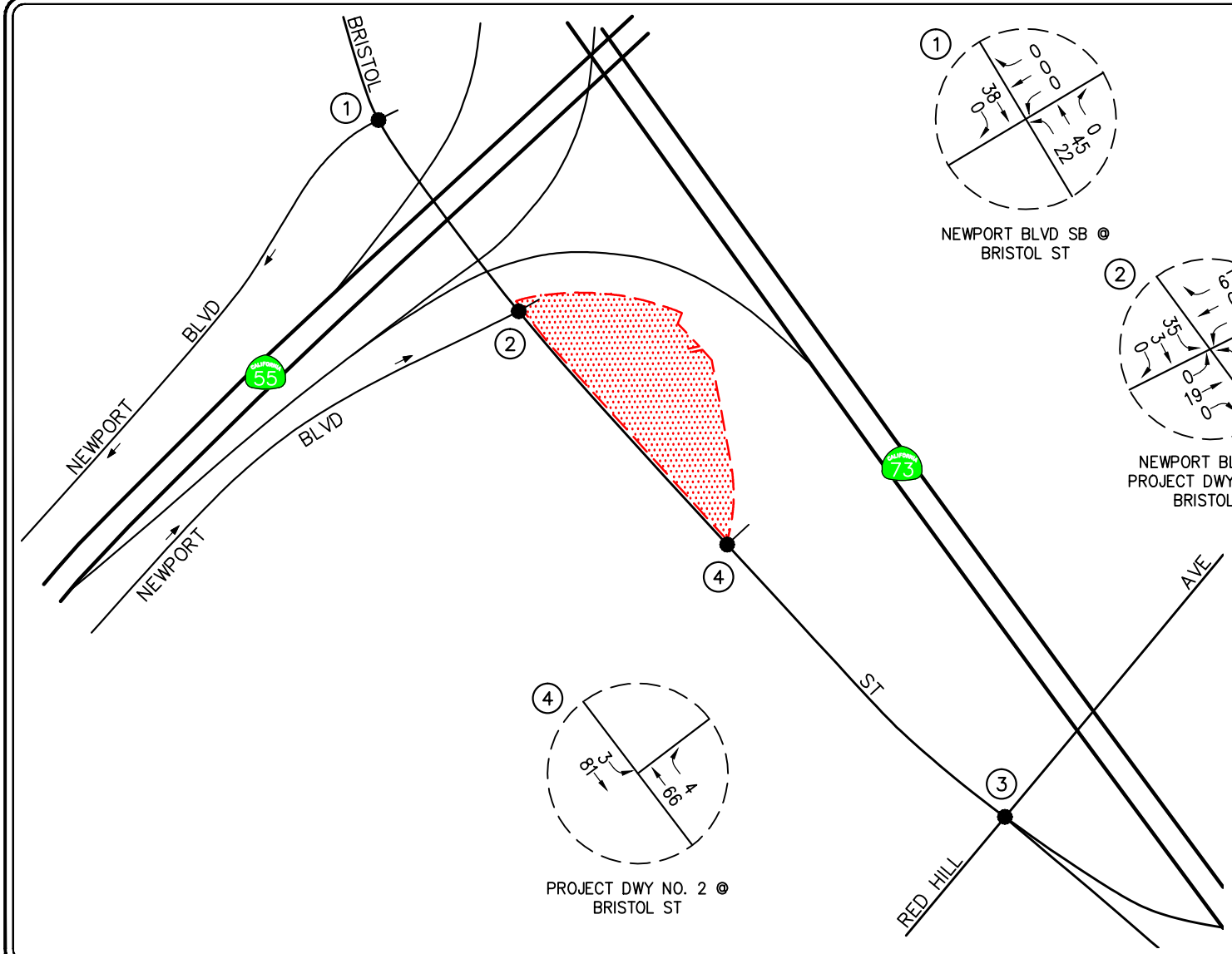
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-1

PROJECT DISTRIBUTION PATTERN

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-2

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA

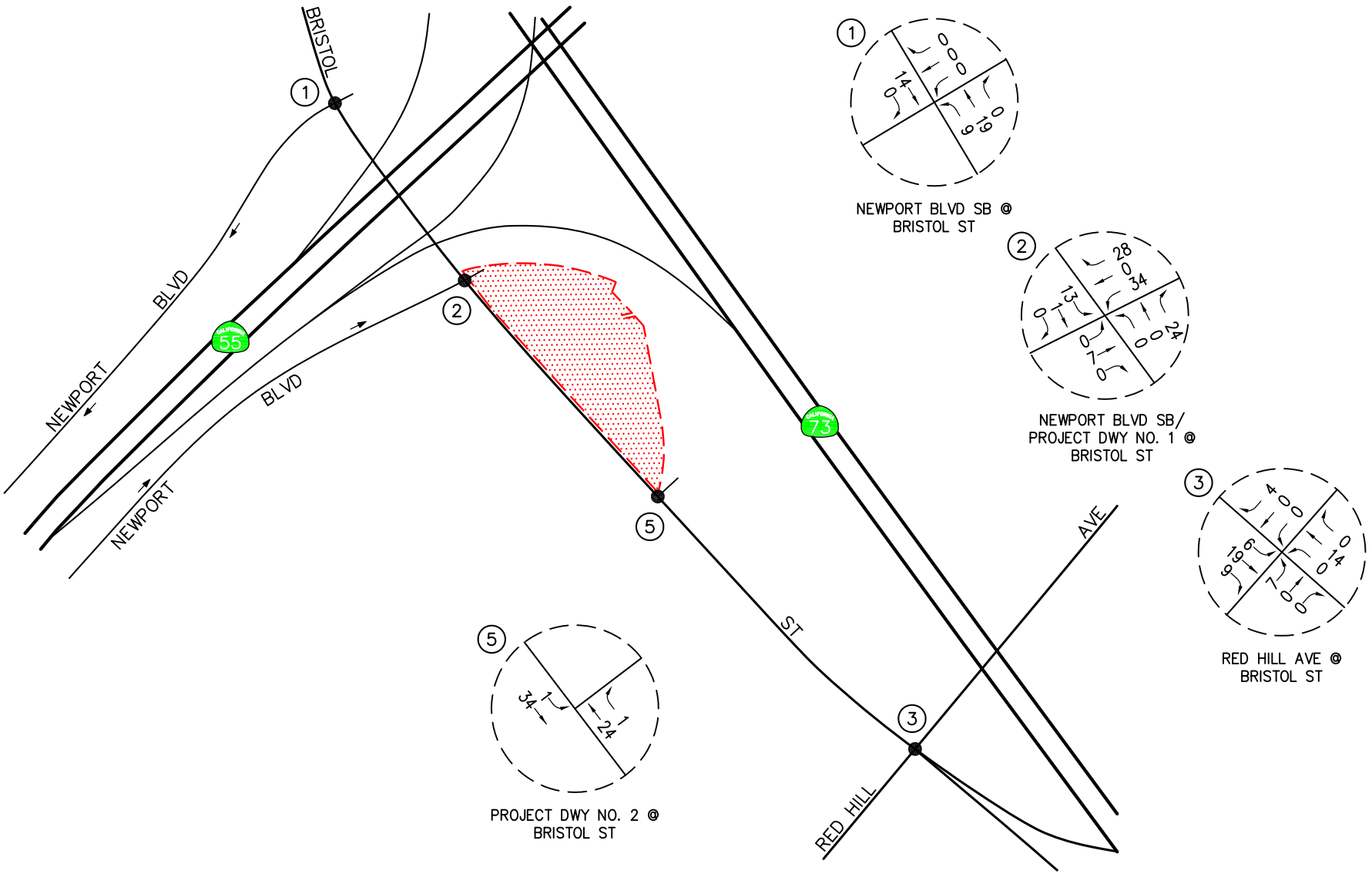

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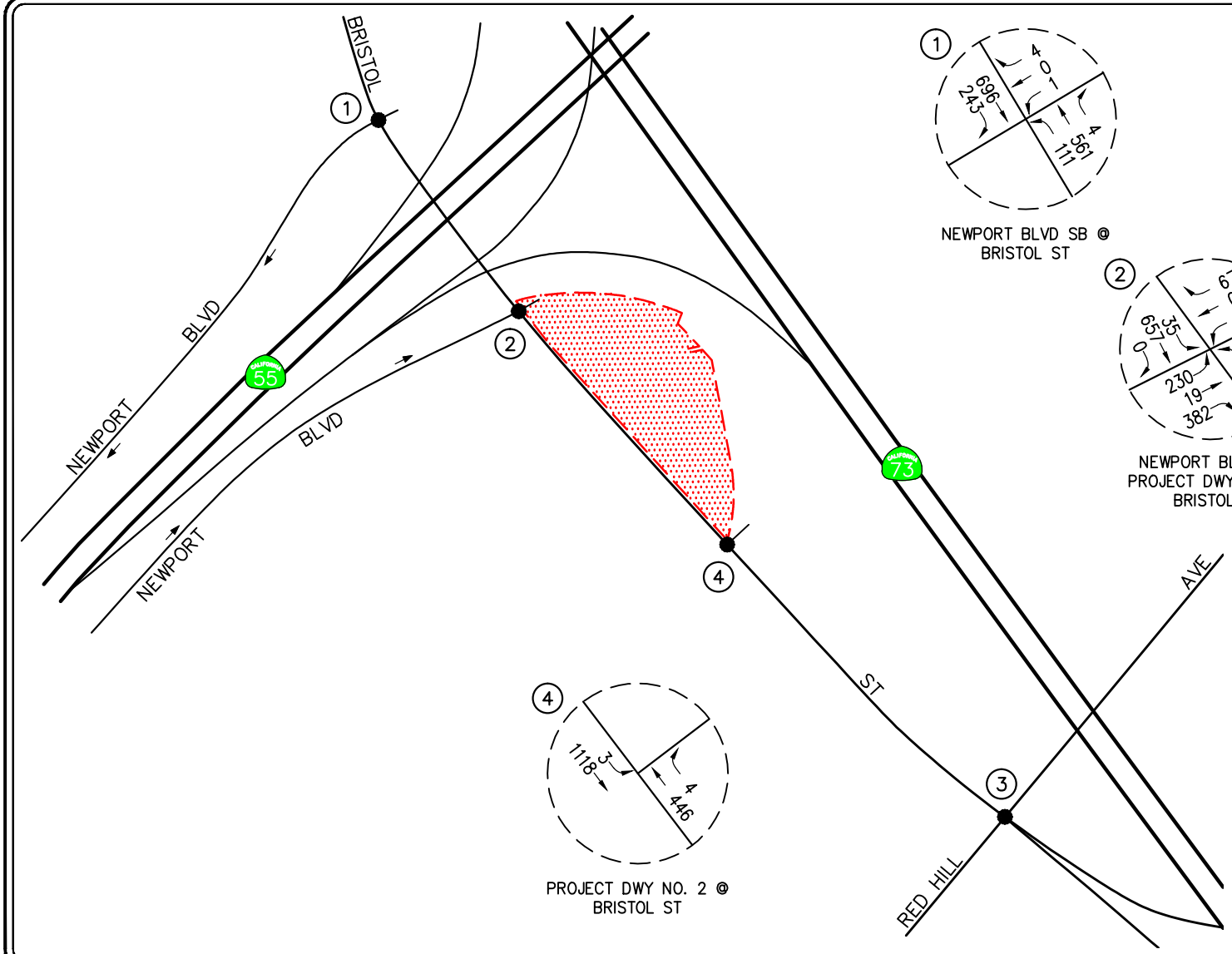
FIGURE 5-3

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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(#) = STUDY INTERSECTION

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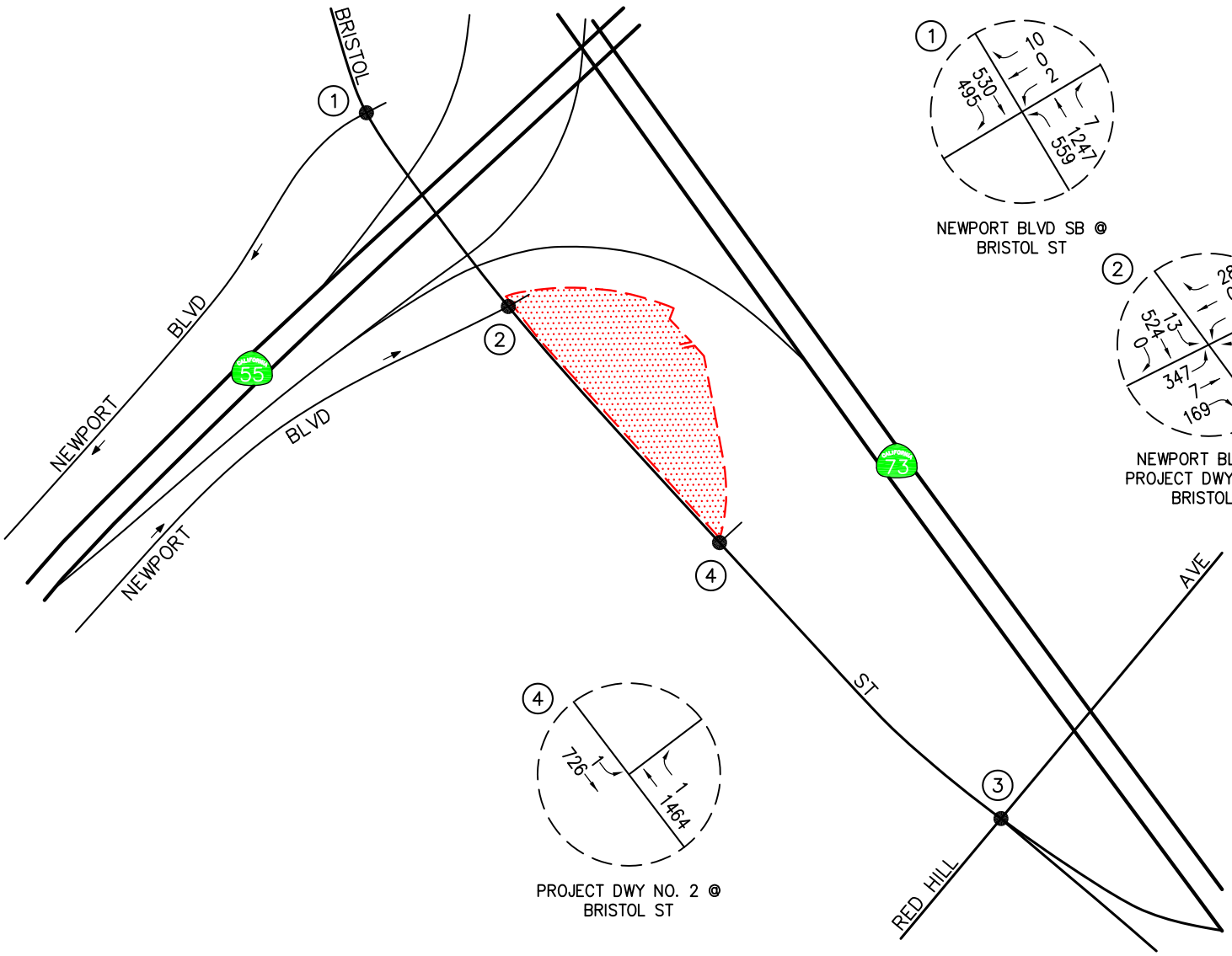
FIGURE 5-4

EXISTING PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-5

EXISTING PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA

6.0 FUTURE TRAFFIC CONDITIONS

6.1 Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown and future related projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at one percent (1.0%) per year. Applied to the Year 2014 existing traffic volumes, this factor results in a 2.0% growth in existing volumes to the near-term horizon Year 2016.

6.2 Related Projects Traffic Characteristics

In order to make a realistic estimate of future on-street conditions prior to implementation of the proposed Project, the status of other known development projects (related projects) has been researched at the City of Costa Mesa and City of Irvine. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development.

Based on our research, there are no related projects in the City of Costa Mesa or City of Irvine, within the vicinity of the Project that have either been built, but not yet fully occupied, or are being processed for approval. However, to provide a conservative cumulative assessment, this traffic analysis assumes the re-occupancy of the current Ganahl Lumber building materials store with a retail use as well as the re-occupancy of a vacant fast-food restaurant located directly adjacent to the current Ganahl Lumber facility.

Table 6-1 presents the address and description/size of the two (2) cumulative projects considered in this traffic analysis. ***Table 6-2*** presents the trip generation rates and the resultant trip generation for the two (2) cumulative projects. As shown, the trip generation potential of the two cumulative projects was estimated using average trip rates for ITE Land Use 820: Shopping Center and ITE Land Use 934: Fast-Food Restaurant with Drive-Through Window. A review of *Table 6-2* indicates that the two (2) cumulative projects are expected to generate a combined total 2,656 daily trips (one half arriving, one half departing) on a "typical" weekday, with 149 trips (79 inbound and 70 outbound) forecast during the AM peak hour and 204 trips (101 inbound and 103 outbound) forecast during the PM peak hour.

6.3 Year 2016 Traffic Volumes Without and With Project traffic

Figures 6-1 and ***6-2*** present the AM and PM peak hour cumulative traffic volumes (existing traffic + ambient growth + related projects) at the three (3) key study intersections for the Year 2016, respectively.

Figures 6-3 and ***6-4*** illustrate the Year 2016 forecast AM and PM peak hour traffic volumes, with the inclusion of trips generated by the proposed Project, respectively.

TABLE 6-1

LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS

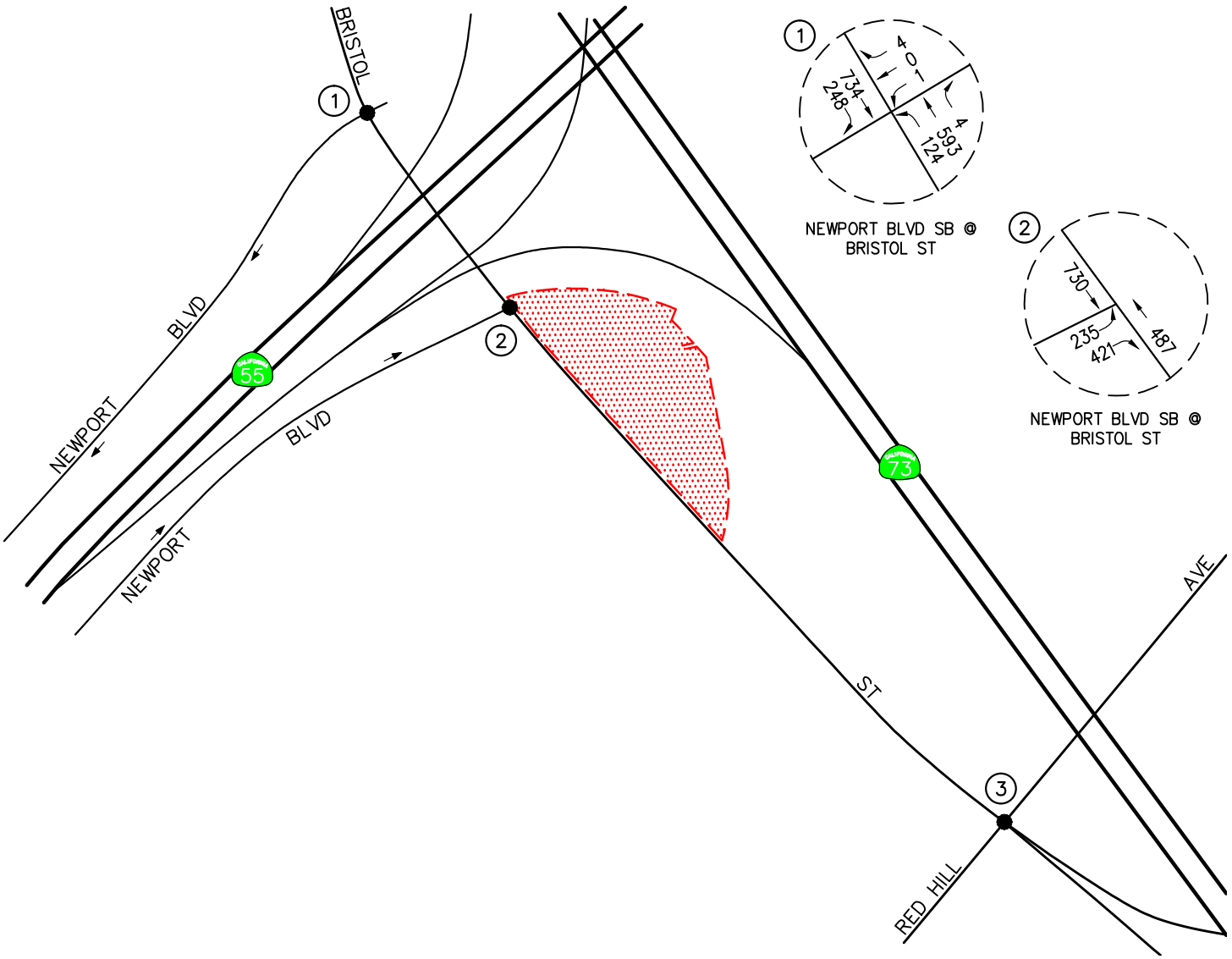
No.	Cumulative Project	Address	Description/Size
1.	Existing Ganahl Lumber building	1275 Bristol Street	Re-occupancy of 35,650 SF building and materials (when vacated) with retail use
2.	Fast-food Restaurant	250 Bristol Street	Re-occupancy of a 2,600 SF vacant fast-food restaurant (former Weinerschnitzel)

TABLE 6-2

CUMULATIVE PROJECTS TRIP GENERATION FORECAST[10]

Cumulative Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Generation Rates:							
❑ 820: Shopping Center (TE/1000 SF)	42.70	0.60	0.36	0.96	1.78	1.93	3.71
❑ 934: Fast-Food Restaurant with Drive-Through Window (TE/1000 SF)	496.12	23.16	22.26	45.42	16.98	15.67	32.65
Generation Forecasts:							
1. 820: Retail Building/Shops	1,366	19	12	31	57	62	119
2. 934: Fast-Food Restaurant.	1,290	60	58	118	44	41	85
Cumulative Projects Trip Generation Potential	**2,656**	**79**	**70**	**149**	**101**	**103**	**204**

[10] Source: *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2012).* Trip generation potential for the retail building assumes a 10% pass-by factor. Whereas the trip generation for the proposed fast-food restaurant did not include a pass-by adjustment to provide a conservative assessment since details of the potential redevelopment were not available.



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

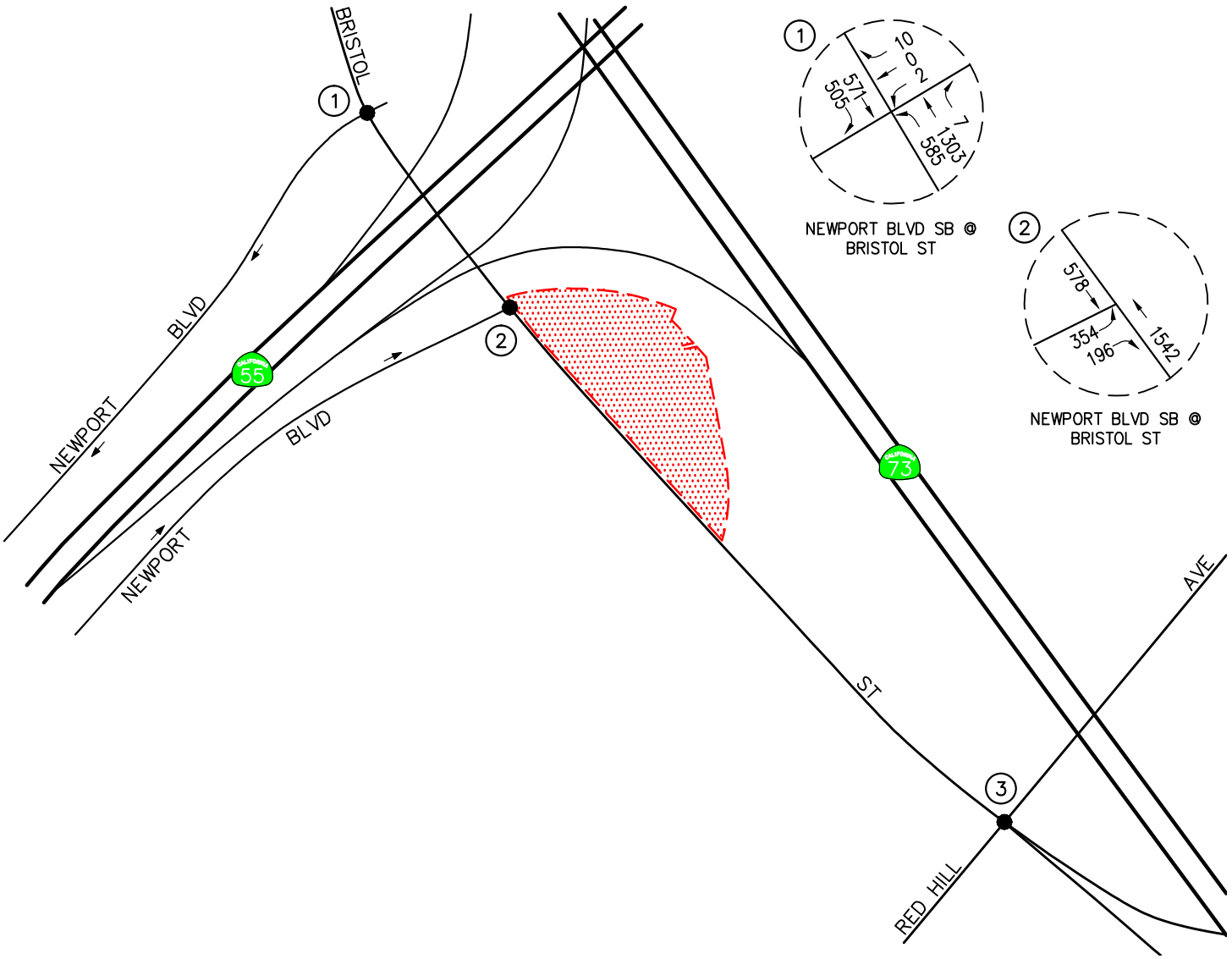
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-1

YEAR 2016 AM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

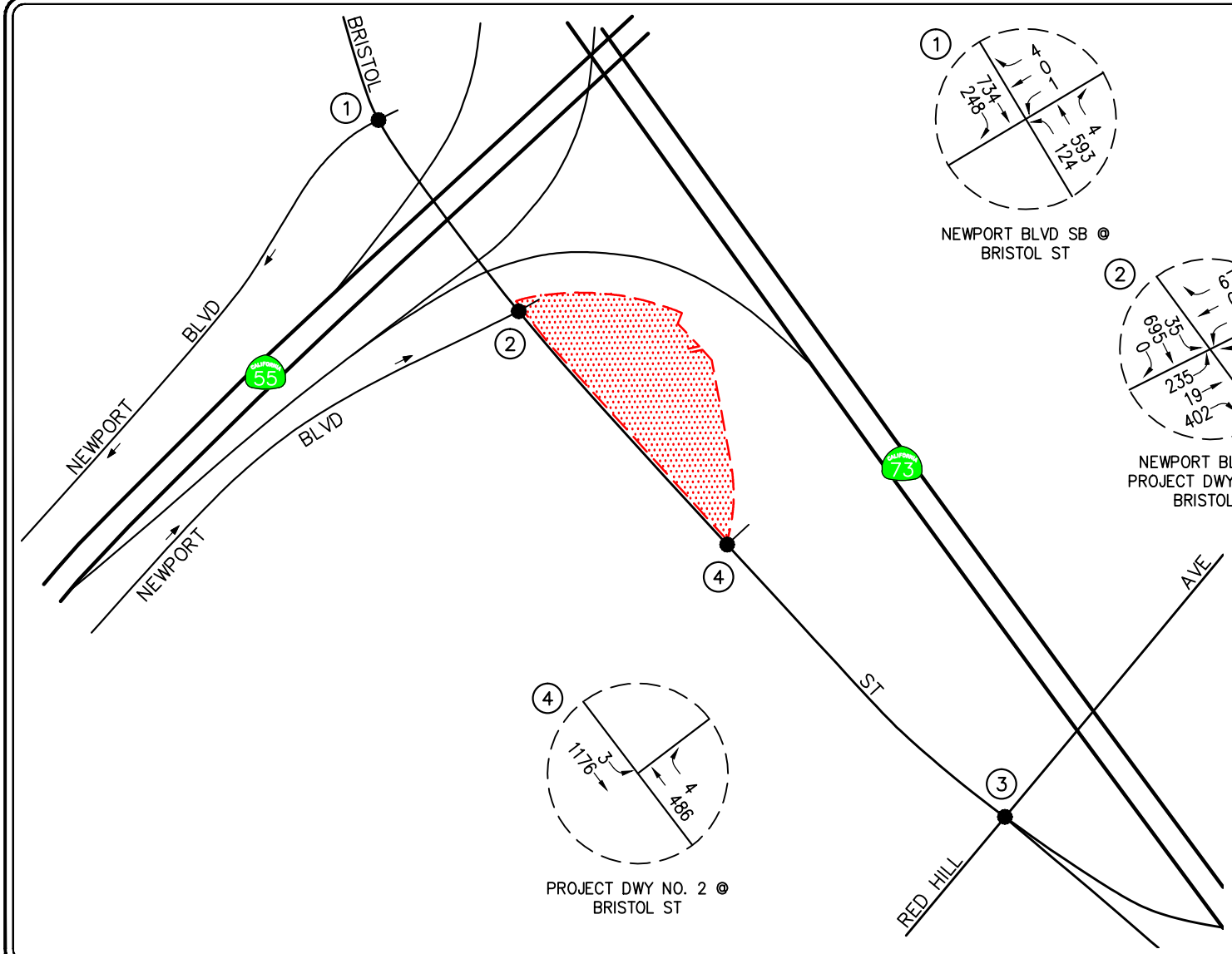
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-2

YEAR 2016 PM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

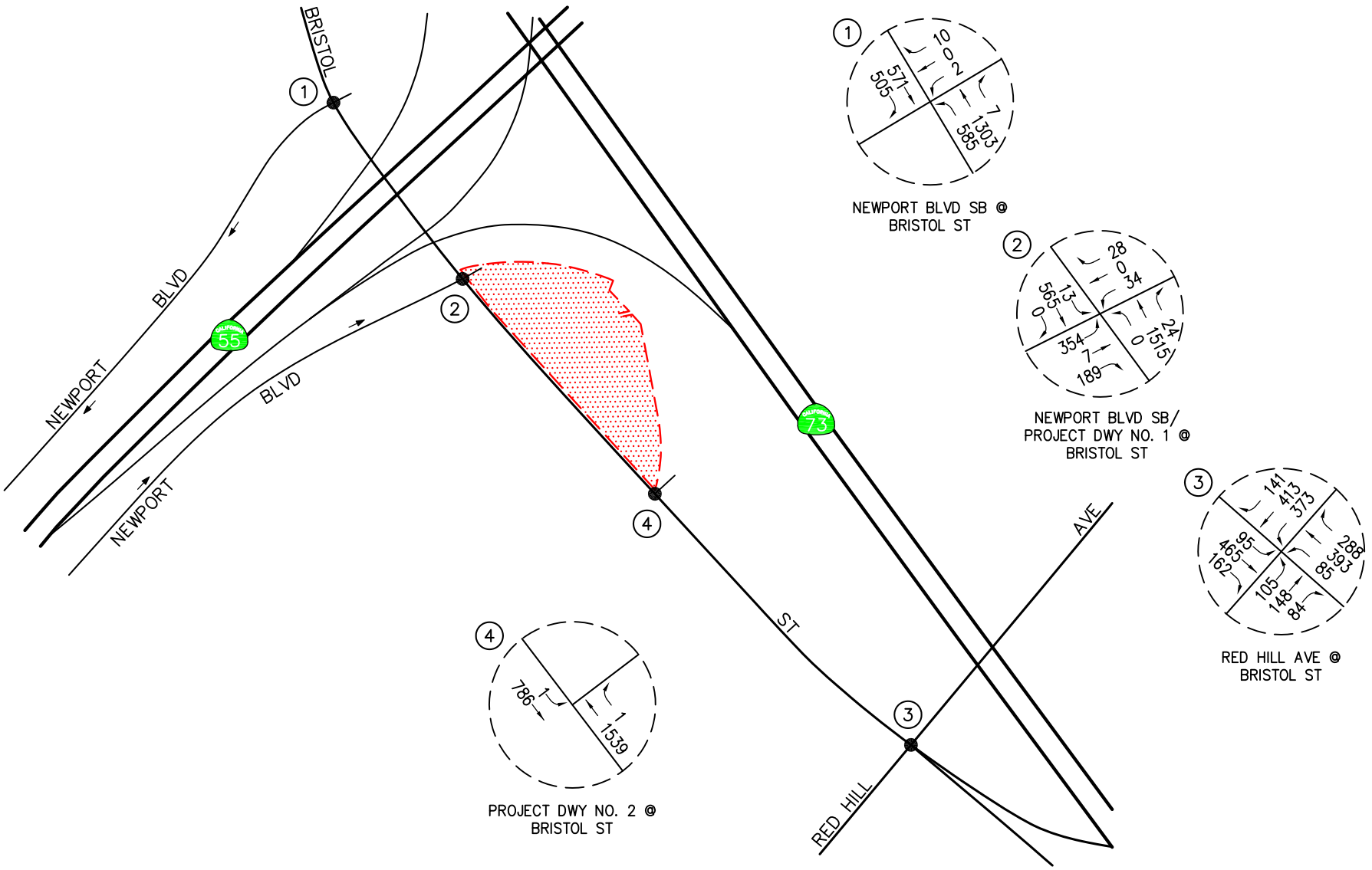
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-3

YEAR 2016 AM PEAK HOUR CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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N NO SCALE

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6-4

YEAR 2016 PM PEAK HOUR CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES

GANAHL LUMBER FOCUSED TIS, COSTA MESA

7.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The relative impact of the proposed Project during the AM peak hour and PM peak hour was evaluated based on analysis of future operating conditions at the three (3) key study intersections and three (3) site driveway, without, then with, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the following traffic impact criteria.

7.1 Impact Criteria and Thresholds

Per the City of Costa Mesa guidelines, LOS D is the minimum acceptable level of service that should be maintained during the weekday AM peak hour and weekday PM peak hour. Per the City's criteria, the Project is considered to have a significant impact if the following criteria are met:

For Signalized Intersections:

- the ICU value under "with Project" conditions is 0.91 or greater (LOS E or F), and
- the ICU increase attributable to the Project is 0.01 or greater.

7.2 Traffic Impact Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed at the three (3) key intersections for existing plus project and near-term (Year 2016) traffic conditions:

A. Existing Traffic Conditions;
B. Existing Plus Project Traffic Conditions;
C. Scenario (B) with Improvements, if necessary;
D. Near-Term (Year 2016) Cumulative Traffic Conditions,
E. Near-Term (Year 2016) Cumulative plus Project Traffic Conditions;
F. Scenario (E) with Improvements, if necessary.

8.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

8.1 Existing Plus Project Analysis

Table 8-1 summarizes the peak hour Level of Service results at the three (3) key study intersections and Project driveways for existing plus project traffic conditions. The first column (1) of ICU/LOS values and HCM/LOS values in *Table 8-1* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second (2) column lists existing plus project traffic conditions. The third column (3) indicates if the proposed Project will have a significant impact based on the LOS standards and significant impact criteria defined in this report.

8.1.1 *Existing Plus Project Traffic Conditions*

Review of Columns 2 and 3 of *Table 8-1* indicates that traffic associated with the proposed Project will not have an impact at any of the key study locations when compared to the LOS standards and significant impact criteria specified in this report. As shown, the key study intersections, inclusive of the site driveways, are forecast to operate at LOS B or better during the weekday AM and PM peak hours.

Appendix C presents the existing plus project ICU/LOS and HCM/LOS calculations for the three (3) key study intersections and easterly site driveway (Driveway No. 2).

8.2 Year 2016 Traffic Conditions

Table 8-2 summarizes the peak hour Level of Service results at the three (3) key study intersections and easterly site driveway for the Year 2016 horizon year. The structure of this table is similar to that *Table 8-1*.

8.2.1 *Year 2016 Cumulative Traffic Conditions*

An analysis of future (Year 2016) cumulative traffic conditions indicates that the addition of ambient traffic growth and related projects traffic will not impact any of the key study intersections. All three locations are projected to continue to operate at LOS A during the weekday AM and PM peak hours.

8.2.2 *Year 2016 Cumulative Plus Project Conditions*

Review of Columns 3 and 4 of *Table 8-2* indicates that traffic associated with the proposed Project will not impact any of key study intersections. All three locations, plus the Driveway No. 2, are forecast to continue to operate at LOS A or B.

As there are no significant impacts, no traffic mitigation measures are required or recommended for the intersections.

Appendix C presents the near-term ICU/LOS and HCM/LOS calculations for the key study intersections and site driveways.

TABLE 8-1

EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact
		ICU/ HCM	LOS	ICU/ HCM	LOS	Yes/ No
1. Newport Boulevard (SB) at	AM	0.233	A	0.233	A	No
Bristol Street	PM	0.492	A	0.492	A	No
2. Newport Boulevard (NB)/	AM	0.276	A	0.426	A	No
Driveway 1 at Bristol Street	PM	0.415	A	0.445	A	No
3. Red Hill Avenue at	AM	0.409	A	0.409	A	No
Bristol Street	PM	0.287	A	0.287	A	No
4. Driveway 2 (truck-entry only) at	AM	--	--	8.3 s/v	A	No
Bristol Street	PM	--	--	13.3 s/v	B	No

Notes:

- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on the City's LOS standards.
- s/v = seconds per vehicle

TABLE 8-2

YEAR 2016 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection		Time Period	(1) Existing Traffic Conditions		(2) Year 2016 Cumulative Traffic Conditions		(3) Year 2016 Cumulative Plus Project Traffic Conditions		(4) Significant Impact
			ICU/ HCM	LOS	ICU/ HCM	LOS	ICU/ HCM	LOS	Yes / No
1.	Newport Boulevard (SB) at	AM	0.233	A	0.246	A	0.246	A	No
	Bristol Street	PM	0.492	A	0.506	A	0.506	A	No
2.	Newport Boulevard (NB)/	AM	0.276	A	0.289	A	0.447	A	No
	Driveway 1 at Bristol Street	PM	0.415	A	0.436	A	0.468	A	No
3.	Red Hill Avenue at	AM	0.409	A	0.426	A	0.426	A	No
	Bristol Street	PM	0.287	A	0.301	**A**	0.301	A	No
4.	Driveway 2 (truck-entry	AM	--	--	--	--	8.4 s/v	A	No
	only) at Bristol Street	PM	--	--	--	--	13.9 s/v	B	No

Notes:

- **Bold ICU/LOS** or **HCM/LOS** values indicate adverse service levels based on the City's LOS standards.
- s/v = seconds per vehicle

9.0 SITE ACCESS EVALUATION

9.1 Level of Service Analysis For Project Access

As noted in *Table 8-1 and 8-2***,** the two project driveways along Bristol Street are forecast to operate at LOS A or B during the weekday AM and PM peak hours. As such, motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion.

9.2 Internal Circulation

The internal circulation layout for the proposed Project has been reviewed and is adequate to accommodate service/delivery trucks, fire trucks and large trucks (WB-62). ***Figure 9-1*** illustrates the turning movements required of a small service/delivery truck (SU-30) as it circulates throughout the site. ***Figure 9-2*** and ***Figure 9-3*** illustrate the turning movements required of a fire truck and a large truck (WB-62) as it circulates throughout the site. As shown in these figures, we have confirmed that the turning radii of service/delivery vehicles (SU-30) and the turning radii of a fire truck are met as these vehicles can access the Project site and circulate throughout comfortably and safely. Further, the turning requirements of a WB-62 large truck are met as well.

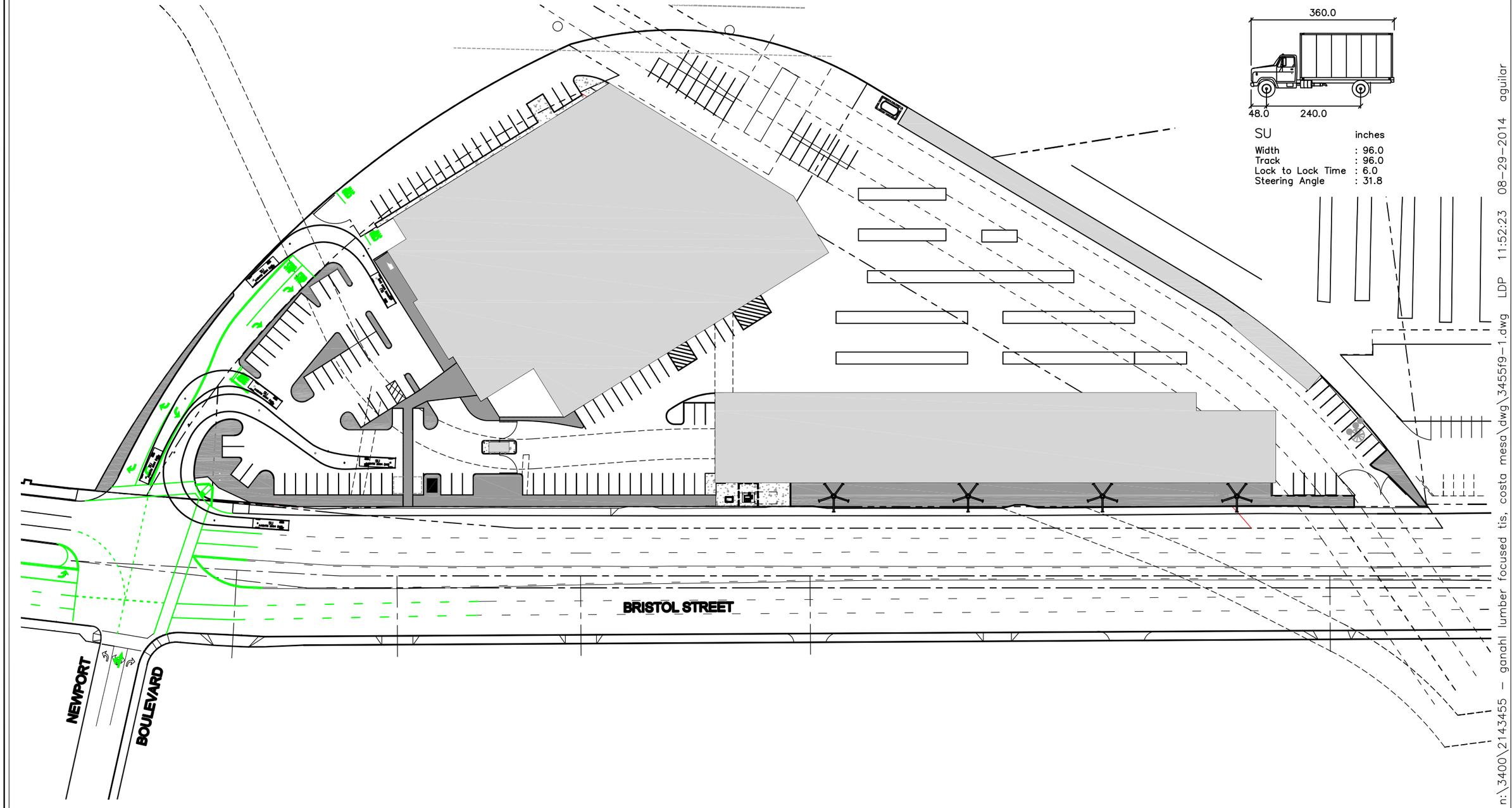
9.3 Queuing Analysis

To validate the adequacy of the proposed stacking/storage lengths, a queuing evaluation was prepared for the proposed eastbound left-turn lane on Bristol Street at Northbound Newport Boulevard/ Driveway No.1. The queuing evaluation was conducted based on projected Year 2016 plus project peak hour driveway traffic volumes and the Highway Capacity Manual (HCM) methodology.

As currently proposed, the Project will modify the existing median on Bristol Street and construct an eastbound left-turn lane consisting of 130 feet of storage and a 90 foot transition. In addition, the Project proposed to restripe northbound Newport Boulevard to provide one left-turn lane, an option left-turn/through lane, and a separate right-turn lane and construct Driveway No. 1 to provide a southbound left-turn lane, southbound right-turn lane and one departure (inbound) lane. With the proposed lane assignments, the traffic signal will be modified to operate "split phase" on Northbound Newport Boulevard/Driveway No. 1.

Based on the HCM service level calculation, which calculates a critical (95th percentile) queue value in number of vehicles, the AM peak hour and PM peak hour queue length is not more than three (3) vehicle or 66 feet for the inbound movement. Review of the proposed site plan indicates that eastbound left-turn pocket provide adequate stacking to accommodate all of the inbound vehicles.

Relative to the outbound queue of vehicles, the southbound left and southbound right-turn queues each total three (3) vehicles (or 66 feet). With proposed storage capacities of 70 feet and 200 feet, respectively, the southbound left-turn lane and right-turn lane storage capacities are adequate.



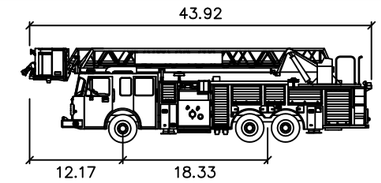
LINSCOTT LAW & GREENSPAN engineers

NO SCALE

FIGURE 9-1

SU-30 TRUCK TURNING ANALYSIS

GANAHL LUMBER FOCUSED TIS, COSTA MESA



Smeal Platform RM 87ft

	feet
Width	: 8.33
Track	: 7.83
Lock to Lock Time	: 6.0
Steering Angle	: 48.0

BRISTOL STREET

NEWPORT BOULEVARD

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LINSCOTT LAW & GREENSPAN engineers

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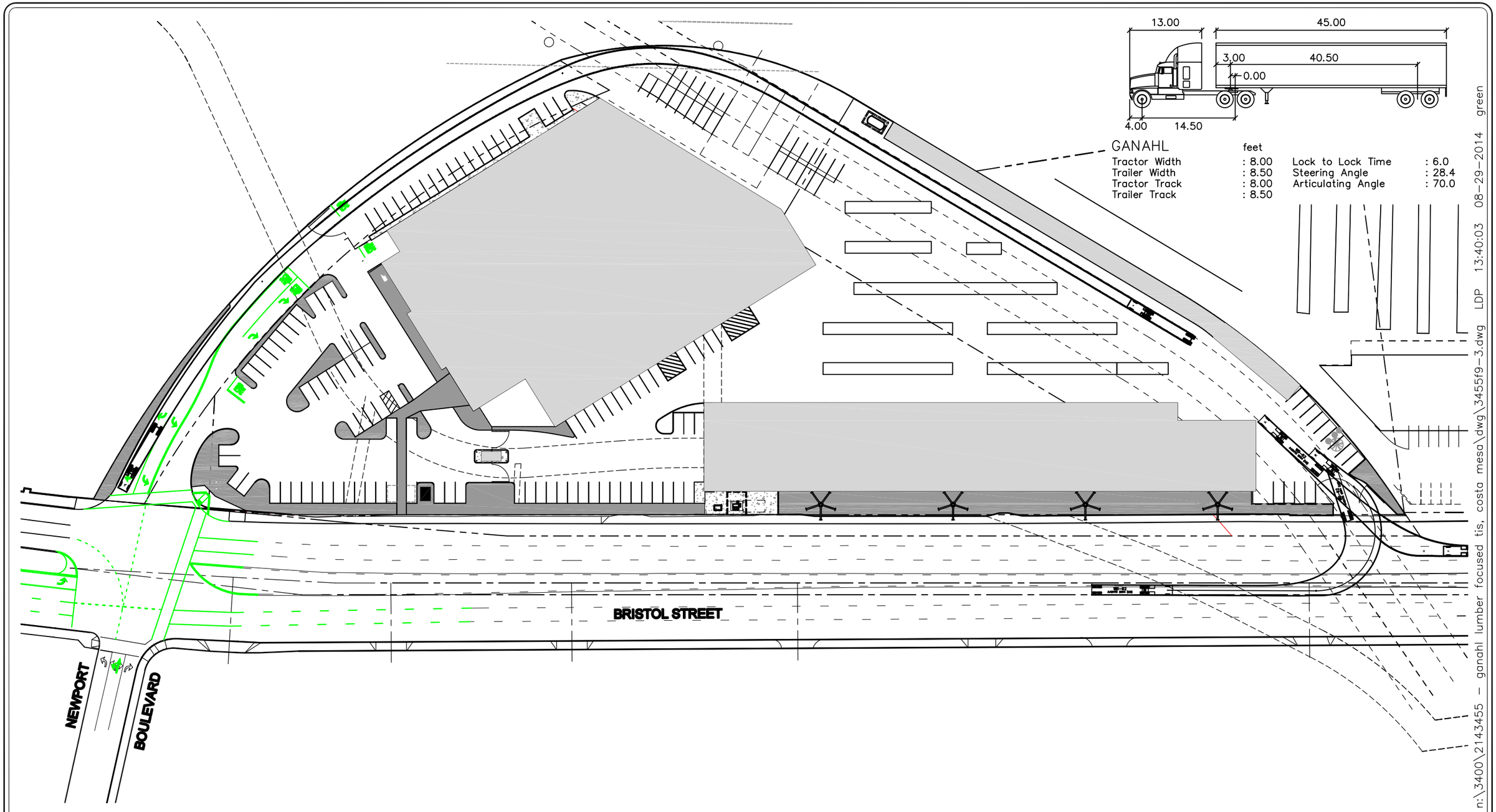
FIGURE 9-2

FIRE TRUCK TURNING ANALYSIS

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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NO SCALE

FIGURE 9-3

WB-62 TRUCK TURNING ANALYSIS
GANAHL LUMBER FOCUSED TIS, COSTA MESA

10.0 PROJECT-SPECIFIC IMPROVEMENTS

10.1 Preliminary Traffic Impact Fee Calculation

Pursuant to the requirements of the City of Costa Mesa, Traffic Impact Fees will be required of the proposed Project. The purpose of the fee is to fund the necessary transportation/circulation improvements that are related to incremental traffic impacts on the City's circulation system by new development. The "City-wide" traffic impact fee, based on Average Daily Trips Ends (ADT), for all new development is assessed based on an incremental basis. The precise fee will be determined upon issuance of Project building permits by the City of Costa Mesa.

10.2 Site Access Improvements

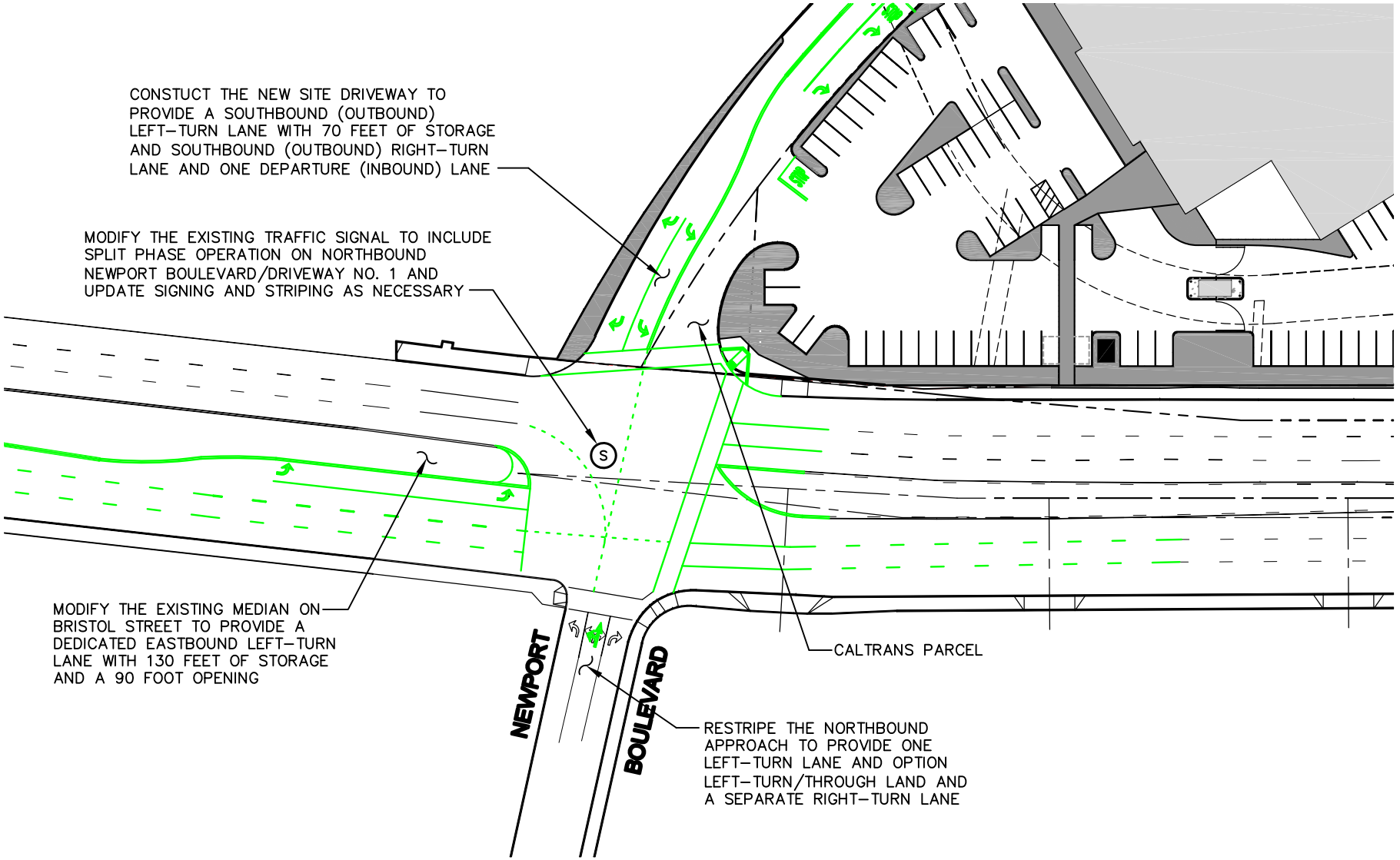
Subject to review and approval by the City Traffic Engineer, the following improvements are recommended in conjunction with development of the proposed Project to ensure adequate access and egress to the site is provided:

- Maintain adequate sight distance for Driveway No.1 by minimizing obstructions (i.e. landscaping and/or hardscape/walls/monument signs) within "limited use areas" on east side and west side of the Project driveway. Landscaping and/or hardscapes should be designed such that a driver's clear line of sight is not obstructed and does not threaten vehicular or pedestrian safety, as determined by the City Traffic Engineer.
- All plants and shrubs within the limited use area should be of the type that will grow no higher than 30-inches above the curb or a have a canopy no lower than 72 inches above curb. The maximum tree size and minimum tree spacing in the limited use area should be limited to 24-inch caliper tree trunks (maximum size at maturity) spaced at 40-feet on center.
- Install appropriate signage and necessary pavement legends at Driveway No. 2 to indicate that proposed access is a "truck-only entry" driveway.

Recommended improvements to be completed as a part of the Project at the Bristol Street/Northbound Newport Boulevard intersection, subject to the approval of the City of Costa Mesa, assuming site access from this location is provided, are as follows:

- Modify the existing median on Bristol Street to provide a dedicated eastbound left-turn lane with 130 feet of storage and a 90-foot transition,
- Restripe the northbound approach to provide one left-turn lane, and option left-turn/through lane and a separate right-turn lane,
- Construct the new site driveway to provide a southbound (outbound) left-turn lane with 70 feet of storage and southbound (outbound) right-turn lane and one departure (inbound) lane; and.
- Modify the existing traffic signal, to include split phase operation on Northbound Newport Boulevard/Driveway No. 1, and update signing and striping as necessary.

Figure 10-1 presents a conceptual plan for Bristol Street at Northbound Newport Boulevard that illustrates the recommended improvements mentioned above to provide access to the Project site.



SOURCE: ONYX ARCHITECTS

LINSCOTT LAW & GREENSPAN engineers

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NO SCALE

FIGURE 10-1

CONCEPTUAL IMPROVEMENT PLAN FOR BRISTOL STREET AT NORTHBOUND NEWPORT BOULEVARD/PROJECT DRIVEWAY NO. 1

GANAHL LUMBER FOCUSED TIS, COSTA MESA

11.0 CONGESTION MANAGEMENT PROGRAM (CMP) COMPLIANCE ASSESSMENT

This analysis is consistent with the requirements and procedures outlined in the current *Orange County Congestion Management Program (CMP).* The CMP requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System (HS). Per the CMP guidelines, this number is based on the desire to analyze any impacts that will be 3.0% or more of the existing CMP highway system facilities' capacity.

However, as noted in this traffic study, the proposed Project is expected to generate 2,287 daily trips, and thus does not meet the criteria required for a CMP traffic analysis. Therefore, it is concluded that the proposed Project will not have any significant traffic impacts on the Congestion Management Program Highway System. It is noted that the three (3) key study intersections along Bristol Street are forecast to continue to operate at an acceptable service level.

12.0 CODE PARKING REQUIREMENTS

The code parking calculation for the proposed Project is based on the City's requirements as outlined in *Title 13 – Planning, Zoning and Development, Chapter VI. – Off-Street Parking Standards, Section 13-89. Parking Required* of the City of Costa Mesa Municipal Code. The City's Municipal Code specifies the following parking requirements as outlined in *Table 13-89: Nonresidential Parking Standards*:

- Retail: offices; central administrative offices: 4 spaces per 1000 square-feet (SF) of gross floor area (GFA) [11]

- Industrial: 3 spaces per 1000 SF of GFA for the first 25,000 SF; 2 spaces per 1000 SF of GFA between 25,000 and 50,000 SF; and 1 ½ parking space per 1,000 SF of GFA over 50,001 SF of building.

Table 12-1 presents the code parking requirements for the proposed Project. As shown, direct application of City parking codes to the proposed Building Material Retail Store (Building A) results in a total parking requirement of 263 parking spaces.

With a proposed parking supply of 273 spaces, a parking surplus of 10 spaces is forecast thus satisfying the Code-base requirements of the City.

[11] Per the *City of Costa Mesa Municipal Code,* Gross Floor Area (GFA) is defined as area of all floors within the walls of a structure except elevator and other vertical shafts (including stairwells) and elevator equipment). Hence, the ancillary "shed" buildings are excluded from the assessment given these structures are not enclosed.

TABLE 12-1

CITY CODE PARKING REQUIREMENTS[12]

Project Description	Size	City of Costa Mesa Code Parking Ratio	Spaces Required
Ganahl Lumber (Building A)			
▪ Building Material Retail Store	57,287 SF	4.0 spaces per 1000 SF of GFA	229
▪ Will Call Storage/ Warehouse	11,284 SF	3 spaces per 1000 SF of GFA for the first 25,000 SF; 2 spaces per 1000 SF of GFA between 25,000 and 50,000 SF; and 1 ½ parking space per 1,000 SF of GFA over 50,001 SF of building.	34
		Parking Requirement:	**263**
		Proposed Parking Supply:	**273**
		Parking Surplus/Deficiency (+/-):	**+10**

[12] Source: *City of Costa Mesa Municipal Code.*

13.0 SUMMARY OF FINDINGS AND CONCLUSIONS

- ***Project Description*** – The Project site is a 5.93± acre parcel of land that is located north of Bristol Street and west of the existing Ganahl Lumber facility in the City of Costa Mesa, California. The subject property's street address is 1100 Bristol Street. The proposed Project will replace the existing Ganahl Lumber facility located at 1275 Bristol Street, which will be closed upon completion of the new store. The proposed Project includes the development of 68,571 SF of building area to accommodate a new 57,287 SF building materials retail store with 11,284 SF of warehouse/will-call storage space, and up to 43,113 SF of ancillary support "shed" buildings ("B" storage shed, pole-shed space and mill shed) for protection of raw materials/lumber and/or equipment.

  Access to the site will be provided two driveways on Bristol Street. Primary access is proposed via a full access signalized driveway along Bristol Street to be constructed opposite northbound Newport Boulevard (Driveway No. 1), with secondary access to be provided via an a proposed unsignalized driveways on Bristol Street at the eastern property line (Driveway No. 2)Driveway No. 1 will provide access to customer, employee and contractor-related traffic, while Driveway No. 2 will provide access to truck-related traffic.

  Based on information provided by Ganahl Lumber, the gated access at Driveway No. 2 (east gate) will be open at all times during regular hours of operation (Monday through Friday, 6:00 AM to 6:00 PM, Saturday, 7:00 AM to 6:00 PM, Closed Sunday) to prevent trucks from "queuing" in front of the gate and blocking through traffic on Bristol Street. The gate will be manually operated and secured during business hours by employees of Ganahl Lumber. To prevent/deter trucks from using Driveway No. 2 as an exit, "traffic/back-up spikes" will be installed. The exit gate (north gate) on the northwest corner of Building A will be an automated gate that will remain in the "closed position" during regular business hours and remotely activated to open from a camera station in the operations office to allow for trucks to exit the site.

- ***Study Scope*** – The following three (3) key study intersections were selected for detailed peak hour level of service analyses under Existing Traffic Conditions, Existing Plus Project Traffic Conditions, Year 2016 Cumulative Traffic Conditions, Year 2016 Cumulative plus Project Traffic Conditions.

  Study Intersections
  - Southbound Newport Boulevard at Bristol Street (Signalized)
  - Northbound Newport Boulevard at Bristol Street (Signalized)
  - Red Hill Avenue/Santa Ana Avenue at Bristol Street (Signalized)

- ***Existing Traffic Conditions*** – All three (3) key study intersections currently operate at LOS A during the weekday AM and PM peak hours. It is noted that the existing traffic volumes include

traffic that is now generated by the existing Ganahl Lumber facility and current service levels are representative of this condition.

- ***Project Trip Generation*** – Based on trip generation studies of existing Ganahl Lumber facilities, the proposed Project is expected to generate approximately 2,287 daily trips, with 223 trips (112 inbound, 111 outbound) produced in the AM peak hour and 106 trips (46 inbound and 60 outbound) produced in the PM peak hour on a typical weekday.

  When converted to PCE's to account for truck-related traffic, the proposed Project's trip generation potential amounts to 2,352 daily PCE trips, with 274 PCE trips (126 inbound, 148 outbound) produced in the AM peak hour and 108 PCE trips (46 inbound and 62 outbound) produced in the PM peak hour on a typical weekday.

- ***Cumulative Projects Trip Generation***– Two (2) cumulative projects were assessed in the cumulative analysis of the Project. These two projects are expected to generate a combined total 2,656 daily trips (one half arriving, one half departing) on a "typical" weekday, with 149 trips (79 inbound and 70 outbound) forecast during the AM peak hour and 204 trips (101 inbound and 103 outbound) forecast during the PM peak hour.

- ***Existing Plus Project Traffic Conditions*** – The proposed Project will not significantly impact any of the three (3) key study intersections as all three locations are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of Project generated traffic to existing traffic.

- ***Year 2016 Cumulative Traffic Conditions Plus Project*** – The proposed Project will not significantly any of the three (3) key study intersections when assessed within a near-term cumulative traffic setting. All locations will continue to operate at an acceptable service level.

- ***Site Access –*** The proposed Project driveways along Bristol Street are forecast to operate at acceptable LOS during the weekday AM peak hour and weekday PM peak hour. As such, project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably without undue congestion.

- ***Internal Circulation*** - Internal circulation for the Project is adequate. An assessment of the proposed site plan indicates that a (SU-30) service truck and fire truck, as well as a large truck (WB-62) can access the Project site and circulate throughout site.

- ***Project-Specific Improvements***: Subject to review and approval by the City Traffic Engineer, the following improvements are recommended in conjunction with development of the proposed Project to ensure adequate access and egress to the site is provided:

  - Maintain adequate sight distance for the Project Driveway No. 1 by minimizing obstructions (i.e. landscaping and/or hardscape/walls/monument signs) within "limited use areas" on east

side and west side of the Project driveways. Landscaping and/or hardscapes should be designed such that a driver's clear line of sight is not obstructed and does not threaten vehicular or pedestrian safety, as determined by the City Traffic Engineer.

- All plants and shrubs within the limited use area should be of the type that will grow no higher than 30-inches above the curb or a have a canopy no lower than 72 inches above curb. The maximum tree size and minimum tree spacing in the limited use area should be limited to 24-inch caliper tree trunks (maximum size at maturity) spaced at 40-feet on center.
- Install appropriate signage and necessary pavement legends at Driveway No. 2 to indicate that proposed access is a "truck-only entry" driveway.

Recommended improvements to be completed as a part of the Project at the Bristol Street/Northbound Newport Boulevard intersection, subject to the approval of the City of Costa Mesa, assuming site access from this location is provided, are as follows:

- Modify the existing median on Bristol Street to provide a dedicated eastbound left-turn lane, with 130 feet of storage and a 90-foot transition.
- Restripe the northbound approach to provide one left-turn lane, an option left-turn/through lane and a separate right-turn lane,
- Construct the new site driveway to provide a southbound (outbound) left-turn lane with 70-feet of storage and southbound (outbound) right-turn lane and one departure (inbound) lane; and.
- Modify the existing traffic signal, to include split phase operation on Northbound Newport Boulevard/Driveway No.1 and update signing and striping as necessary.

- ***CMP Compliance Assessment –*** No significant impacts are expected to occur on the Orange County Congestion Management Program roadway network due to the development and full occupancy of the proposed Project.

APPENDIX A

TRAFFIC STUDY SCOPE OF WORK

MEMORANDUM

To:	Mr. Raja Sethuraman City of Costa Mesa	Date:	April 17, 2014
From:	Richard E. Barretto, P.E., Principal LLG, Engineers	LLG Ref:	2.14.3455.1
Subject:	***Focused Traffic Study Scope of Work for Ganahl Lumber Costa Mesa, California***		

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Traffic Study Scope of Work for the proposed Ganahl Lumber Relocation Project (herein referred to as Project) in the City of Costa Mesa, California, for your review and approval. The proposed Project will replace the existing Ganahl Lumber facility located at 1275 Bristol Street, which will be closed upon completion of the new store. The existing Ganahl Lumber facility consists of 50,899 square-feet (SF) of building area consisting of a 32,000 SF building materials retail store (A) and support buildings that includes a 3,699 SF will call storage shed (C), a 11,200 SF storage shed (B), and a 4,000 SF mill shed (D). The work program provided herein is based on our understanding of the Project, and the most current project information provided by the project applicant, Ganahl Construction Corporation.

Traffic Study Scope of Work

The Traffic Impact Analysis for the proposed Ganahl Lumber Relocation Project will satisfy the traffic impact requirements of the City of Costa Mesa and be consistent with the requirements and procedures outlined in the current *2013 Congestion Management Program (CMP) for Orange County.*

A. **Project Address/Location:** The Project site is a 5.93± acre vacant parcel of land that is located north of Bristol Street and west of the existing Ganahl Lumber Costa Mesa facility in the City of Costa Mesa, California. The subject property's street address is 1100 Bristol Street. The Project site is zoned "C1 Local Business" and has a land use designation of "General Commercial" in the City of Costa Mesa Zoning Map and General Plan Land Us Map, respectively. Access to the Project site is now provided via two full access driveway on Bristol Street that are located at the center and eastern portion of property. See attached ***Figure 1-1,*** a Vicinity Map that illustrates the general location of the Project and surrounding street system. ***Figure 2-1*** is an existing aerial photograph of the Project site.

B. **Project Description:** Subject to verification by the Project Applicant/Project Architect, the proposed Project includes the development of 71,674 square-feet (SF) of building area to accommodate a new 42,224 SF building materials retail store (A) and support buildings that includes a new 4,000 SF building for will call storage (C), a storage shed of 21,450 SF (B), and a 4,000 SF mill shed (D). ***Table***

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Transportation
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Irvine
San Diego
Woodland Hills

1 summarizes the existing and proposed development totals of the Ganahl Lumber project. A review of this table includes that the main building, the Building Materials Lumber Store (A), will increase in size from 32,000 SF to 42,000 SF.

As currently envisioned, primary access to the site will be provided via a full access signalized driveway along Bristol Street to be constructed opposite northbound Newport Boulevard, with secondary access to be provided via two proposed unsignalized driveways on Bristol Street that are to be located in the middle of the site and at the eastern property line.

The proposed Project is expected to be completed by late 2015/early 2016. Upon completion of the new facility, the existing Ganahl Lumber store will be closed; we understand that there are no plans to reuse or continue to operate the existing site once the new store is operational. ***Figures 2-2*** illustrates the preliminary site plan for the Project prepared by Onyx Architects, dated February 26, 2014.

C. **Traffic Study Locations:** Based on our review of the project vicinity, the following one (1) key study intersection will be evaluated in the Project's focused traffic impact study.

Study Intersections

1. Northbound Newport Boulevard at Bristol Street (Signalized)

D. **Traffic Counts:** AM peak hour and PM peak hour traffic counts for the one (1) key study intersections has been collected for the AM peak period and PM peak period of a typical weekday. The traffic counts were collected in February 2014. ***Table 2*** summarizes the existing service level for the one (1) potential key study intersection based on existing traffic counts and current intersection lane geometrics.

E. **Project Trip Generation:** The trip generation potential of the proposed Ganahl Lumber facility will be forecast by employing derived site specific trip generation rates of the existing Ganahl Lumber store located in Costa Mesa, Anaheim and Los Alamitos rather than using trip rates provided in *Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE)*, Washington, D.C. (2012) for general building materials and lumber stores.

Counts were conducted at three locations, Costa Mesa, Anaheim and Los Alamitos over a three day period. ***Table 3*** summarizes the results for each day at each location and identifies the averages for each site. It should be noted that all three sites have vastly different building square-footages and overall sizes. Review of the existing trips associated with each site shows that all three are very similar. Therefore, the trip generation is based on a per site basis rather than the square-footage.

Table 4 presents the average number of trips on a per site basis and compares it to the average for the Costa Mesa site. Review of *Table 4* shows that the difference between vastly different sites results in a nominal change in trips. Therefore, with the relocation of the existing site to the proposed location, no new trips are expected to be added to the current road network. The total trips associated with the Project are 2,210 daily trips, with 205 trips (107 inbound, 98 outbound) produced in the AM peak hour and 119 trips (52 inbound and 67 outbound) produced in the PM peak hour.

F. Trip Distribution: See attached ***Figure 5-1*** for the Project Trip Distribution Pattern and a tabular summary on ***Table 4***.

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- location of site access points in relation to the surrounding street system,
- the site's proximity to major traffic carriers and regional access routes,
- physical characteristics of the circulation system such as lane channelization and presence of traffic signals that affect travel patterns,
- presence of traffic congestion in the surrounding vicinity,
- ingress/egress availability at the project site, and
- existing traffic volumes.

G. Analysis Methodology and Scenarios: The LOS calculations will be based on *Intersection Capacity Utilization (ICU)* methodology for signalized intersections and *Highway Capacity Manual (HCM)* methodology for unsignalized intersections. The Project's potential impact will be based on the City of Costa Mesa significant impact criteria. The following scenarios are those for which LOS calculations will be performed using the ICU and HCM methodologies:

a. Existing Traffic,
b. Existing Plus Project Traffic, and
c. Scenario (b) With Mitigation, if necessary,

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H. Other Issues:

- Evaluate site access and internal circulation, especially as it relates to line of sight for the Project driveways on Bristol Street to ensure safe access is maintained for the Project.
- Conduct LOS calculations at the proposed project driveway(s).

* * * * * * * * * * *

We appreciate the opportunity to provide this scope of work. Should you have any questions, please call me at (949) 825-6175. Thank You.

Recommended by:

_____ _____

Consultant's Representative Date

Approved by:

_____ _____

City of Costa Mesa Date

cc: File
Shane Green, P.E., Transportation Engineer III

Attachment

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TABLE 1

EXISTING AND PROPOSED PROJECT DEVELOPMENT SUMMARY[1]

Project Description	Existing Development	Proposed Project[2]
▪ Ganahl Lumber		
❖ Building Materials Retail Store (Building A)	32,000 SF	42,000 SF
▪ Ganahl Lumber Ancillary Buildings[3]		
❖ Storage Shed (Building B")	11,200 SF	33,098 SF
❖ Will Call Storage Shed	3,699 SF	20,000 SF
❖ Mill Shed	4,000 SF	10,215 SF
❖ Yard	104,118 SF	95,239 SF

Notes:

- SF = Square Footage

1 Source: *Onyx Architects*

2 Subject to final project description, the building floor areas noted below may change upon completion of Project site plan layout.

3 Ancillary buildings are support uses to the Building Materials Retail Store

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TABLE 2

EXISTING PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersection	Time Period	Control Type	ICU	LOS
1. Newport Boulevard (NB) at Bristol Street	AM	2 Phase	0.276	A
	PM	Signal	0.415	A

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TABLE 3

EXISTING GANAHL LUMBER TRIPS

	Costa Mesa[4]							Anaheim[5]							Los Alamitos[6]						
		AM Peak Hour			PM Peak Hour				AM Peak Hour			PM Peak Hour				AM Peak Hour			PM Peak Hour		
Count Day	Daily	Enter	Exit	Total	Enter	Exit	Total	Daily[7]	Enter	Exit	Total	Enter	Exit	Total	Daily[7]	Enter	Exit	Total	Enter	Exit	Total
Without PCE[8]																					
Tuesday	2,146	98	98	194	46	61	107	2,053	117	81	198	44	68	112	2,351	111	88	199	72	84	156
Wednesday	2,287	112	111	223	46	59	105	2,294	117	81	198	47	80	127	2,301	108	82	190	67	69	136
Thursday	2,197	110	87	197	65	80	145	2,285	123	111	234	37	66	103	2,089	84	78	162	63	83	146
Average	*2,210*	*107*	*98*	*205*	*52*	*67*	*119*	2,211	*119*	*91*	*210*	*43*	*71*	*114*	2,247	*101*	*83*	*184*	*67*	*79*	*146*
With PCE																					
Tuesday	2,321	100	100	200	48	62	110	2,307	129	94	223	48	70	118	2,531	122	93	215	74	85	159
Wednesday	2,438	124	128	252	46	60	106	2,530	135	91	226	50	80	130	2,516	123	90	213	72	69	141
Thursday	2,335	120	91	211	70	80	150	2,471	134	124	258	38	67	105	2,206	91	84	175	64	85	149
Average	*2,365*	*115*	*106*	*221*	*55*	*67*	*122*	2,436	*133*	*103*	*236*	*45*	*73*	*118*	2,418	*112*	*89*	*201*	*70*	*80*	*150*

4 Counts took place from Tuesday (2/11/2014) to Thursday (2/13/2014) at the Costa Mesa site. The existing Costa Mesa site consists of 32,000 SF of retail store on 4.9 Acres of Land.

5 Counts took place from Tuesday (1/28/2014) to Thursday (1/30/2014) at the Anaheim site. The existing Anaheim site consists of 45,760 SF of retail store on 15.9 Acres of Land.

6 Counts took place from Tuesday (2/04/2014) to Thursday (2/06/2014) at the Los Alamitos site. The existing Los Alamitos site consists of 26,650 SF of retail store on 7.5 Acres of Land.

7 Daily trips were empirically derived based on the existing daily values collected at the Costa Mesa site.

8 PCE = Passenger Car Equivalent

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TABLE 4
PROJECT TRIP GENERATION RATES AND FORECAST

Land Use / Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Without Passenger Car Equivalent (PCE)							
▪ Average Ganahl Lumber Trips For Costa Mesa	*2,210*	*107*	*98*	*205*	*52*	*67*	*119*
▪ Average Ganahl Lumber Trips Per Site	2,223	109	91	200	54	72	126
Net Difference (Costa Mesa – Trip Per Site)	*-13*	*-2*	*7*	*5*	*-2*	*-5*	*-7*
With Passenger Car Equivalent (PCE)							
▪ Average Ganahl Lumber Trips For Costa Mesa	*2,365*	*115*	*106*	*221*	*55*	*67*	*122*
▪ Average Ganahl Lumber Trips Per Site	*2,406*	*120*	*99*	*219*	*57*	*73*	*130*
Net Difference (Costa Mesa – Trip Per Site)	*-41*	*-5*	*7*	*2*	*-2*	*-6*	*-8*

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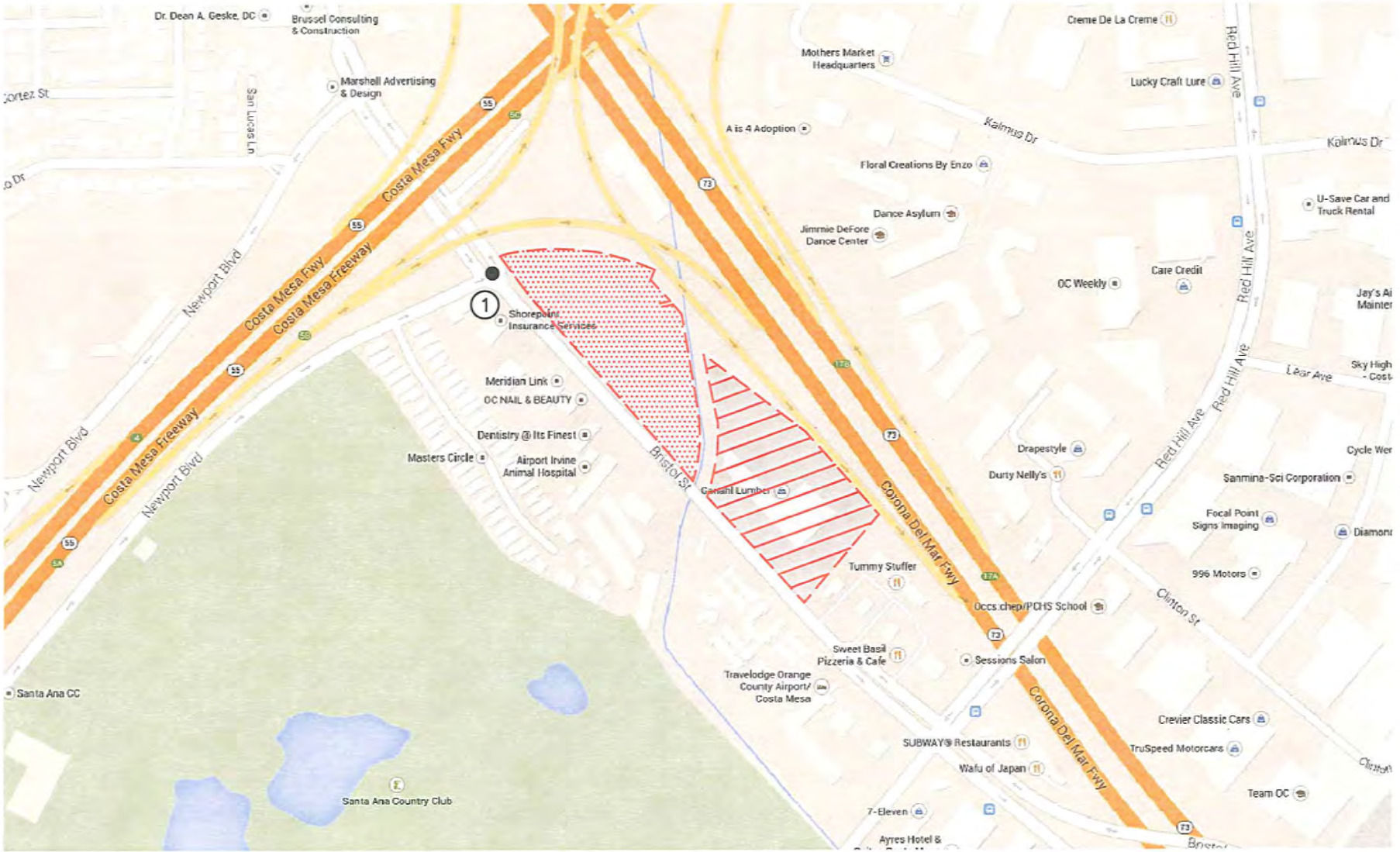
TABLE 5

PROJECT DIRECTIONAL DISTRIBUTION PATTERN

Project Distribution Percentage	Orientation/Direction
30%	To/from the southeast via Bristol Street
30%	To/from the northwest via Bristol Street
10%	To/from the north via Red Hill Avenue
15%	To/from the south via Red Hill Avenue
15%	To/from the south via Newport Boulevard
100%	**Total**



n:\3400\2143455 - ganahl lumber focused tis, costa mesa\dwg\3455f1-1a.dwg LDP 18:42:47 04-16-2014 green

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N NO SCALE

SOURCE: GOOGLE

KEY

(#) = STUDY INTERSECTION

= EXISITNG PROJECT SITE

= PROPOSED PROJECT SITE

FIGURE 1-1

VICINITY MAP

GANAHL LUMBER FOCUSED TIS, COSTA MESA

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NO SCALE

SOURCE: GOOGLE

KEY

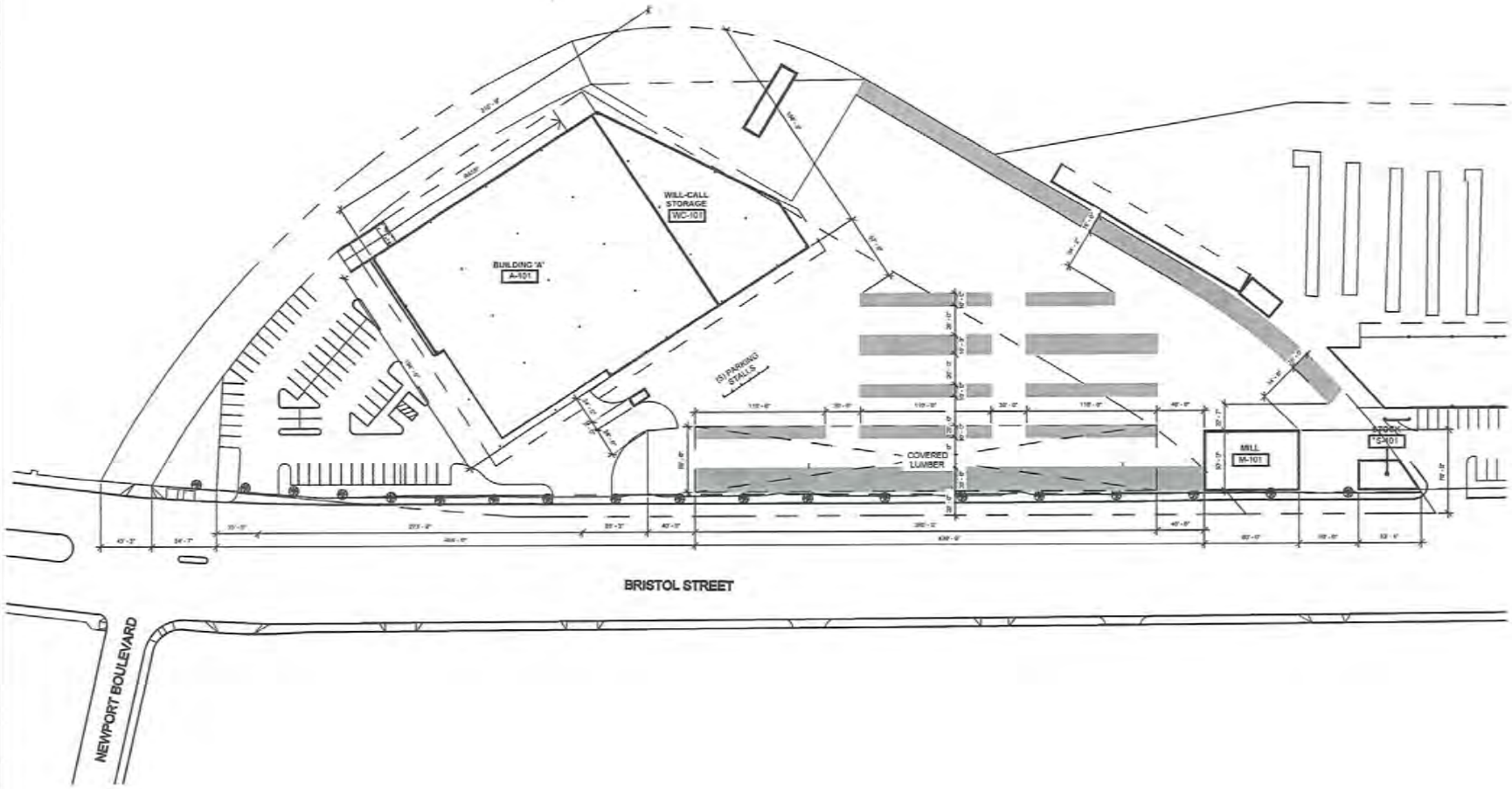
= EXISTING PROJECT SITE

= PROPOSED PROJECT SITE

FIGURE 2-1

EXISTING AERIAL SITE PHOTOGRAPH

GANAHL LUMBER FOCUSED TIS, COSTA MESA



n:\3400\2143455 - ganahl lumber focused tis, costa mesa\dwg\3455f2-3.dwg LDP 09:16:51 04-17-2014 lam

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N

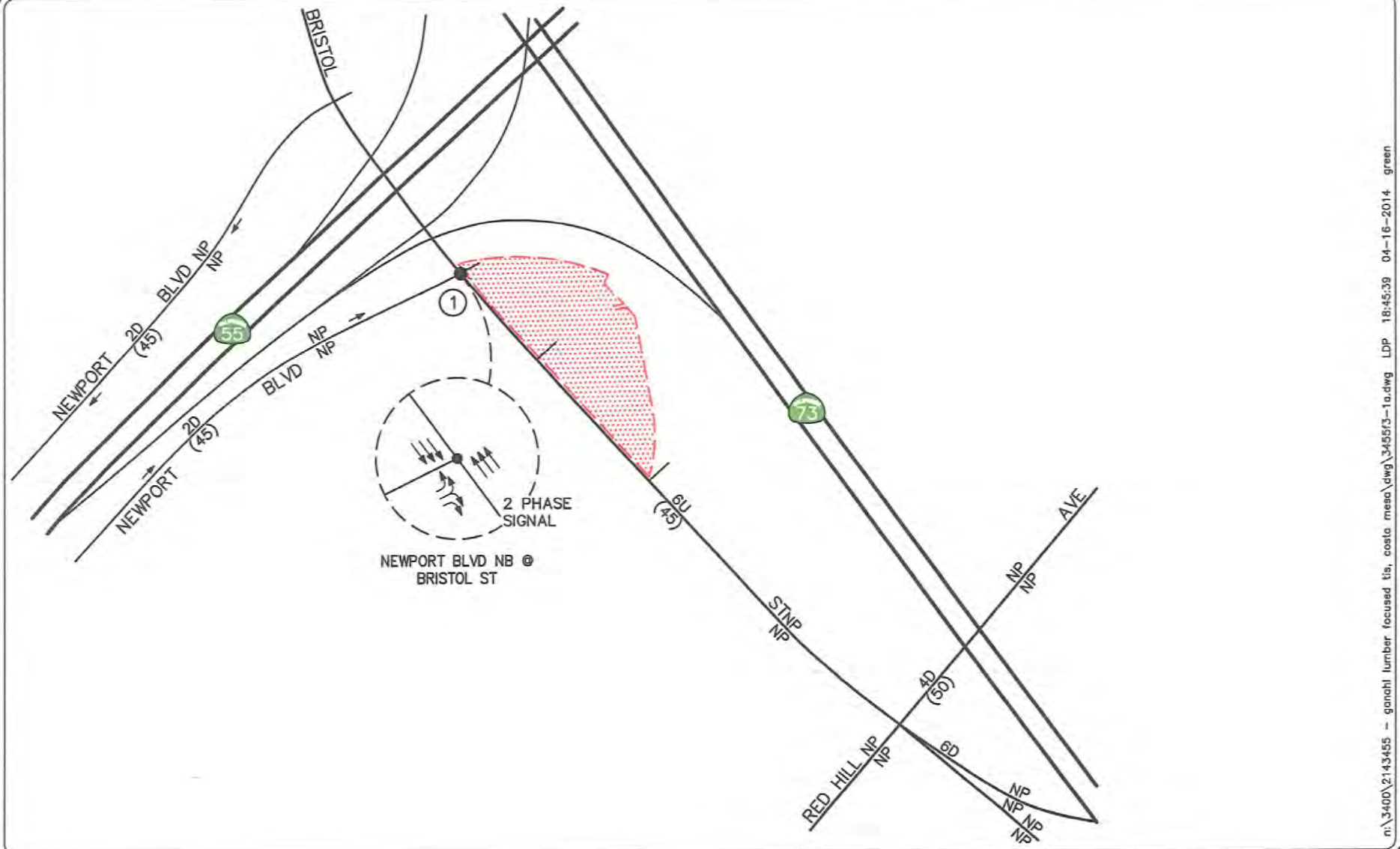
NO SCALE

SOURCE: ONYX ARCHITECTS

FIGURE 2-2

PROPOSED SITE PLAN

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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N NO SCALE

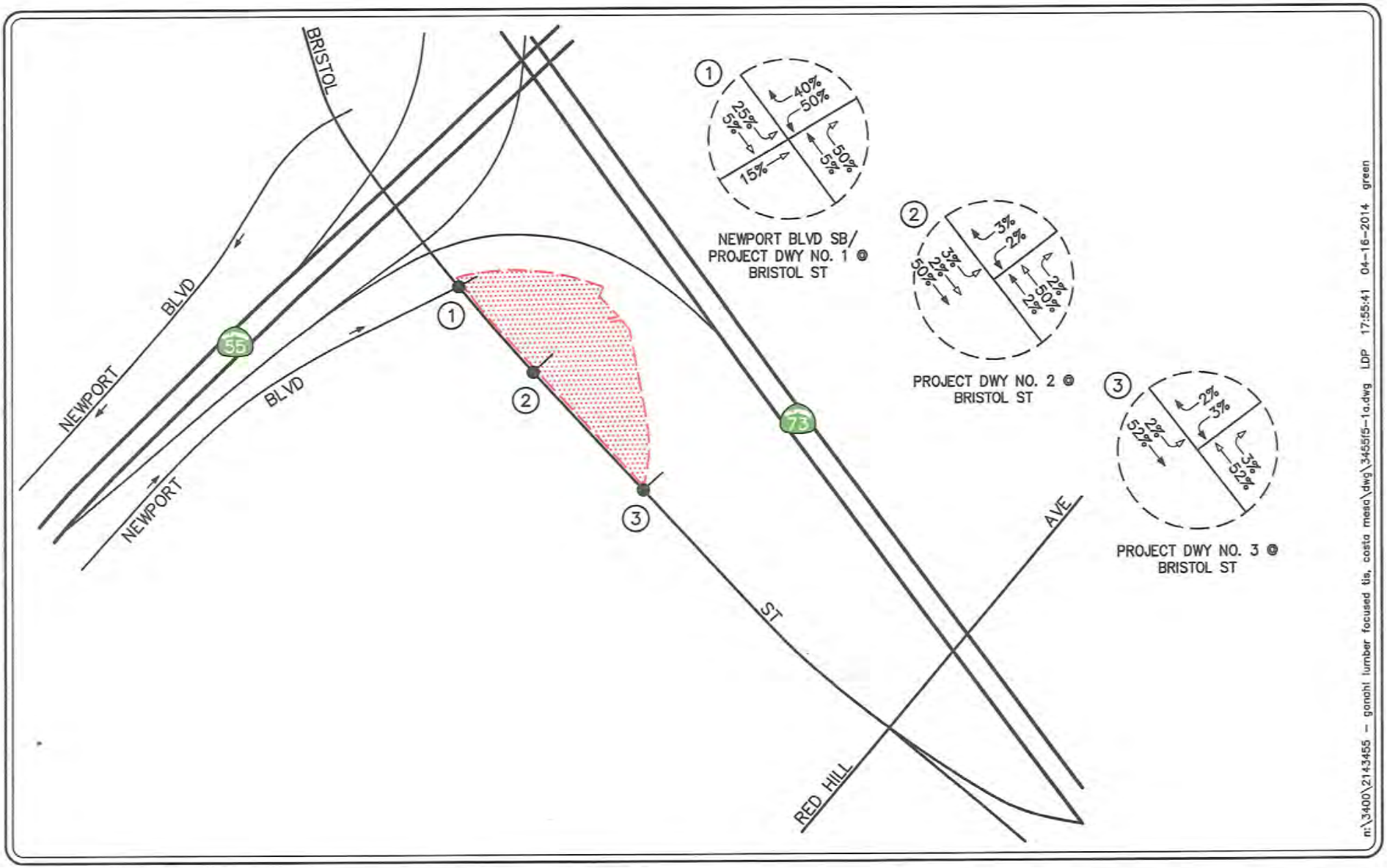
KEY

(#) = STUDY INTERSECTION
← = APPROACH LANE ASSIGNMENT
● = TRAFFIC SIGNAL, ▼ = STOP SIGN
P = PARKING, NP = NO PARKING
U = UNDIVIDED, D = DIVIDED
2 = NUMBER OF TRAVEL LANES
(XX)= POSTED SPEED LIMIT (MPH)
▨ = PROJECT SITE

FIGURE 3-1

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

GANAHL LUMBER FOCUSED TIS, COSTA MESA



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N NO SCALE

KEY
- ⇦ = INBOUND PERCENTAGE
- ⇦ = OUTBOUND PERCENTAGE
- (#) = STUDY INTERSECTION
- = PROJECT SITE

FIGURE 5-1

PROJECT TRAFFIC DISTRIBUTION PATTERN
GANAHL LUMBER FOCUSED TIS, COSTA MESA

APPENDIX B

EXISTING TRAFFIC COUNT DATA

APPENDIX B-I

INTERSECTION COUNTS

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: NEWPORT BLVD (SB)
E-W Direction: BRISTOL STREET

File Name : h1402092
Site Code : 00000000
Start Date : 2/13/2014
Page No : 1

Groups Printed- Turning Movements

	NEWPORT BOULEVARD Southbound			BRISTOL STREET Westbound			CAR WASH Northbound			BRISTOL STREET Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	0	84	18	0	0	0	44	114	0	260
07:15 AM	1	0	0	1	98	20	0	0	0	42	109	0	271
07:30 AM	1	0	0	1	119	30	0	0	0	43	160	0	354
07:45 AM	0	0	1	0	152	33	0	0	0	81	203	0	470
Total	2	0	1	2	453	101	0	0	0	210	586	0	1355
08:00 AM	0	0	0	2	135	22	0	0	0	54	161	0	374
08:15 AM	3	0	0	1	148	33	0	0	0	51	164	0	400
08:30 AM	1	0	0	1	126	23	0	0	0	57	168	0	376
08:45 AM	1	0	0	0	132	40	0	0	0	58	156	0	387
Total	5	0	0	4	541	118	0	0	0	220	649	0	1537
*** BREAK ***													
04:00 PM	0	0	0	1	215	70	0	0	0	93	103	0	482
04:15 PM	2	0	1	1	244	91	0	0	0	104	97	0	540
04:30 PM	0	0	0	1	235	97	0	0	0	94	120	0	547
04:45 PM	2	0	1	5	264	107	0	0	0	114	122	0	615
Total	4	0	2	8	958	365	0	0	0	405	442	0	2184
05:00 PM	4	0	0	3	320	150	0	0	0	133	141	0	751
05:15 PM	3	0	0	2	345	159	0	0	0	115	131	0	755
05:30 PM	1	0	1	1	311	138	0	0	0	116	117	0	685
05:45 PM	2	0	1	1	271	112	0	0	0	131	141	0	659
Total	10	0	2	7	1247	559	0	0	0	495	530	0	2850
Grand Total	21	0	5	21	3199	1143	0	0	0	1330	2207	0	7926
Apprch %	80.8	0	19.2	0.5	73.3	26.2	0	0	0	37.6	62.4	0	
Total %	0.3	0	0.1	0.3	40.4	14.4	0	0	0	16.8	27.8	0	

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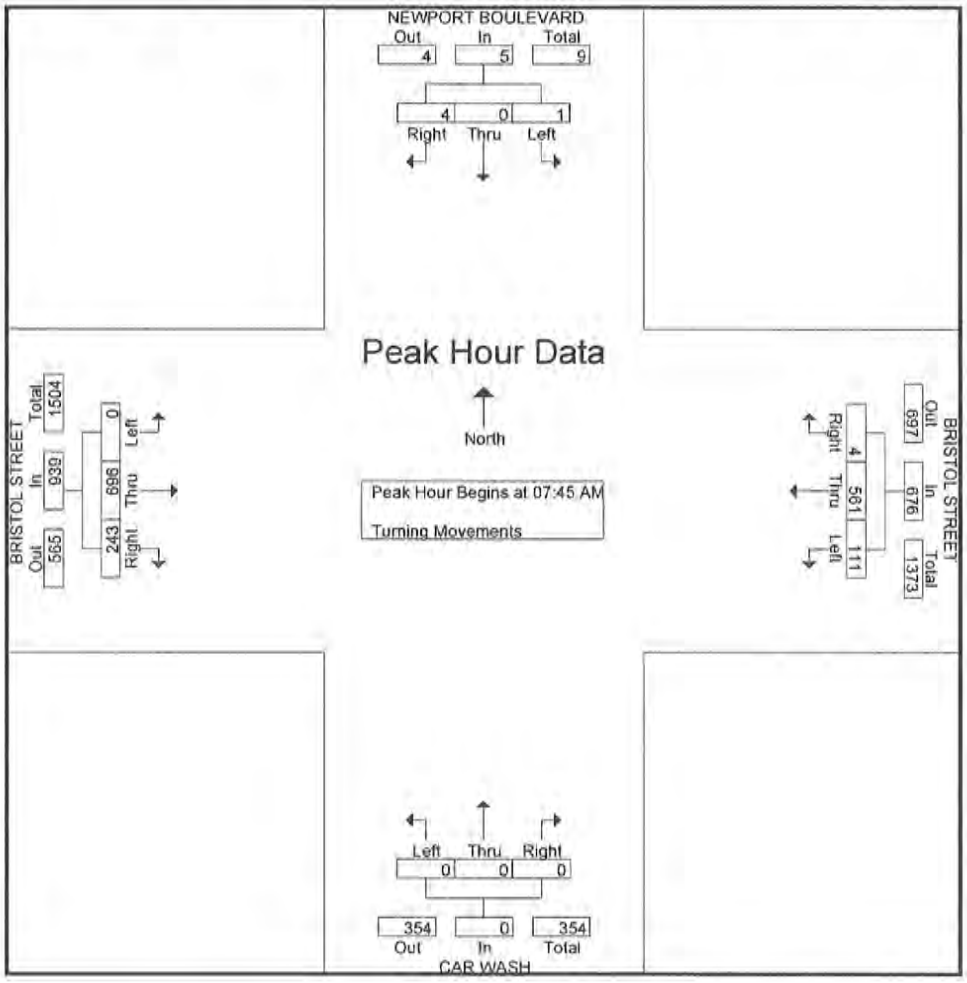
E-W Direction: BRISTOL STREET

File Name : h1402092
Site Code : 00000000
Start Date : 2/13/2014
Page No : 2

	NEWPORT BOULEVARD Southbound				BRISTOL STREET Westbound				CAR WASH Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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 07:45 AM																	
07:45 AM	0	0	1	1	0	152	33	185	0	0	0	0	81	203	0	284	470
08:00 AM	0	0	0	0	2	135	22	159	0	0	0	0	54	161	0	215	374
08:15 AM	3	0	0	3	1	148	33	182	0	0	0	0	51	164	0	215	400
08:30 AM	1	0	0	1	1	126	23	150	0	0	0	0	57	168	0	225	376
Total Volume	4	0	1	5	4	561	111	676	0	0	0	0	243	696	0	939	1620
% App. Total	80	0	20		0.6	83	16.4		0	0	0		25.9	74.1	0		
PHF	.333	.000	.250	.417	.500	.923	.841	.914	.000	.000	.000	.000	.750	.857	.000	.827	.862



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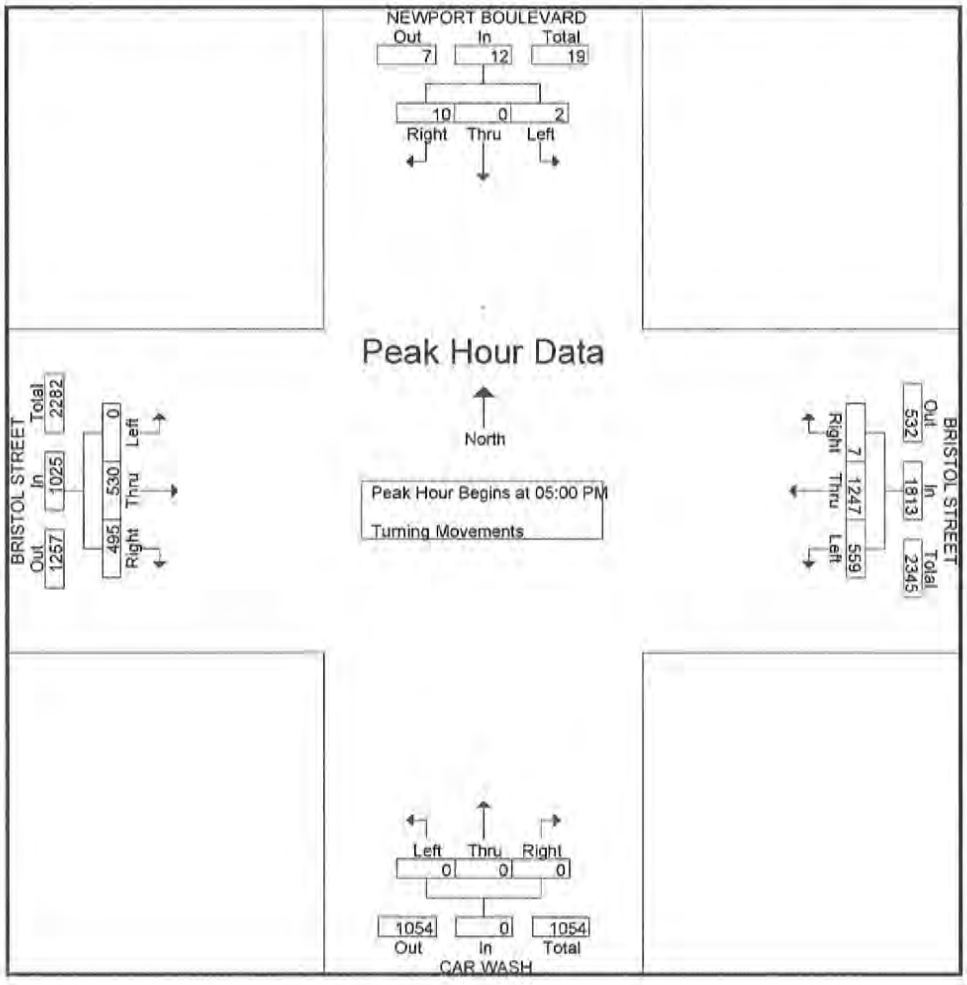
File Name : h1402092
Site Code : 00000000
Start Date : 2/13/2014
Page No : 3

	NEWPORT BOULEVARD Southbound				BRISTOL STREET Westbound				CAR WASH Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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	4	0	0	4	3	320	150	473	0	0	0	0	133	141	0	274	751
05:15 PM	3	0	0	3	2	345	159	506	0	0	0	0	115	131	0	246	755
05:30 PM	1	0	1	2	1	311	138	450	0	0	0	0	116	117	0	233	685
05:45 PM	2	0	1	3	1	271	112	384	0	0	0	0	131	141	0	272	659
Total Volume	10	0	2	12	7	1247	559	1813	0	0	0	0	495	530	0	1025	2850
% App. Total	83.3	0	16.7		0.4	68.8	30.8		0	0	0		48.3	51.7	0		
PHF	.625	.000	.500	.750	.583	.904	.879	.896	.000	.000	.000	.000	.930	.940	.000	.935	.944



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Tustin, CA. 92780

City: COSTA MESA
N-S Direction: NEWPORT BLVD (NB)
E-W Direction: BRISTOL STREET

File Name : h1402093
Site Code : 00000000
Start Date : 2/13/2014
Page No : 1

Groups Printed- Turning Movements

	DEAD END Southbound			BRISTOL STREET Westbound			NEWPORT BOULEVARD Northbound			BRISTOL STREET Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	0	75	0	44	0	33	0	109	0	261
07:15 AM	0	0	0	0	81	0	60	0	42	0	123	0	306
07:30 AM	0	0	0	0	96	0	76	0	44	0	158	0	374
07:45 AM	0	0	0	0	110	0	148	0	74	0	196	0	528
Total	0	0	0	0	362	0	328	0	193	0	586	0	1469
08:00 AM	0	0	0	0	108	0	81	0	58	0	153	0	400
08:15 AM	0	0	0	0	126	0	94	0	57	0	175	0	452
08:30 AM	0	0	0	0	103	0	78	0	41	0	168	0	390
08:45 AM	0	0	0	0	114	0	87	0	56	0	148	0	405
Total	0	0	0	0	451	0	340	0	212	0	644	0	1647
*** BREAK ***													
04:00 PM	0	0	0	0	226	0	38	0	70	0	103	0	437
04:15 PM	0	0	0	0	250	0	43	0	85	0	103	0	481
04:30 PM	0	0	0	0	233	0	58	0	93	0	123	0	507
04:45 PM	0	0	0	0	275	0	43	0	96	0	120	0	534
Total	0	0	0	0	984	0	182	0	344	0	449	0	1959
05:00 PM	0	0	0	0	398	0	46	0	103	0	138	0	685
05:15 PM	0	0	0	0	410	0	32	0	91	0	137	0	670
05:30 PM	0	0	0	0	351	0	56	0	87	0	120	0	614
05:45 PM	0	0	0	0	308	0	42	0	66	0	142	0	558
Total	0	0	0	0	1467	0	176	0	347	0	537	0	2527
Grand Total	0	0	0	0	3264	0	1026	0	1096	0	2216	0	7602
Apprch %	0	0	0	0	100	0	48.4	0	51.6	0	100	0	
Total %	0	0	0	0	42.9	0	13.5	0	14.4	0	29.2	0	

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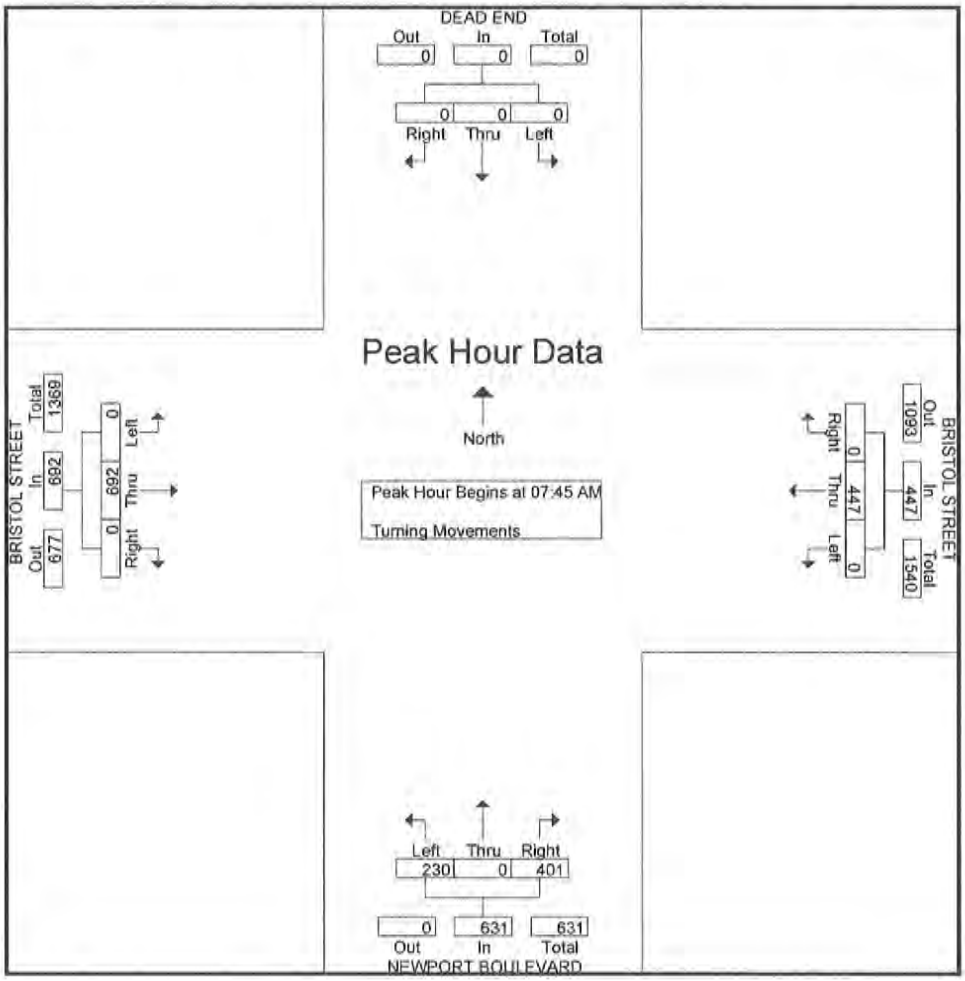
File Name : h1402093
Site Code : 00000000
Start Date : 2/13/2014
Page No : 2

	DEAD END Southbound				BRISTOL STREET Westbound				NEWPORT BOULEVARD Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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 07:45 AM																	
07:45 AM	0	0	0	0	0	110	0	110	**148**	0	**74**	**222**	0	**196**	0	**196**	**528**
08:00 AM	0	0	0	0	0	108	0	108	81	0	58	139	0	153	0	153	400
08:15 AM	0	0	0	0	0	**126**	0	**126**	94	0	57	151	0	175	0	175	452
08:30 AM	0	0	0	0	0	103	0	103	78	0	41	119	0	168	0	168	390
Total Volume	0	0	0	0	0	447	0	447	401	0	230	631	0	692	0	692	1770
% App. Total	0	0	0		0	100	0		63.5	0	36.5		0	100	0		
PHF	.000	.000	.000	.000	.000	.887	.000	.887	.677	.000	.777	.711	.000	.883	.000	.883	.838



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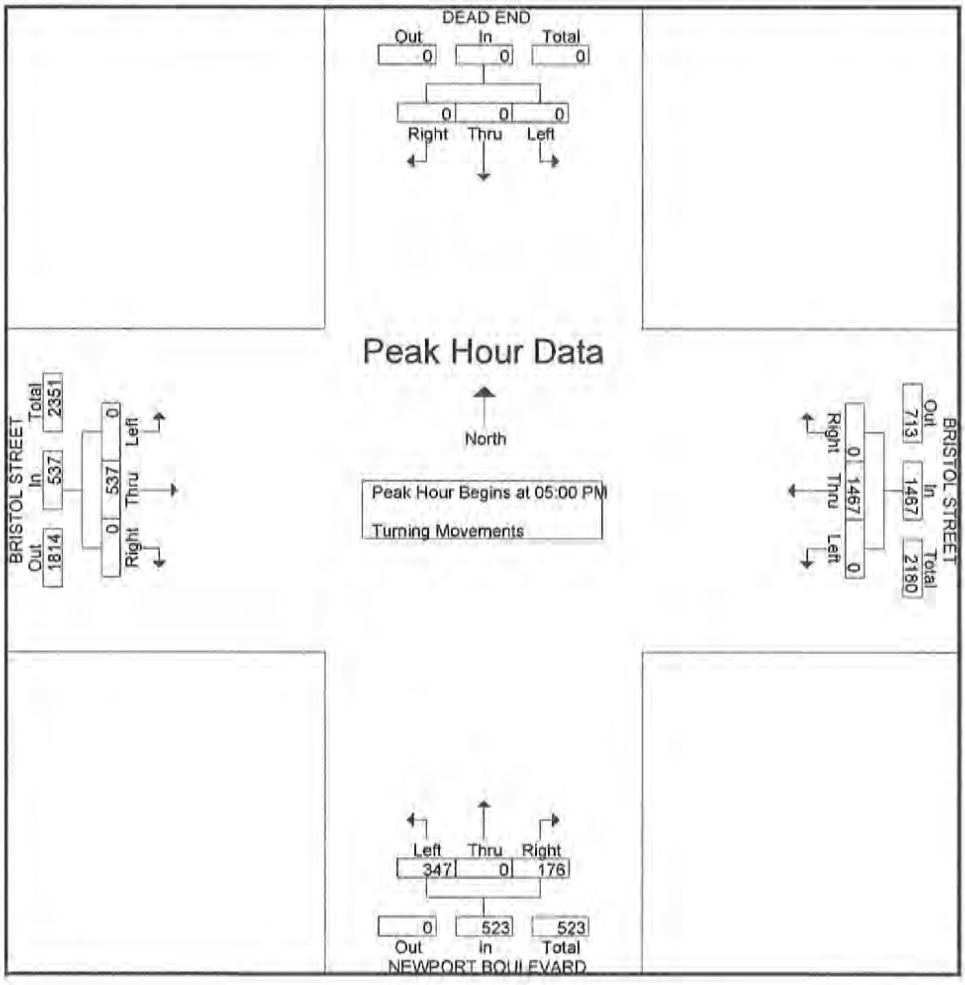
File Name : h1402093
Site Code : 00000000
Start Date : 2/13/2014
Page No : 3

	DEAD END Southbound				BRISTOL STREET Westbound				NEWPORT BOULEVARD Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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	0	0	0	0	0	398	0	398	46	0	**103**	**149**	0	138	0	138	**685**
05:15 PM	0	0	0	0	0	**410**	0	**410**	32	0	91	123	0	137	0	137	670
05:30 PM	0	0	0	0	0	351	0	351	**56**	0	87	143	0	120	0	120	614
05:45 PM	0	0	0	0	0	308	0	308	42	0	66	108	0	**142**	0	**142**	558
Total Volume	0	0	0	0	0	1467	0	1467	176	0	347	523	0	537	0	537	2527
% App. Total	0	0	0		0	100	0		33.7	0	66.3		0	100	0		
PHF	.000	.000	.000	.000	.000	.895	.000	.895	.786	.000	.842	.878	.000	.945	.000	.945	.922



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: REDHILL AVE/SANTA ANA AV
E-W Direction: BRISTOL STREET

File Name : h1402094
Site Code : 00000000
Start Date : 2/13/2014
Page No : 1

Groups Printed- Turning Movements

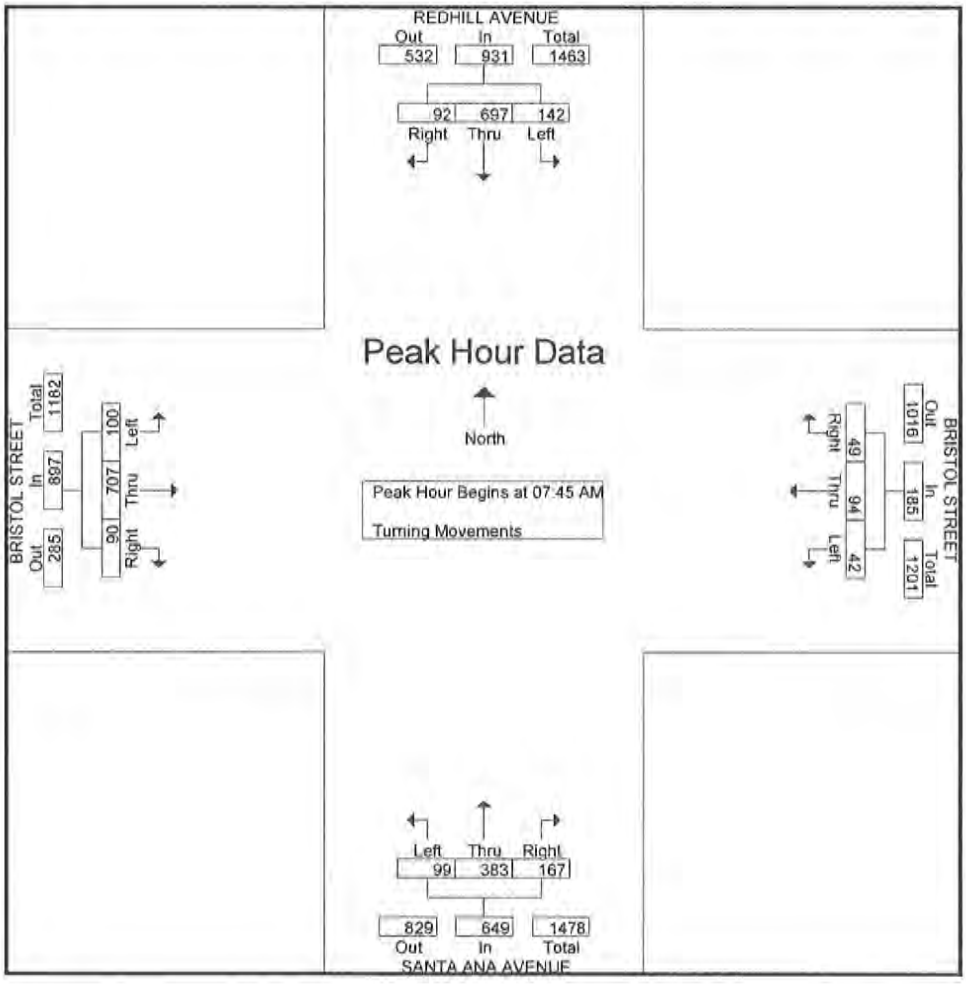
	REDHILL AVENUE Southbound				BRISTOL STREET Westbound				SANTA ANA AVENUE Northbound			BRISTOL STREET Eastbound					
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	10	89	19	2	12	12	5	6	19	41	16	11	86	16	8	336	344
07:15 AM	11	114	22	3	11	22	4	5	29	60	7	11	115	6	8	412	420
07:30 AM	18	135	27	4	7	17	10	4	36	112	16	17	132	15	8	542	550
07:45 AM	27	201	37	6	14	21	12	9	42	116	35	26	199	32	15	762	777
Total	66	539	105	15	44	72	31	24	126	329	74	65	532	69	39	2052	2091
08:00 AM	19	179	34	3	14	20	12	9	45	102	22	19	172	27	12	665	677
08:15 AM	28	153	32	5	11	32	7	11	49	85	22	28	171	22	16	640	656
08:30 AM	18	164	39	2	10	21	11	8	31	80	20	17	165	19	10	595	605
08:45 AM	18	125	26	2	11	28	13	14	35	69	27	19	132	26	16	529	545
Total	83	621	131	12	46	101	43	42	160	336	91	83	640	94	54	2429	2483
*** BREAK ***																	
04:00 PM	26	95	61	0	41	53	20	10	16	39	24	26	105	19	10	525	535
04:15 PM	19	85	77	1	45	56	21	8	19	45	20	19	82	21	9	509	518
04:30 PM	35	109	92	3	60	76	15	13	13	46	21	35	113	22	16	637	653
04:45 PM	37	91	73	5	45	86	31	19	18	38	14	40	111	16	24	600	624
Total	117	380	303	9	191	271	87	50	66	168	79	120	411	78	59	2271	2330
05:00 PM	25	114	95	0	98	102	13	11	21	27	25	39	108	20	11	687	698
05:15 PM	31	91	106	1	79	92	24	22	30	34	27	30	93	25	23	662	685
05:30 PM	35	94	57	0	48	86	28	18	17	29	34	38	112	38	18	616	634
05:45 PM	30	123	77	2	55	64	20	6	14	32	28	37	114	27	8	621	629
Total	121	422	335	3	280	344	85	57	82	122	114	144	427	110	60	2586	2646
Grand Total	387	1962	874	39	561	788	246	173	434	955	358	412	2010	351	212	9338	9550
Apprch %	12	60.9	27.1		35.2	49.4	15.4		24.8	54.7	20.5	14.9	72.5	12.7			
Total %	4.1	21	9.4		6	8.4	2.6		4.6	10.2	3.8	4.4	21.5	3.8	2.2	97.8	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: REDHILL AVE/SANTA ANA AV
E-W Direction: BRISTOL STREET

File Name : h1402094
Site Code : 00000000
Start Date : 2/13/2014
Page No : 2

	REDHILL AVENUE Southbound				BRISTOL STREET Westbound				SANTA ANA AVENUE Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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 07:45 AM																	
07:45 AM	27	**201**	37	**265**	**14**	21	**12**	**47**	42	**116**	**35**	**193**	26	**199**	32	**257**	**762**
08:00 AM	19	179	34	232	14	20	12	46	45	102	22	169	19	172	27	218	665
08:15 AM	**28**	153	32	213	11	**32**	7	**50**	**49**	85	22	156	**28**	171	22	221	640
08:30 AM	18	164	**39**	221	10	21	11	42	31	80	20	131	17	165	19	201	595
Total Volume	92	697	142	931	49	94	42	185	167	383	99	649	90	707	100	897	2662
% App. Total	9.9	74.9	15.3		26.5	50.8	22.7		25.7	59	15.3		10	78.8	11.1		
PHF	.821	.867	.910	.878	.875	.734	.875	.925	.852	.825	.707	.841	.804	.888	.781	.873	.873

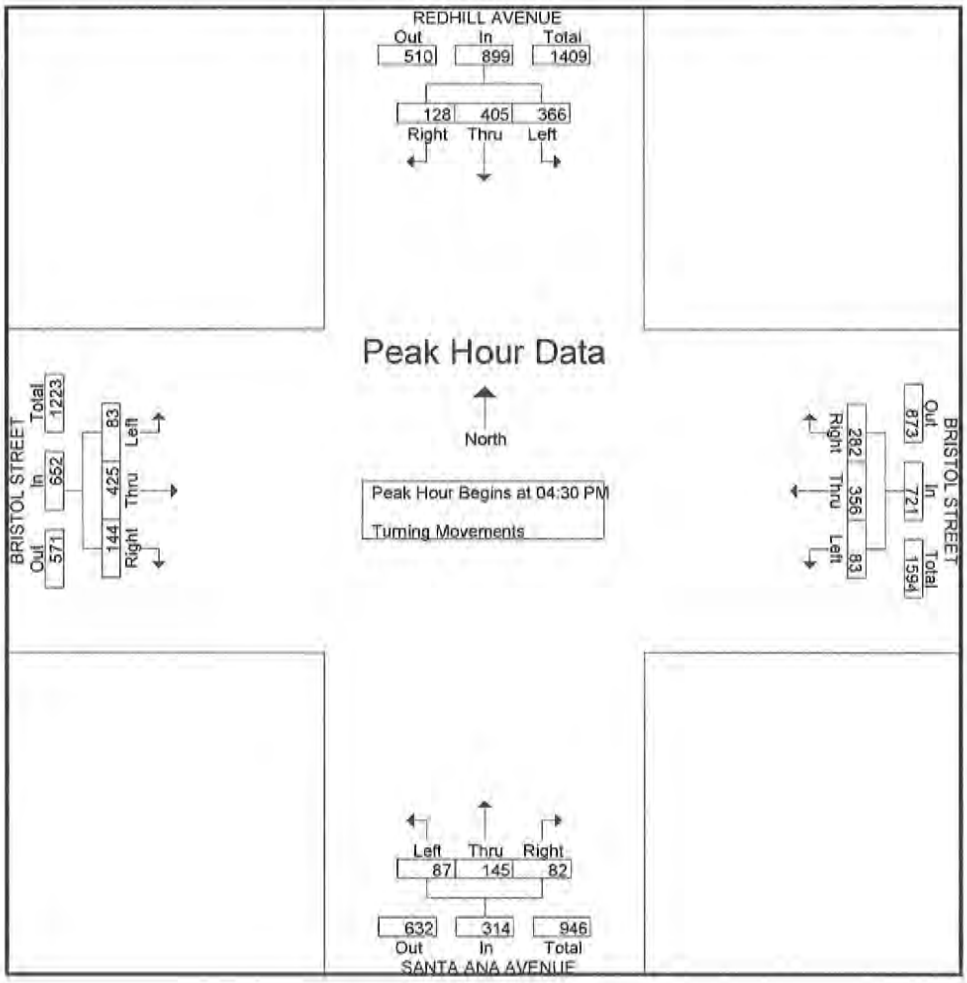


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: REDHILL AVE/SANTA ANA AV
E-W Direction: BRISTOL STREET

File Name : h1402094
Site Code : 00000000
Start Date : 2/13/2014
Page No : 3

	REDHILL AVENUE Southbound				BRISTOL STREET Westbound				SANTA ANA AVENUE Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	35	109	92	**236**	60	76	15	151	13	**46**	21	80	35	**113**	22	**170**	637
04:45 PM	**37**	91	73	201	45	86	**31**	162	18	38	14	70	**40**	111	16	167	600
05:00 PM	25	**114**	95	234	**98**	**102**	13	**213**	21	27	25	73	39	108	20	167	**687**
05:15 PM	31	91	**106**	228	79	92	24	195	**30**	34	**27**	**91**	30	93	**25**	148	662
Total Volume	128	405	366	899	282	356	83	721	82	145	87	314	144	425	83	652	2586
% App. Total	14.2	45.1	40.7		39.1	49.4	11.5		26.1	46.2	27.7		22.1	65.2	12.7		
PHF	.865	.888	.863	.952	.719	.873	.669	.846	.683	.788	.806	.863	.900	.940	.830	.959	.941



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: GANAHL LUMBER WEST DRIVE
E-W Direction: BRISTOL STREET

File Name : H1402118
Site Code : 00000000
Start Date : 2/20/2014
Page No : 1

Groups Printed- Turning Movements

	DRIVEWAY Southbound			BRISTOL STREET Westbound			DEAD END Northbound			BRISTOL STREET Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	2	0	0	1	0	0	0	0	0	0	0	3	6
07:15 AM	3	0	0	1	0	0	0	0	0	0	0	0	4
07:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	1	0	1	1	0	0	0	0	0	0	0	1	4
Total	6	0	1	4	0	0	0	0	0	0	0	4	15
08:00 AM	1	0	1	0	0	0	0	0	0	0	0	2	4
08:15 AM	2	0	1	0	0	0	0	0	0	0	0	2	5
08:30 AM	3	0	0	0	0	0	0	0	0	0	0	4	7
08:45 AM	2	0	0	1	0	0	0	0	0	0	0	3	6
Total	8	0	2	1	0	0	0	0	0	0	0	11	22
*** BREAK ***													
04:00 PM	8	0	1	1	0	0	0	0	0	0	0	3	13
04:15 PM	7	0	0	1	0	0	0	0	0	0	0	2	10
04:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	4	0	0	0	0	0	0	0	0	0	0	0	4
Total	20	0	1	3	0	0	0	0	0	0	0	5	29
05:00 PM	3	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	3	0	0	1	0	0	0	0	0	0	0	0	4
05:30 PM	2	0	1	2	0	0	0	0	0	0	0	0	5
05:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	9	0	1	3	0	0	0	0	0	0	0	0	13
Grand Total	43	0	5	11	0	0	0	0	0	0	0	20	79
Apprch %	89.6	0	10.4	100	0	0	0	0	0	0	0	100	
Total %	54.4	0	6.3	13.9	0	0	0	0	0	0	0	25.3	

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2640 Walnut Avenue, Suite H
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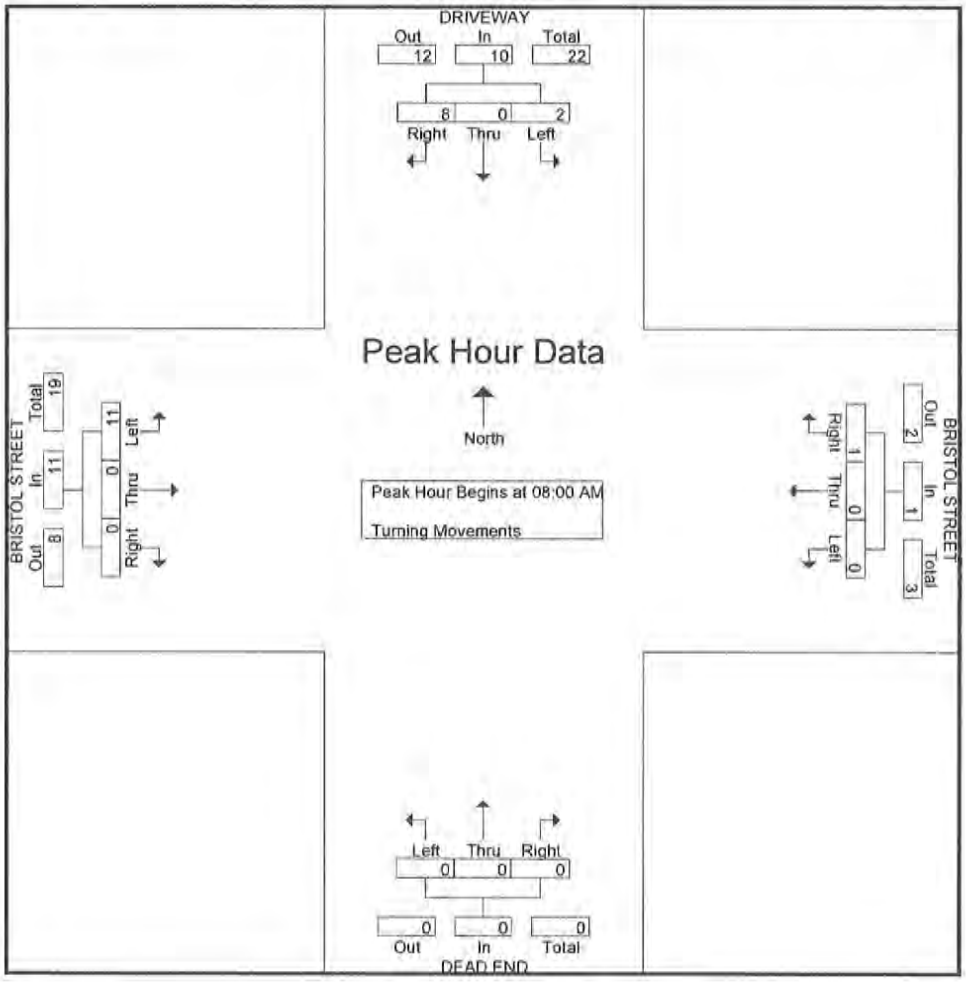
City: COSTA MESA
N-S Direction: GANAHL LUMBER WEST DRIVE
E-W Direction: BRISTOL STREET

File Name : H1402118
Site Code : 00000000
Start Date : 2/20/2014
Page No : 2

	DRIVEWAY Southbound				BRISTOL STREET Westbound				DEAD END Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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 08:00 AM																	
08:00 AM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	2	2	4
08:15 AM	2	0	1	3	0	0	0	0	0	0	0	0	0	0	2	2	5
08:30 AM	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	4	7
08:45 AM	2	0	0	2	1	0	0	1	0	0	0	0	0	0	3	3	6
Total Volume	8	0	2	10	1	0	0	1	0	0	0	0	0	0	11	11	22
% App. Total	80	0	20		100	0	0		0	0	0		0	0	100		
PHF	.667	.000	.500	.833	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.688	.688	.786

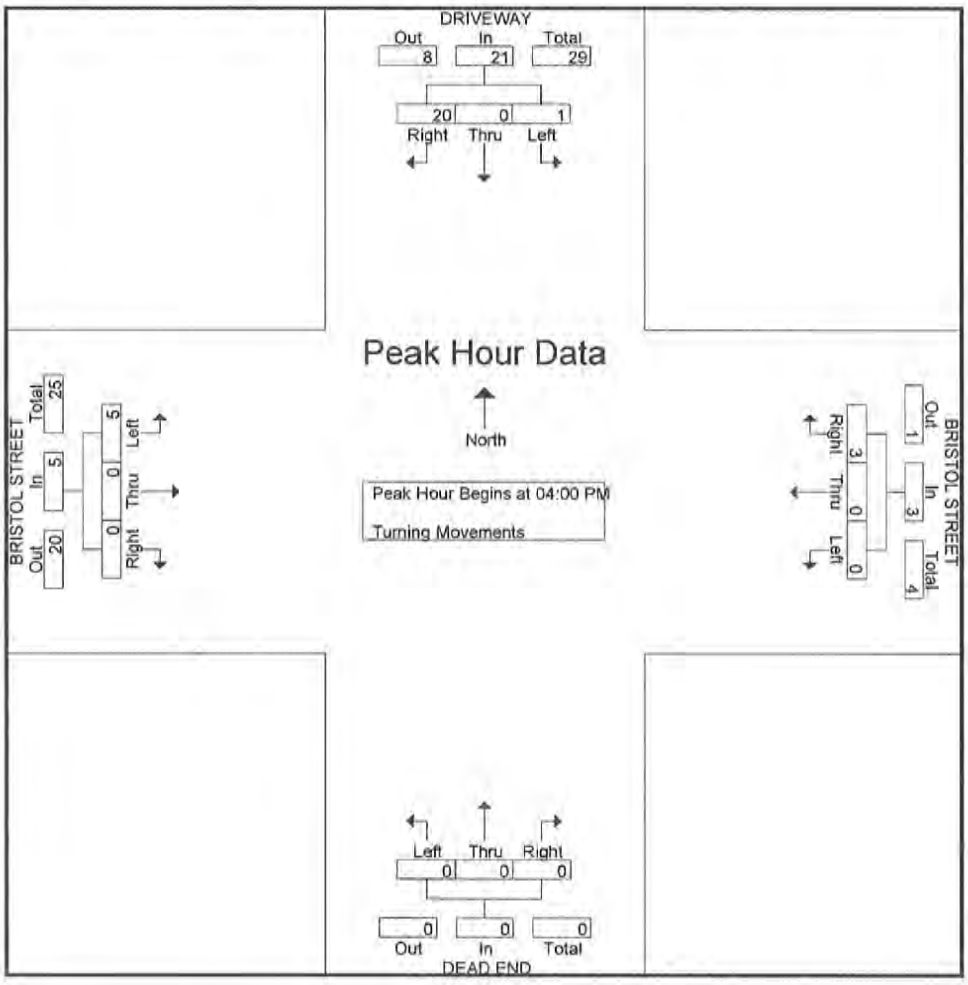


Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: GANAHL LUMBER WEST DRIVE
E-W Direction: BRISTOL STREET

File Name : H1402118
Site Code : 00000000
Start Date : 2/20/2014
Page No : 3

	DRIVEWAY Southbound				BRISTOL STREET Westbound				DEAD END Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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	8	0	1	9	1	0	0	1	0	0	0	0	0	0	3	3	13
04:15 PM	7	0	0	7	1	0	0	1	0	0	0	0	0	0	2	2	10
04:30 PM	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	20	0	1	21	3	0	0	3	0	0	0	0	0	0	5	5	29
% App. Total	95.2	0	4.8		100	0	0		0	0	0		0	0	100		
PHF	.625	.000	.250	.583	.750	.000	.000	.750	.000	.000	.000	.000	.000	.000	.417	.417	.558



Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: GANAHL LUMBER EAST DRIVE
E-W Direction: BRISTOL STREET

File Name : H1402119
Site Code : 00000000
Start Date : 2/20/2014
Page No : 1

Groups Printed- Turning Movements

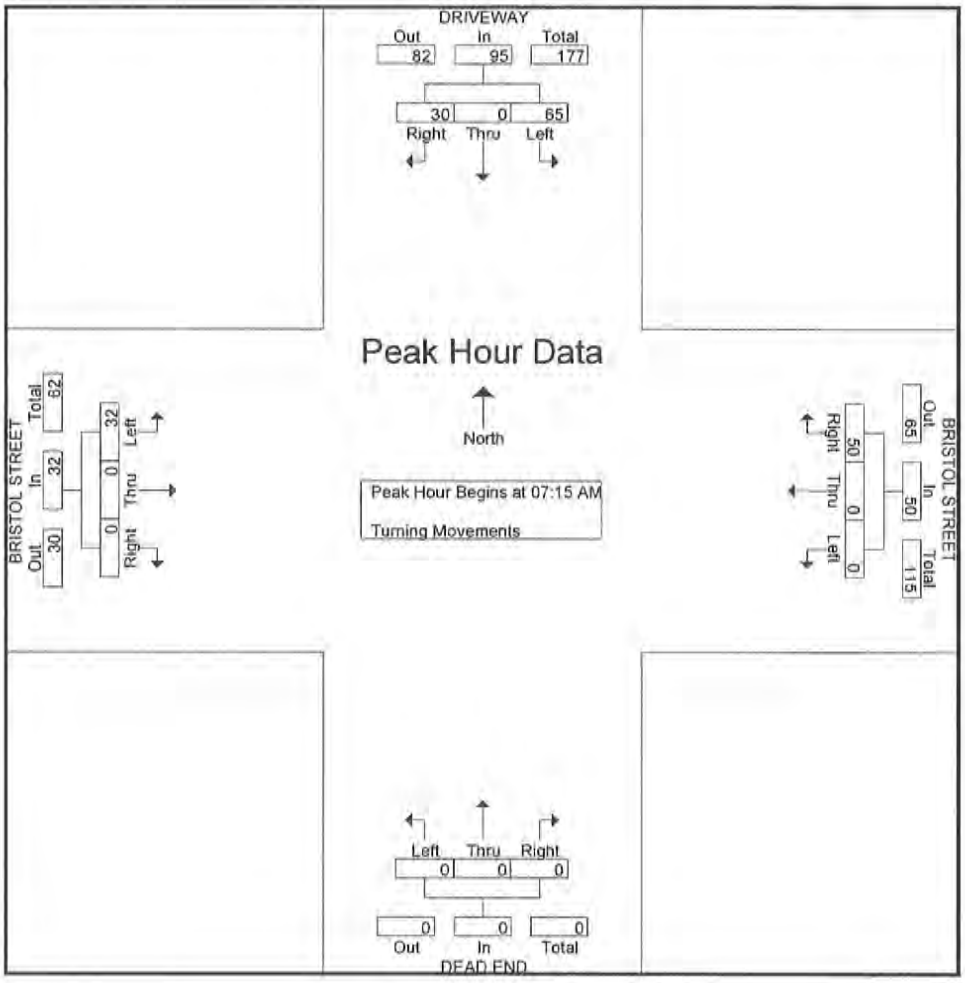
	DRIVEWAY Southbound			BRISTOL STREET Westbound			DEAD END Northbound			BRISTOL STREET Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	9	0	12	13	0	0	0	0	0	0	0	15	49
07:15 AM	7	0	13	12	0	0	0	0	0	0	0	8	40
07:30 AM	10	0	14	14	0	0	0	0	0	0	0	9	47
07:45 AM	6	0	16	9	0	0	0	0	0	0	0	7	38
Total	32	0	55	48	0	0	0	0	0	0	0	39	174
08:00 AM	7	0	22	15	0	0	0	0	0	0	0	8	52
08:15 AM	2	0	12	9	0	0	0	0	0	0	0	9	32
08:30 AM	3	0	10	9	0	0	0	0	0	0	0	7	29
08:45 AM	9	0	16	12	0	0	0	0	0	0	0	6	43
Total	21	0	60	45	0	0	0	0	0	0	0	30	156
*** BREAK ***													
04:00 PM	5	0	7	7	0	0	0	0	0	0	0	4	23
04:15 PM	6	0	10	2	0	0	0	0	0	0	0	2	20
04:30 PM	4	0	7	7	0	0	0	0	0	0	0	4	22
04:45 PM	3	0	10	7	0	0	0	0	0	0	0	8	28
Total	18	0	34	23	0	0	0	0	0	0	0	18	93
05:00 PM	4	0	3	4	0	0	0	0	0	0	0	4	15
05:15 PM	3	0	6	2	0	0	0	0	0	0	0	1	12
05:30 PM	3	0	5	2	0	0	0	0	0	0	0	3	13
05:45 PM	4	0	4	2	0	0	0	0	0	0	0	2	12
Total	14	0	18	10	0	0	0	0	0	0	0	10	52
Grand Total	85	0	167	126	0	0	0	0	0	0	0	97	475
Apprch %	33.7	0	66.3	100	0	0	0	0	0	0	0	100	
Total %	17.9	0	35.2	26.5	0	0	0	0	0	0	0	20.4	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite H
Tustin, CA. 92780

City: COSTA MESA
N-S Direction: GANAHL LUMBER EAST DRIVE
E-W Direction: BRISTOL STREET

File Name : H1402119
Site Code : 00000000
Start Date : 2/20/2014
Page No : 2

	DRIVEWAY Southbound				BRISTOL STREET Westbound				DEAD END Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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	7	0	13	20	12	0	0	12	0	0	0	0	0	0	8	8	40
07:30 AM	**10**	0	14	24	14	0	0	14	0	0	0	0	0	0	**9**	**9**	47
07:45 AM	6	0	16	22	9	0	0	9	0	0	0	0	0	0	7	7	38
08:00 AM	7	0	**22**	**29**	**15**	0	0	**15**	0	0	0	0	0	0	8	8	**52**
Total Volume	30	0	65	95	50	0	0	50	0	0	0	0	0	0	32	32	177
% App. Total	31.6	0	68.4		100	0	0		0	0	0		0	0	100		
PHF	.750	.000	.739	.819	.833	.000	.000	.833	.000	.000	.000	.000	.000	.000	.889	.889	.851



Transportation Studies, Inc.
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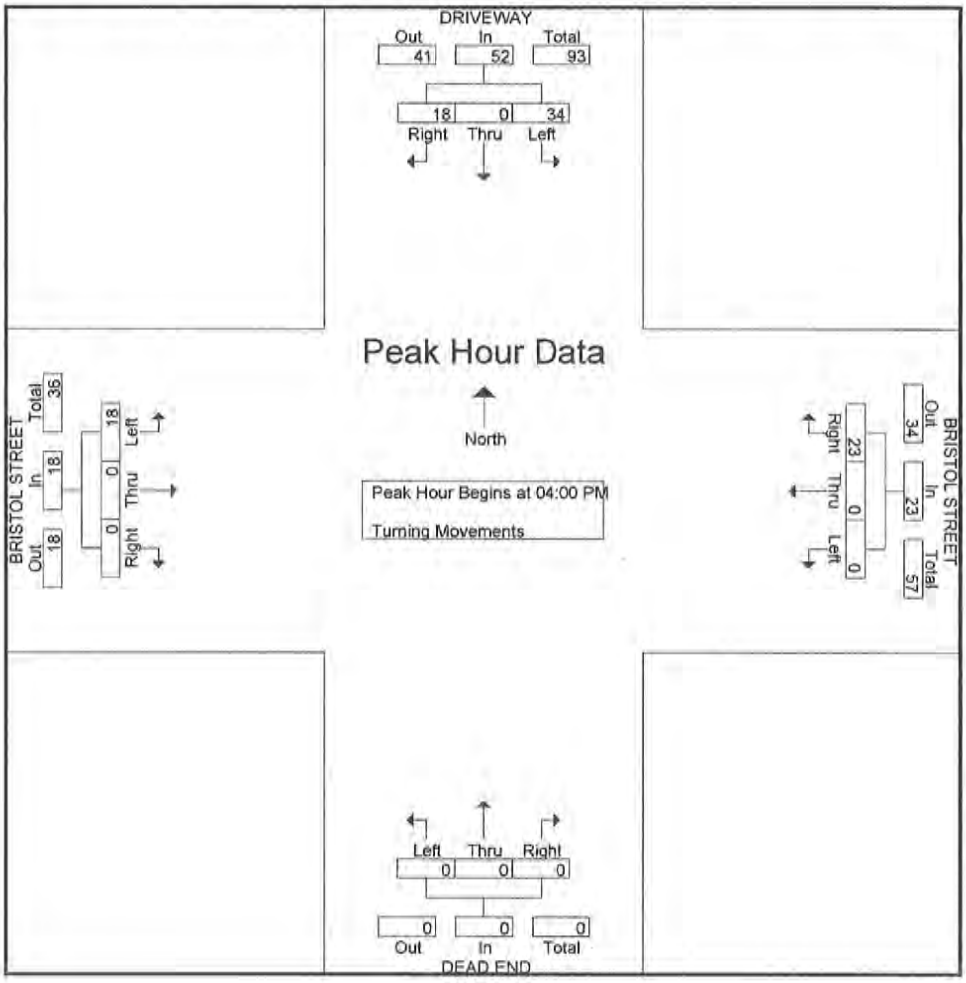
City: COSTA MESA
N-S Direction: GANAHL LUMBER EAST DRIVE
E-W Direction: BRISTOL STREET

File Name : H1402119
Site Code : 00000000
Start Date : 2/20/2014
Page No : 3

	DRIVEWAY Southbound				BRISTOL STREET Westbound				DEAD END Northbound				BRISTOL STREET Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	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	5	0	7	12	7	0	0	7	0	0	0	0	0	0	4	4	23
04:15 PM	6	0	10	16	2	0	0	2	0	0	0	0	0	0	2	2	20
04:30 PM	4	0	7	11	7	0	0	7	0	0	0	0	0	0	4	4	22
04:45 PM	3	0	10	13	7	0	0	7	0	0	0	0	0	0	8	8	28
Total Volume	18	0	34	52	23	0	0	23	0	0	0	0	0	0	18	18	93
% App. Total	34.6	0	65.4		100	0	0		0	0	0		0	0	100		
PHF	.750	.000	.850	.813	.821	.000	.000	.821	.000	.000	.000	.000	.000	.000	.563	.563	.830



APPENDIX B-II

EXISTING TRIP GENERATION COUNTS

(COSTA MESA)

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	1	0
5:45 AM	7	1
6:00 AM	6	4
6:15 AM	17	4
6:30 AM	10	12
6:45 AM	19	9
7:00 AM	21	22
7:15 AM	34	25
7:30 AM	18	22
7:45 AM	12	23
8:00 AM	22	14
8:15 AM	12	13
8:30 AM	17	16
8:45 AM	29	22
9:00 AM	27	26
9:15 AM	23	23
9:30 AM	26	20
9:45 AM	22	31
10:00 AM	24	25
10:15 AM	24	22
10:30 AM	23	27
10:45 AM	17	22
11:00 AM	20	14
11:15 AM	24	25
11:30 AM	26	22
11:45 AM	14	20
12:00 PM	29	14
12:15 PM	22	22
12:30 PM	24	23

12:45 PM	18	22
1:00 PM	22	14
1:15 PM	21	24
1:30 PM	21	24
1:45 PM	17	23
2:00 PM	24	17
2:15 PM	14	17
2:30 PM	22	20
2:45 PM	15	21
3:00 PM	15	16
3:15 PM	14	12
3:30 PM	13	16
3:45 PM	16	16
4:00 PM	13	15
4:15 PM	6	14
4:30 PM	11	6
4:45 PM	8	10
5:00 PM	6	8
5:15 PM	7	6
5:30 PM	10	9
5:45 PM	2	7
6:00 PM	6	5
6:15 PM	3	4
6:30 PM	5	6
6:45 PM	2	2

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	1	0
6:15 AM	0	0
6:30 AM	0	1
6:45 AM	0	1
7:00 AM	1	0
7:15 AM	2	0
7:30 AM	1	0
7:45 AM	0	2
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	2	0
8:45 AM	2	1
9:00 AM	1	1
9:15 AM	1	0
9:30 AM	4	0
9:45 AM	2	2
10:00 AM	1	0
10:15 AM	1	0
10:30 AM	1	1
10:45 AM	0	2
11:00 AM	5	1
11:15 AM	1	1
11:30 AM	1	1
11:45 AM	1	0
12:00 PM	3	0
12:15 PM	0	2
12:30 PM	2	1

12:45 PM	0	0
1:00 PM	1	0
1:15 PM	0	0
1:30 PM	4	0
1:45 PM	2	1
2:00 PM	1	1
2:15 PM	0	0
2:30 PM	1	0
2:45 PM	0	1
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	1	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	1	0
4:30 PM	0	1
4:45 PM	1	0
5:00 PM	1	1
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	2	0
6:00 AM	0	0
6:15 AM	1	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	1	0
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	1	0
9:00 AM	1	0
9:15 AM	1	0
9:30 AM	1	0
9:45 AM	1	0
10:00 AM	0	0
10:15 AM	1	0
10:30 AM	1	0
10:45 AM	0	0
11:00 AM	2	0
11:15 AM	0	0
11:30 AM	0	0
11:45 AM	0	0
12:00 PM	1	0
12:15 PM	2	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	1	0
1:15 PM	1	0
1:30 PM	0	1
1:45 PM	1	0
2:00 PM	0	0
2:15 PM	1	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	1	0
5:30 AM	4	0
5:45 AM	9	0
6:00 AM	8	5
6:15 AM	13	10
6:30 AM	23	10
6:45 AM	16	20
7:00 AM	13	16
7:15 AM	23	19
7:30 AM	26	17
7:45 AM	29	23
8:00 AM	23	22
8:15 AM	23	22
8:30 AM	15	21
8:45 AM	32	21
9:00 AM	34	25
9:15 AM	27	24
9:30 AM	30	26
9:45 AM	26	29
10:00 AM	22	27
10:15 AM	21	19
10:30 AM	29	16
10:45 AM	32	31
11:00 AM	25	33
11:15 AM	17	26
11:30 AM	20	29
11:45 AM	22	18
12:00 PM	11	18
12:15 PM	29	25
12:30 PM	22	18

12:45 PM	26	27
1:00 PM	27	21
1:15 PM	30	26
1:30 PM	20	25
1:45 PM	22	17
2:00 PM	18	23
2:15 PM	17	17
2:30 PM	13	19
2:45 PM	17	14
3:00 PM	15	16
3:15 PM	15	13
3:30 PM	15	8
3:45 PM	13	16
4:00 PM	7	9
4:15 PM	12	9
4:30 PM	10	6
4:45 PM	10	6
5:00 PM	9	16
5:15 PM	7	8
5:30 PM	7	8
5:45 PM	3	6
6:00 PM	4	11
6:15 PM	3	5
6:30 PM	4	1
6:45 PM	2	3

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	1	0
6:15 AM	0	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	1	0
7:45 AM	1	0
8:00 AM	5	1
8:15 AM	3	2
8:30 AM	2	1
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	2	1
9:30 AM	0	0
9:45 AM	0	1
10:00 AM	4	0
10:15 AM	1	1
10:30 AM	1	0
10:45 AM	2	2
11:00 AM	1	0
11:15 AM	0	1
11:30 AM	1	0
11:45 AM	1	0
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	2	0
1:00 PM	0	1
1:15 PM	1	0
1:30 PM	1	0
1:45 PM	1	1
2:00 PM	1	0
2:15 PM	0	0
2:30 PM	1	1
2:45 PM	0	0
3:00 PM	1	0
3:15 PM	1	0
3:30 PM	1	0
3:45 PM	1	0
4:00 PM	0	0
4:15 PM	0	1
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	1	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	1	0
7:30 AM	1	0
7:45 AM	1	0
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	0	0
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	1	0
9:30 AM	1	0
9:45 AM	2	0
10:00 AM	1	0
10:15 AM	1	0
10:30 AM	1	0
10:45 AM	1	0
11:00 AM	0	0
11:15 AM	1	0
11:30 AM	0	0
11:45 AM	0	0
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	1	0
1:15 PM	0	0
1:30 PM	1	0
1:45 PM	0	0
2:00 PM	1	0
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	1	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHAL LUMBER EAST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	4	0
5:45 AM	7	2
6:00 AM	10	3
6:15 AM	14	12
6:30 AM	16	13
6:45 AM	26	19
7:00 AM	19	13
7:15 AM	26	23
7:30 AM	20	23
7:45 AM	14	23
8:00 AM	27	17
8:15 AM	19	27
8:30 AM	17	14
8:45 AM	26	18
9:00 AM	20	21
9:15 AM	23	19
9:30 AM	12	22
9:45 AM	29	25
10:00 AM	21	20
10:15 AM	15	27
10:30 AM	24	14
10:45 AM	21	21
11:00 AM	24	18
11:15 AM	25	23
11:30 AM	26	22
11:45 AM	17	19
12:00 PM	19	20
12:15 PM	33	20
12:30 PM	19	23

12:45 PM	24	19
1:00 PM	20	28
1:15 PM	20	18
1:30 PM	16	15
1:45 PM	17	24
2:00 PM	25	25
2:15 PM	20	22
2:30 PM	18	14
2:45 PM	13	20
3:00 PM	14	16
3:15 PM	16	14
3:30 PM	16	11
3:45 PM	16	17
4:00 PM	12	16
4:15 PM	18	18
4:30 PM	15	13
4:45 PM	10	10
5:00 PM	4	10
5:15 PM	10	6
5:30 PM	12	12
5:45 PM	4	7
6:00 PM	3	9
6:15 PM	4	7
6:30 PM	2	2
6:45 PM	0	1

Study Name GANAHAL LUMBER EAST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	1	0
6:15 AM	0	0
6:30 AM	1	2
6:45 AM	0	0
7:00 AM	2	0
7:15 AM	0	1
7:30 AM	0	2
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	0	0
8:45 AM	2	1
9:00 AM	3	0
9:15 AM	0	0
9:30 AM	0	0
9:45 AM	0	0
10:00 AM	0	2
10:15 AM	3	0
10:30 AM	1	0
10:45 AM	2	3
11:00 AM	2	0
11:15 AM	1	0
11:30 AM	1	0
11:45 AM	0	0
12:00 PM	1	0
12:15 PM	3	0
12:30 PM	1	1

12:45 PM	2	0
1:00 PM	1	1
1:15 PM	2	1
1:30 PM	1	1
1:45 PM	2	1
2:00 PM	0	1
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	1	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	4	0
4:15 PM	0	0
4:30 PM	1	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHAL LUMBER EAST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	1	0
6:30 AM	1	0
6:45 AM	0	0
7:00 AM	2	0
7:15 AM	0	0
7:30 AM	1	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	1	0
8:45 AM	1	0
9:00 AM	1	0
9:15 AM	0	0
9:30 AM	0	0
9:45 AM	0	0
10:00 AM	0	0
10:15 AM	1	0
10:30 AM	0	0
10:45 AM	2	0
11:00 AM	0	0
11:15 AM	0	0
11:30 AM	1	0
11:45 AM	0	0
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	0
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	3	0
5:15 AM	2	0
5:30 AM	2	0
5:45 AM	9	0
6:00 AM	4	0
6:15 AM	2	0
6:30 AM	2	1
6:45 AM	3	1
7:00 AM	2	0
7:15 AM	3	2
7:30 AM	2	1
7:45 AM	0	1
8:00 AM	3	1
8:15 AM	3	1
8:30 AM	3	2
8:45 AM	5	2
9:00 AM	4	3
9:15 AM	5	5
9:30 AM	3	2
9:45 AM	4	0
10:00 AM	0	1
10:15 AM	2	3
10:30 AM	1	2
10:45 AM	0	4
11:00 AM	2	4
11:15 AM	6	2
11:30 AM	2	3
11:45 AM	3	3
12:00 PM	1	3
12:15 PM	0	5
12:30 PM	0	3

12:45 PM	2	1
1:00 PM	4	4
1:15 PM	6	4
1:30 PM	2	1
1:45 PM	4	4
2:00 PM	3	4
2:15 PM	4	4
2:30 PM	1	10
2:45 PM	0	6
3:00 PM	2	8
3:15 PM	1	2
3:30 PM	2	4
3:45 PM	3	3
4:00 PM	2	5
4:15 PM	2	2
4:30 PM	0	5
4:45 PM	2	3
5:00 PM	2	5
5:15 PM	0	4
5:30 PM	2	3
5:45 PM	0	0
6:00 PM	0	5
6:15 PM	0	3
6:30 PM	1	1
6:45 PM	0	1

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	2
6:30 AM	0	0
6:45 AM	0	1
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	0	1
9:00 AM	0	1
9:15 AM	0	2
9:30 AM	0	1
9:45 AM	0	0
10:00 AM	0	2
10:15 AM	0	0
10:30 AM	1	0
10:45 AM	0	1
11:00 AM	0	0
11:15 AM	0	3
11:30 AM	0	0
11:45 AM	1	0
12:00 PM	0	0
12:15 PM	0	2
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	1
1:15 PM	0	2
1:30 PM	0	1
1:45 PM	0	1
2:00 PM	0	0
2:15 PM	0	1
2:30 PM	0	2
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	1
6:30 AM	0	1
6:45 AM	0	1
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	1
8:30 AM	0	0
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	0	1
9:30 AM	0	1
9:45 AM	0	1
10:00 AM	0	2
10:15 AM	0	0
10:30 AM	0	1
10:45 AM	0	1
11:00 AM	0	0
11:15 AM	0	1
11:30 AM	0	0
11:45 AM	0	1
12:00 PM	0	0
12:15 PM	0	1
12:30 PM	0	1

12:45 PM	0	0
1:00 PM	0	1
1:15 PM	0	0
1:30 PM	0	1
1:45 PM	0	0
2:00 PM	0	0
2:15 PM	0	1
2:30 PM	0	0
2:45 PM	0	1
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	1	0
5:15 AM	3	0
5:30 AM	1	0
5:45 AM	11	0
6:00 AM	3	1
6:15 AM	4	0
6:30 AM	2	1
6:45 AM	3	2
7:00 AM	2	1
7:15 AM	0	0
7:30 AM	1	1
7:45 AM	2	2
8:00 AM	4	3
8:15 AM	1	3
8:30 AM	2	3
8:45 AM	1	2
9:00 AM	1	2
9:15 AM	3	2
9:30 AM	4	4
9:45 AM	2	2
10:00 AM	1	1
10:15 AM	6	1
10:30 AM	1	4
10:45 AM	2	1
11:00 AM	3	6
11:15 AM	1	2
11:30 AM	6	1
11:45 AM	3	4
12:00 PM	3	5
12:15 PM	5	2
12:30 PM	4	2

12:45 PM	4	5
1:00 PM	6	5
1:15 PM	4	4
1:30 PM	4	2
1:45 PM	1	3
2:00 PM	1	9
2:15 PM	6	4
2:30 PM	1	12
2:45 PM	2	10
3:00 PM	0	7
3:15 PM	2	3
3:30 PM	1	6
3:45 PM	2	3
4:00 PM	1	10
4:15 PM	1	6
4:30 PM	1	5
4:45 PM	1	5
5:00 PM	2	5
5:15 PM	3	8
5:30 PM	0	3
5:45 PM	0	1
6:00 PM	1	8
6:15 PM	0	4
6:30 PM	1	2
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	3
6:30 AM	0	1
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	2
8:30 AM	0	1
8:45 AM	0	4
9:00 AM	0	1
9:15 AM	0	3
9:30 AM	0	1
9:45 AM	0	0
10:00 AM	0	0
10:15 AM	0	2
10:30 AM	0	1
10:45 AM	0	0
11:00 AM	1	1
11:15 AM	0	2
11:30 AM	0	0
11:45 AM	1	2
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	1
1:00 PM	0	0
1:15 PM	0	1
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	1
2:15 PM	0	3
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	1
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	2
8:15 AM	0	0
8:30 AM	0	1
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	0	0
9:30 AM	0	0
9:45 AM	0	1
10:00 AM	0	1
10:15 AM	0	1
10:30 AM	0	3
10:45 AM	0	0
11:00 AM	0	1
11:15 AM	0	0
11:30 AM	0	0
11:45 AM	0	1
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	2
2:15 PM	0	0
2:30 PM	0	1
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	1
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	2	0
5:15 AM	3	0
5:30 AM	2	0
5:45 AM	12	0
6:00 AM	4	0
6:15 AM	4	0
6:30 AM	2	1
6:45 AM	3	1
7:00 AM	2	0
7:15 AM	0	0
7:30 AM	3	1
7:45 AM	3	2
8:00 AM	4	1
8:15 AM	3	1
8:30 AM	1	2
8:45 AM	6	4
9:00 AM	0	3
9:15 AM	8	0
9:30 AM	5	2
9:45 AM	3	2
10:00 AM	3	6
10:15 AM	4	2
10:30 AM	2	5
10:45 AM	2	2
11:00 AM	1	3
11:15 AM	4	5
11:30 AM	0	7
11:45 AM	2	7
12:00 PM	2	2
12:15 PM	0	6
12:30 PM	4	3

12:45 PM	5	1
1:00 PM	1	2
1:15 PM	0	1
1:30 PM	8	1
1:45 PM	1	4
2:00 PM	3	4
2:15 PM	2	5
2:30 PM	1	8
2:45 PM	3	6
3:00 PM	0	3
3:15 PM	2	5
3:30 PM	4	4
3:45 PM	4	5
4:00 PM	2	6
4:15 PM	0	3
4:30 PM	2	11
4:45 PM	1	3
5:00 PM	1	3
5:15 PM	2	4
5:30 PM	2	5
5:45 PM	0	2
6:00 PM	0	4
6:15 PM	3	7
6:30 PM	0	2
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	1
6:15 AM	0	2
6:30 AM	0	1
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	1
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	1	1
9:00 AM	0	0
9:15 AM	0	1
9:30 AM	0	2
9:45 AM	1	1
10:00 AM	0	1
10:15 AM	0	1
10:30 AM	0	2
10:45 AM	0	0
11:00 AM	0	1
11:15 AM	0	0
11:30 AM	0	1
11:45 AM	1	3
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	1

12:45 PM	1	2
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	1
2:00 PM	0	1
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	2
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	0
6:30 AM	0	0
6:45 AM	0	1
7:00 AM	0	1
7:15 AM	0	1
7:30 AM	0	1
7:45 AM	0	0
8:00 AM	0	1
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	0	0
9:00 AM	0	2
9:15 AM	0	0
9:30 AM	0	1
9:45 AM	0	0
10:00 AM	0	1
10:15 AM	0	0
10:30 AM	0	0
10:45 AM	0	1
11:00 AM	0	0
11:15 AM	0	1
11:30 AM	0	1
11:45 AM	0	1
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	0
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

APPENDIX B-III

EXISTING TRIP GENERATION COUNTS

(ANAHEIM)

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

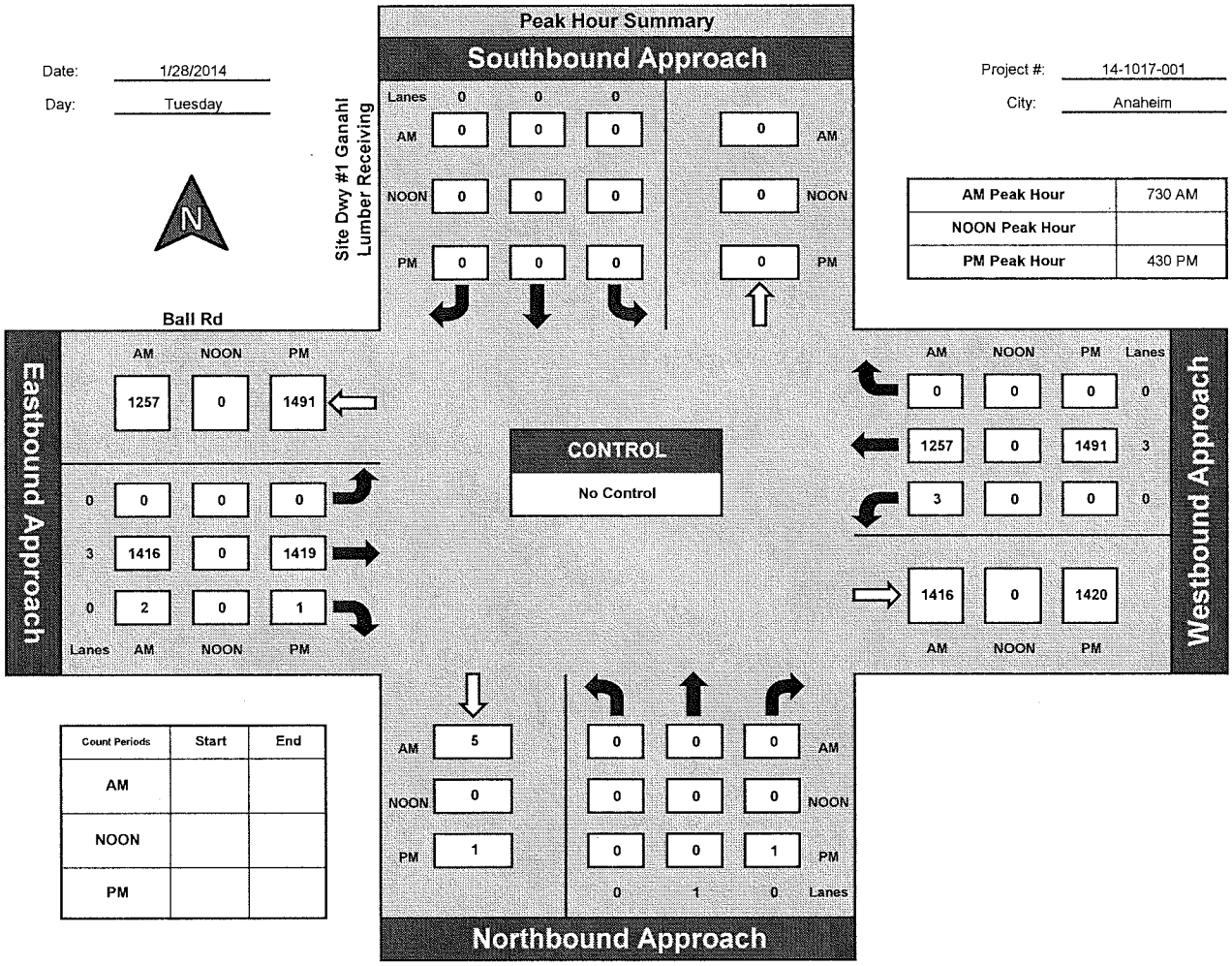
Site Dwy #1 Ganahl Lumber Receiving and Ball Rd , Anaheim

Date: 1/28/2014

Day: Tuesday

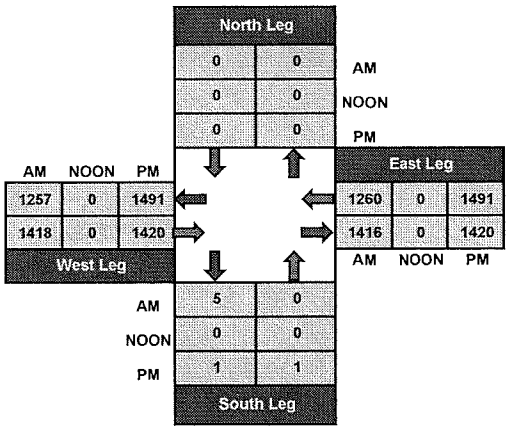
Project #: 14-1017-001

City: Anaheim

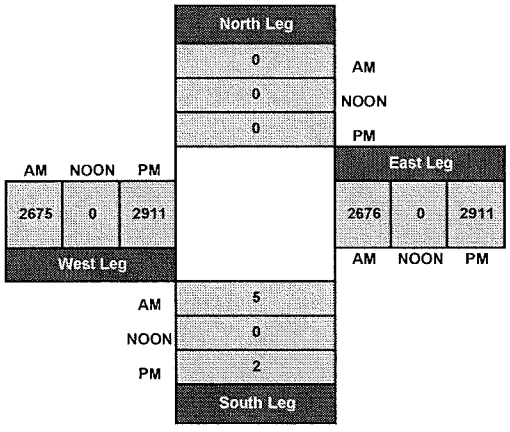


AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Tuesday

City: Anaheim **Date:** 1/28/2014

TOTALS

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM								135	0	0	151		286
6:15 AM								176	0	1	170		347
6:30 AM								206	0	2	189		397
6:45 AM								268	0	0	235		503
7:00 AM								250	0	2	239		491
7:15 AM								290	1	2	261		554
7:30 AM								374	1	1	292		668
7:45 AM								361	0	0	317		678
8:00 AM								338	0	1	311		650
8:15 AM								343	1	1	337		682
8:30 AM								262	0	2	277		541
8:45 AM								215	1	1	291		508
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3218	ER 4	WL 13	WT 3070	WR 0	TOTAL 6305
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.88%	0.12%	0.42%	99.58%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1416	2	3	1257	0	2678
PEAK HR FACTOR :	0.000			0.000			0.945			0.932			0.982

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Tuesday

City: Anaheim **Date:** 1/28/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM			0					337	1	0	313		651
4:15 PM			0					326	0	1	354		681
4:30 PM			1					393	0	0	357		751
4:45 PM			0					299	0	0	343		642
5:00 PM			0					395	1	0	391		787
5:15 PM			0					332	0	0	400		732
5:30 PM			1					388	1	0	359		749
5:45 PM			0					319	0	0	316		635
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	2789	3	1	2833	0	5628
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.89%	0.11%	0.04%	99.96%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	1419	1	0	1491	0	2912
PEAK HR FACTOR :		0.250			0.000			0.896			0.932		0.925

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

Cars

City: Anaheim | **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM								126	0	0	141		267
6:15 AM								169	0	0	161		330
6:30 AM								200	0	0	186		386
6:45 AM								253	0	0	226		479
7:00 AM								235	0	1	226		462
7:15 AM								277	1	0	252		530
7:30 AM								363	1	0	281		645
7:45 AM								347	0	0	299		646
8:00 AM								315	0	0	297		612
8:15 AM								330	0	0	323		653
8:30 AM								244	0	1	265		510
8:45 AM								205	1	0	283		489
TOTAL VOLUMES :	0	0	0	0	0	0	0	3064	3	2	2940	0	6009
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.90%	0.10%	0.07%	99.93%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1355	1	0	1200	0	2556
PEAK HR FACTOR :	0.000			0.000			0.931			0.929			0.979

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

City: Anaheim | **Cars** | **Date:** 1/28/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM			0					331	1	0	302		634
4:15 PM			0					321	0	0	342		663
4:30 PM			1					384	0	0	347		732
4:45 PM			0					294	0	0	335		629
5:00 PM			0					388	1	0	384		773
5:15 PM			0					328	0	0	395		723
5:30 PM			1					384	1	0	355		741
5:45 PM			0					317	0	0	311		628
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	2747	3	0	2771	0	5523
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.89%	0.11%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	1394	1	0	1461	0	2857
PEAK HR FACTOR :		0.250			0.000			0.897			0.925		0.924

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

2 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	0	0	0	3	0	0	3	0					
6:00 AM		2						5		0	2		9				
6:15 AM								5		0	3		8				
6:30 AM								3		0	1		4				
6:45 AM								11		0	4		15				
7:00 AM								8		0	8		16				
7:15 AM								5		1	5		11				
7:30 AM								5		0	6		11				
7:45 AM								4		0	9		13				
8:00 AM								14		0	7		21				
8:15 AM								8		0	8		16				
8:30 AM								11		0	6		17				
8:45 AM								4		0	3		7				
TOTAL VOLUMES :	0	2	0	0	0	0	0	83	0	1	62	0	148	0	0	0	0
APPROACH %'s :	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	1.59%	98.41%	0.00%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	31	0	0	30	0	61				
PEAK HR FACTOR :	0.000			0.000			0.554			0.833			0.979				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

2 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								2			7		9
4:15 PM								3			6		9
4:30 PM								7			5		12
4:45 PM								3			6		9
5:00 PM								2			3		5
5:15 PM								1			4		5
5:30 PM								2			4		6
5:45 PM								0			2		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	20	0	0	37	0	57
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	13	0	0	18	0	31
PEAK HR FACTOR :		0.000			0.000			0.464			0.750		0.924

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM								3	0	0	3		6
6:15 AM								1	0	0	2		3
6:30 AM								2	0	0	1		3
6:45 AM								3	0	0	4		7
7:00 AM								1	0	0	4		5
7:15 AM								3	0	0	2		5
7:30 AM								4	0	0	1		5
7:45 AM								2	0	0	3		5
8:00 AM								7	0	1	2		10
8:15 AM								3	1	0	5		9
8:30 AM								2	0	0	2		4
8:45 AM								2	0	1	2		5
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	33	1	2	31	0	67
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	97.06%	2.94%	6.06%	93.94%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	16	1	1	11	0	29
PEAK HR FACTOR :	0.000			0.000			0.607			0.600			0.979

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								2			1		3
4:15 PM								0			2		2
4:30 PM								1			1		2
4:45 PM								0			1		1
5:00 PM								1			1		2
5:15 PM								2			0		2
5:30 PM								2			0		2
5:45 PM								1			1		2
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 0	ET 9	ER 0	WL 0	WT 7	WR 0	TOTAL 16
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	0	0	3	0	7
PEAK HR FACTOR :		0.000			0.000			0.500			0.750		0.924

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM								1		0	5		6
6:15 AM								1		1	4		6
6:30 AM								1		2	1		4
6:45 AM								1		0	1		2
7:00 AM								6		3	1		10
7:15 AM								5		1	2		8
7:30 AM								2		1	4		7
7:45 AM								8		0	6		14
8:00 AM								2		0	5		7
8:15 AM								2		1	1		4
8:30 AM								5		1	4		10
8:45 AM								4		0	3		7
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 0	ET 38	ER 0	WL 10	WT 37	WR 0	TOTAL 85
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	21.28%	78.72%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	14	0	2	16	0	32
PEAK HR FACTOR :	0.000			0.000			0.438			0.750			0.979

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								2		0	3		5
4:15 PM								2		1	4		7
4:30 PM								1		0	4		5
4:45 PM								2		0	1		3
5:00 PM								4		0	3		7
5:15 PM								1		0	1		2
5:30 PM								0		0	0		0
5:45 PM								1		0	2		3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	13	0	1	18	0	32
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	5.26%	94.74%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	9	0	17
PEAK HR FACTOR :		0.000			0.000			0.500			0.563		0.924

UTURNS

	NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

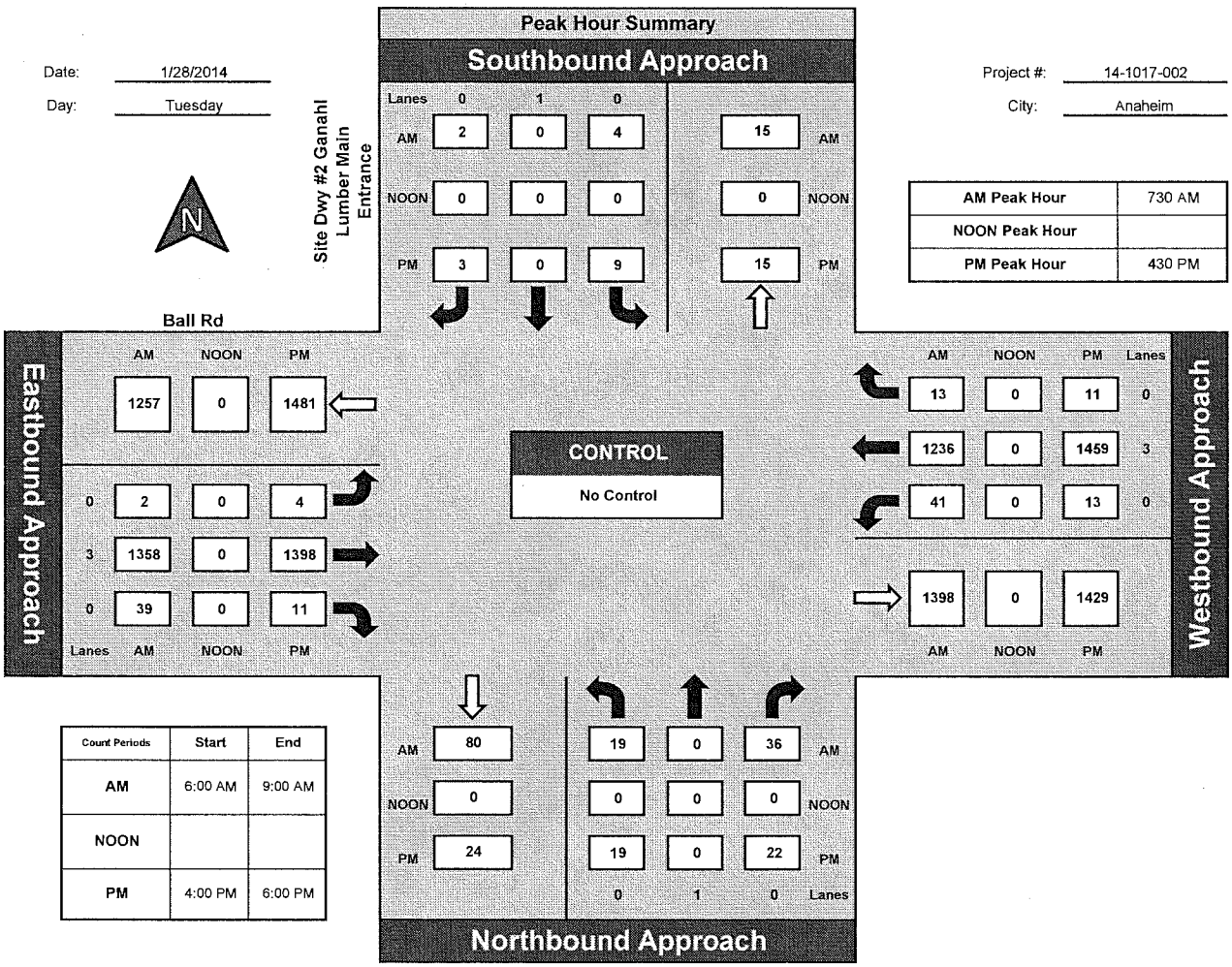
CONTROL : No Control

ITM Peak Hour Summary

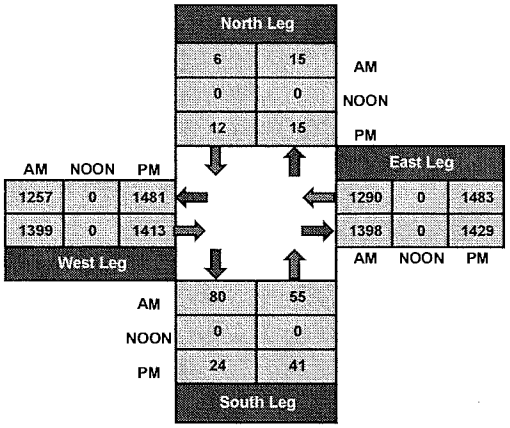
Prepared by:

National Data & Surveying Services

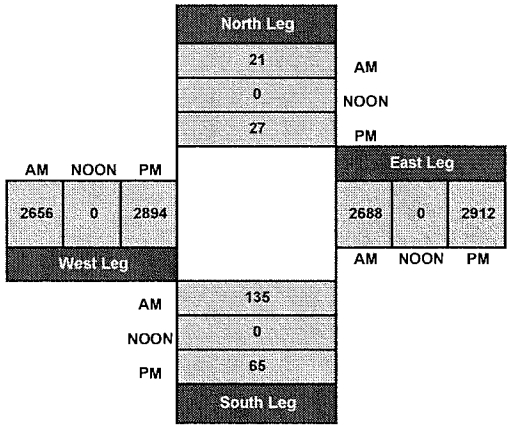
Site Dwy #2 Ganahl Lumber Main Entrance and Ball Rd , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Tuesday

City: Anaheim **Date:** 1/28/2014

TOTALS

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Bali Rd			Bali Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	0		0	0	0	0	2	124	6	4	135	1	272
6:15 AM	3		2	2	0	0	1	166	11	7	173	0	365
6:30 AM	2		9	0	0	0	0	200	6	12	180	1	410
6:45 AM	4		6	0	0	0	0	256	4	15	240	1	526
7:00 AM	1		5	0	0	1	2	227	6	12	236	0	490
7:15 AM	4		11	0	0	0	0	290	7	9	265	0	586
7:30 AM	4		13	2	0	1	0	353	12	7	284	4	680
7:45 AM	7		7	0	0	0	1	344	9	6	321	4	699
8:00 AM	4		4	0	0	0	1	332	8	17	298	3	667
8:15 AM	4		12	2	0	1	0	329	10	11	333	2	704
8:30 AM	6		14	5	0	1	1	251	5	15	282	5	585
8:45 AM	4		20	2	0	0	2	196	13	11	285	6	539

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	43	0	103	13	0	4	10	3068	97	126	3032	27	6523
APPROACH %'s :	29.45%	0.00%	70.55%	76.47%	0.00%	23.53%	0.31%	96.63%	3.06%	3.96%	95.20%	0.85%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	19	0	36	4	0	2	2	1358	39	41	1236	13	2750
PEAK HR FACTOR :		0.809			0.500			0.958			0.932		0.977

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
4:00 PM	7		4	3		3	1	310	7	4	297	1	637
4:15 PM	4		9	2		2	2	317	4	9	352	3	704
4:30 PM	5		11	1		1	0	388	4	3	340	2	755
4:45 PM	5		2	2		0	0	296	2	2	345	4	658
5:00 PM	5		5	4		2	3	388	1	4	376	4	792
5:15 PM	4		4	2		0	1	326	4	4	398	1	744
5:30 PM	2		2	3		1	2	377	8	2	350	2	749
5:45 PM	4		4	1		1	0	324	1	1	320	0	656
TOTAL VOLUMES :	NL 36	NT 0	NR 41	SL 18	ST 0	SR 10	EL 9	ET 2726	ER 31	WL 29	WT 2778	WR 17	TOTAL 5695
APPROACH %'s :	46.75%	0.00%	53.25%	64.29%	0.00%	35.71%	0.33%	98.55%	1.12%	1.03%	98.37%	0.60%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	19	0	22	9	0	3	4	1398	11	13	1459	11	2949
PEAK HR FACTOR :		0.641			0.500			0.901			0.920		0.931

UTURNS	NB	SB	EB	WB

	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

Cars

City: Anaheim | **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
6:00 AM	0		0	0	0	0	2	115	5	4	125	1	252
6:15 AM	3		2	2	0	0	1	161	11	7	161	0	348
6:30 AM	2		9	0	0	0	0	194	6	12	172	1	396
6:45 AM	4		6	0	0	0	0	244	4	15	233	1	507
7:00 AM	1		5	1	0	1	2	215	6	12	220	0	463
7:15 AM	4		11	0	0	0	0	280	7	8	256	0	566
7:30 AM	4		13	2	0	1	0	339	12	7	273	4	655
7:45 AM	7		7	0	0	0	1	332	8	6	306	4	671
8:00 AM	3		4	0	1	0	1	316	7	17	281	3	633
8:15 AM	3		12	2	0	1	0	313	10	11	318	2	672
8:30 AM	5		14	5	0	1	1	234	4	15	272	5	556
8:45 AM	4		19	2	1	0	2	184	12	10	275	6	515
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	40	0	102	14	2	4	10	2927	92	124	2892	27	6234
APPROACH %'s :	28.17%	0.00%	71.83%	70.00%	10.00%	20.00%	0.33%	96.63%	3.04%	4.07%	95.04%	0.89%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	17	0	36	4	1	2	2	1300	37	41	1178	13	2631
PEAK HR FACTOR :	0.779			0.583			0.954			0.931			0.979

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

City: Anaheim | **Cars** | **Date:** 1/28/2014

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
4:00 PM	7		4	2		3	1	304	7	4	287	0	619
4:15 PM	4		8	2		1	2	313	4	9	342	3	688
4:30 PM	5		11	0		1	1	382	3	3	328	1	735
4:45 PM	4		2	2		1	0	289	2	1	339	4	644
5:00 PM	5		5	4		2	3	380	1	4	368	4	776
5:15 PM	4		4	2		0	1	320	4	4	392	1	732
5:30 PM	2		2	3		1	2	374	8	2	348	2	744
5:45 PM	4		4	1		1	0	322	1	1	316	0	650
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	35	0	40	16	0	10	10	2684	30	28	2720	15	5588
APPROACH %'s :	46.67%	0.00%	53.33%	61.54%	0.00%	38.46%	0.37%	98.53%	1.10%	1.01%	98.44%	0.54%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	18	0	22	8	0	4	5	1371	10	12	1427	10	2887
PEAK HR FACTOR :	0.625			0.500			0.898			0.912			0.930

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

2 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
6:00 AM	0		0		0			6	0	0	4		10
6:15 AM	0		0		0			3	0	0	4		7
6:30 AM	0		0		0			3	0	0	3		6
6:45 AM	0		0		0			8	0	0	3		11
7:00 AM	0		0		0			7	0	0	8		15
7:15 AM	0		0		0			3	0	1	5		9
7:30 AM	0		0		0			7	0	0	6		13
7:45 AM	0		0		0			3	1	0	6		10
8:00 AM	1		0		1			9	1	0	9		21
8:15 AM	1		0		0			9	0	0	8		18
8:30 AM	1		0		0			11	1	0	4		17
8:45 AM	0		1		1			4	1	1	3		11
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	3	0	1	0	2	0	0	73	4	2	63	0	148
APPROACH %'s :	75.00%	0.00%	25.00%	0.00%	100.00%	0.00%	0.00%	94.81%	5.19%	3.08%	96.92%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	2	0	0	0	1	0	0	28	2	0	29	0	62
PEAK HR FACTOR :	0.500			0.250			0.750			0.806			0.978

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

2 Axle Trucks

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
4:00 PM	0		0	0		0	0	3	0	0	5	1	9
4:15 PM	0		1	0		0	0	2	0	0	6	0	9
4:30 PM	0		0	1		0	1	4	1	0	7	1	15
4:45 PM	1		0	0		1	0	5	0	1	3	0	11
5:00 PM	0		0	0		0	0	3	0	0	3	0	6
5:15 PM	0		0	0		0	0	3	0	0	5	0	8
5:30 PM	0		0	0		0	0	1	0	0	2	0	3
5:45 PM	0		0	0		0	0	0	0	0	2	0	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	1	1	0	1	1	21	1	1	33	2	63
APPROACH %'s :	50.00%	0.00%	50.00%	50.00%	0.00%	50.00%	4.35%	91.30%	4.35%	2.78%	91.67%	5.56%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	1	0	0	1	0	1	1	15	1	1	18	1	40
PEAK HR FACTOR :	0.250			0.500			0.708			0.625			0.929

CONTROL : No Control

UTURN5

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	3	0	0	3	0					
6:00 AM								1	1		1		3				
6:15 AM								1	0		3		4				
6:30 AM								2	0		1		3				
6:45 AM								3	0		2		5				
7:00 AM								1	0		5		6				
7:15 AM								3	0		1		4				
7:30 AM								4	0		1		5				
7:45 AM								2	0		3		5				
8:00 AM								5	0		2		7				
8:15 AM								4	0		5		9				
8:30 AM								2	0		1		3				
8:45 AM								3	0		2		5				
TOTAL VOLUMES :	0	0	0	0	0	0	0	31	1	0	27	0	59	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	96.88%	3.13%	0.00%	100.00%	0.00%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	15	0	0	11	0	26				
PEAK HR FACTOR :	0.000			0.000			0.750			0.550			0.978				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
4:00 PM								1			1		2
4:15 PM								0			2		2
4:30 PM								1			1		2
4:45 PM								0			1		1
5:00 PM								2			2		4
5:15 PM								1			0		1
5:30 PM								2			0		2
5:45 PM								1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	8	0	0	8	0	16
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	0	0	4	0	8
PEAK HR FACTOR :	0.000			0.000			0.500			0.500			0.929

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL	NB	SB	EB	WB
6:00 AM				0				2			5		7				
6:15 AM				0				1			5		6				
6:30 AM				0				1			4		5				
6:45 AM				0				1			2		3				
7:00 AM				1				4			3		8				
7:15 AM				0				4			3		7				
7:30 AM				0				3			4		7				
7:45 AM				0				7			6		13				
8:00 AM				0				2			6		8				
8:15 AM				0				3			2		5				
8:30 AM				0				4			5		9				
8:45 AM				0				5			5		10				
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 1	ST 0	SR 0	EL 0	ET 37	ER 0	WL 0	WT 50	WR 0	TOTAL 88	NB 0	SB 0	EB 0	WB 0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	15	0	0	18	0	33				
PEAK HR FACTOR :		0.000			0.000			0.536			0.750		0.978				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
4:00 PM				1		0		2			4		7
4:15 PM				0		1		2			2		5
4:30 PM				0		0		1			4		5
4:45 PM				0		0		2			2		4
5:00 PM				0		0		3			3		6
5:15 PM				0		0		2			1		3
5:30 PM				0		0		0			0		0
5:45 PM				0		0		1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1	0	1	0	13	0	0	17	0	32
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	50.00%	0.00%	50.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	10	0	18
PEAK HR FACTOR :		0.000			0.000			0.667			0.625		0.929

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

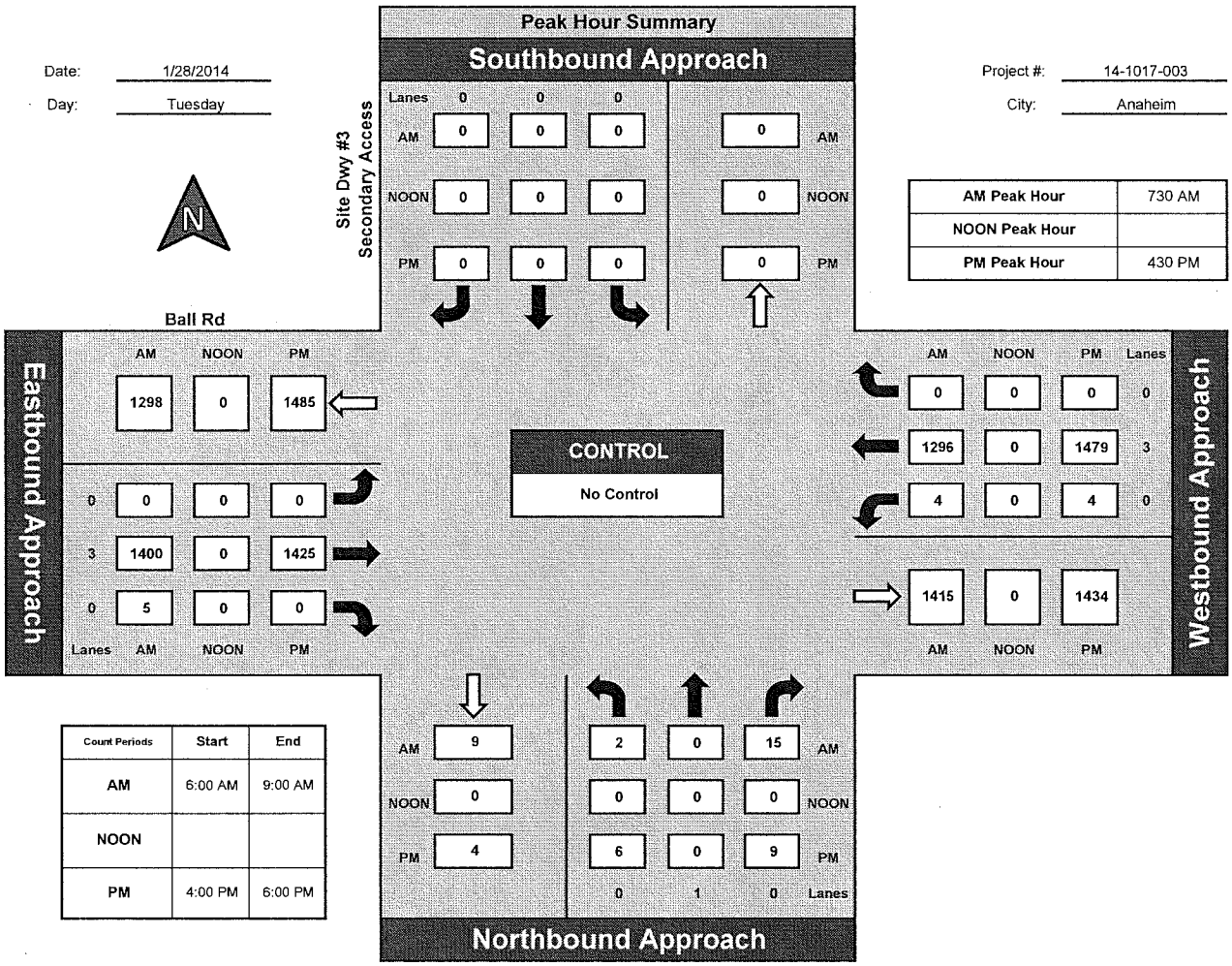
Site Dwy #3 Secondary Access and Ball Rd , Anaheim

Date: 1/28/2014

Day: Tuesday

Project #: 14-1017-003

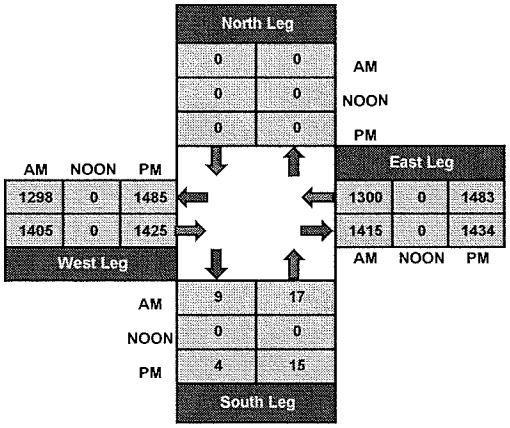
City: Anaheim



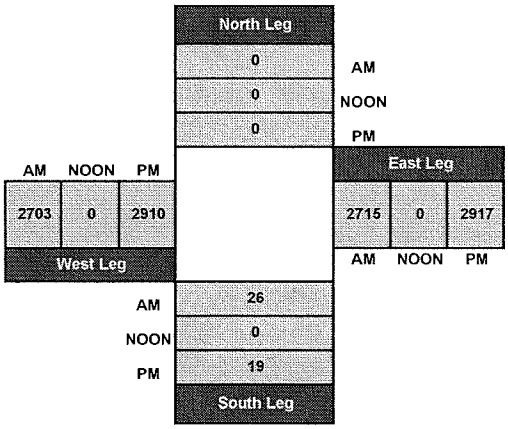
AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	6:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

TOTALS

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	3		3				0	122	0	1	159		288
6:15 AM	0		1				0	174	0	1	170		346
6:30 AM	0		0				0	202	0	1	196		399
6:45 AM	0		1				0	266	1	1	250		519
7:00 AM	0		4				0	241	0	0	255		500
7:15 AM	0		3				0	308	1	3	268		583
7:30 AM	0		3				0	365	2	1	317		688
7:45 AM	1		4				0	361	1	0	308		675
8:00 AM	1		3				0	329	1	1	333		668
8:15 AM	0		5				0	345	1	2	338		691
8:30 AM	1		0				0	280	0	3	314		598
8:45 AM	0		0				1	214	2	4	294		515
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	6	0	27	0	0	0	1	3207	9	18	3202	0	6470
APPROACH %'s :	18.18%	0.00%	81.82%	#DIV/0!	#DIV/0!	#DIV/0!	0.03%	99.69%	0.28%	0.56%	99.44%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	2	0	15	0	0	0	0	1400	5	4	1296	0	2722
PEAK HR FACTOR :		0.850			0.000			0.957			0.956		0.985

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Tuesday

City: Anaheim **Date:** 1/28/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM	4		1				0	328		0	305		638
4:15 PM	1		3				1	332		1	361		699
4:30 PM	1		1				0	396		3	353		754
4:45 PM	2		6				0	293		0	341		642
5:00 PM	2		1				0	404		1	390		798
5:15 PM	1		1				0	332		0	395		729
5:30 PM	2		3				0	387		1	358		751
5:45 PM	1		1				0	323		0	317		642
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	14	0	17	0	0	0	1	2795	0	6	2820	0	5653
APPROACH %'s :	45.16%	0.00%	54.84%	#DIV/0!	#DIV/0!	#DIV/0!	0.04%	99.96%	0.00%	0.21%	99.79%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	6	0	9	0	0	0	0	1425	0	4	1479	0	2923
PEAK HR FACTOR :	0.469			0.000			0.882			0.939			0.916

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Tuesday

City: Anaheim | **Cars** | **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	0		0				0	113	0	1	150		264
6:15 AM	0		0				0	169	0	1	159		329
6:30 AM	0		0				0	197	0	1	192		390
6:45 AM	0		1				0	254	1	1	243		500
7:00 AM	0		2				0	230	0	0	239		471
7:15 AM	0		2				0	296	1	3	257		559
7:30 AM	0		1				0	354	2	1	305		663
7:45 AM	0		4				0	348	1	0	294		647
8:00 AM	0		0				0	312	1	1	316		630
8:15 AM	0		3				0	333	1	2	328		667
8:30 AM	1		0				0	265	0	3	300		569
8:45 AM	0		0				1	203	2	4	285		495
TOTAL VOLUMES :	1	0	13	0	0	0	1	3074	9	18	3068	0	6184
APPROACH %'s :	7.14%	0.00%	92.86%	#DIV/0!	#DIV/0!	#DIV/0!	0.03%	99.68%	0.29%	0.58%	99.42%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	8	0	0	0	0	1347	5	4	1243	0	2607
PEAK HR FACTOR :	0.500			0.000			0.949			0.945			0.977

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Tuesday

City: Anaheim | **Cars** | **Date:** 1/28/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM	4		1				0	323		0	298		626
4:15 PM	1		3				1	324		1	349		679
4:30 PM	1		1				0	388		3	342		735
4:45 PM	2		6				0	289		0	332		629
5:00 PM	2		1				0	398		1	383		785
5:15 PM	1		1				0	327		0	391		720
5:30 PM	2		3				0	383		1	355		744
5:45 PM	1		1				0	321		0	313		636
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	14	0	17	0	0	0	1	2753	0	6	2763	0	5554
APPROACH %'s :	45.16%	0.00%	54.84%	#DIV/0!	#DIV/0!	#DIV/0!	0.04%	99.96%	0.00%	0.22%	99.78%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	6	0	9	0	0	0	0	1402	0	4	1448	0	2869
PEAK HR FACTOR :		0.469			0.000			0.881			0.928		0.914

CONTROL : No Control

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Tuesday

2 Axle Trucks

City: Anaheim **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	1		1					6			2		10
6:15 AM	0		0					3			4		7
6:30 AM	0		0					2			1		3
6:45 AM	0		0					8			3		11
7:00 AM	0		0					5			9		14
7:15 AM	0		0					4			7		11
7:30 AM	0		0					5			6		11
7:45 AM	0		0					3			7		10
8:00 AM	0		0					9			7		16
8:15 AM	0		1					6			4		11
8:30 AM	0		0					8			7		15
8:45 AM	0		0					5			4		9
TOTAL VOLUMES :	1	0	2	0	0	0	0	64	0	0	61	0	128
APPROACH %'s :	33.33%	0.00%	66.67%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	23	0	0	24	0	48
PEAK HR FACTOR :		0.250			0.000			0.639			0.857		0.977

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

2 Axle Trucks

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM								2			4		6
4:15 PM								4			5		9
4:30 PM								6			6		12
4:45 PM								3			7		10
5:00 PM								1			3		4
5:15 PM								2			3		5
5:30 PM								2			3		5
5:45 PM								0			2		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	20	0	0	33	0	53
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	12	0	0	19	0	31
PEAK HR FACTOR :		0.000			0.000			0.500			0.679		0.914

UTURNS	NB	SB	EB	WB
TOTAL	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Tuesday

3 Axle Trucks

City: Anaheim **Date:** 1/28/2014

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	1		1					1			1		4
6:15 AM	0		0					1			2		3
6:30 AM	0		0					2			1		3
6:45 AM	0		0					3			2		5
7:00 AM	0		0					2			4		6
7:15 AM	0		1					3			1		5
7:30 AM	0		1					5			1		7
7:45 AM	0		0					4			2		6
8:00 AM	0		1					6			3		10
8:15 AM	0		0					4			4		8
8:30 AM	0		0					2			3		5
8:45 AM	0		0					3			1		4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	4	0	0	0	0	36	0	0	25	0	66
APPROACH %'s :	20.00%	0.00%	80.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	19	0	0	10	0	31
PEAK HR FACTOR :	0.500			0.000			0.792			0.625			0.977

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								2			1		3
4:15 PM								0			2		2
4:30 PM								1			1		2
4:45 PM								0			1		1
5:00 PM								2			1		3
5:15 PM								2			0		2
5:30 PM								2			0		2
5:45 PM								1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	10	0	0	7	0	17
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	5	0	0	3	0	8
PEAK HR FACTOR :		0.000			0.000			0.625			0.750		0.914

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	0	0	0	3	0	0	3	0					
6:00 AM	1		1					2			6		10				
6:15 AM	0		1					1			5		7				
6:30 AM	0		0					1			2		3				
6:45 AM	0		0					1			2		3				
7:00 AM	0		2					4			3		9				
7:15 AM	0		0					5			3		8				
7:30 AM	0		1					1			5		7				
7:45 AM	1		0					6			5		12				
8:00 AM	1		2					2			7		12				
8:15 AM	0		1					2			2		5				
8:30 AM	0		0					5			4		9				
8:45 AM	0		0					3			4		7				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	3	0	8	0	0	0	0	33	0	0	48	0	92	0	0	0	0
APPROACH %'s :	27.27%	0.00%	72.73%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	2	0	4	0	0	0	0	11	0	0	19	0	36				
PEAK HR FACTOR :	0.500			0.000			0.458			0.679			0.977				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								1			2		3
4:15 PM								4			5		9
4:30 PM								1			4		5
4:45 PM								1			1		2
5:00 PM								3			3		6
5:15 PM								1			1		2
5:30 PM								0			0		0
5:45 PM								1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	12	0	0	17	0	29
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	6	0	0	9	0	15
PEAK HR FACTOR :	0.000			0.000			0.500			0.563			0.914

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

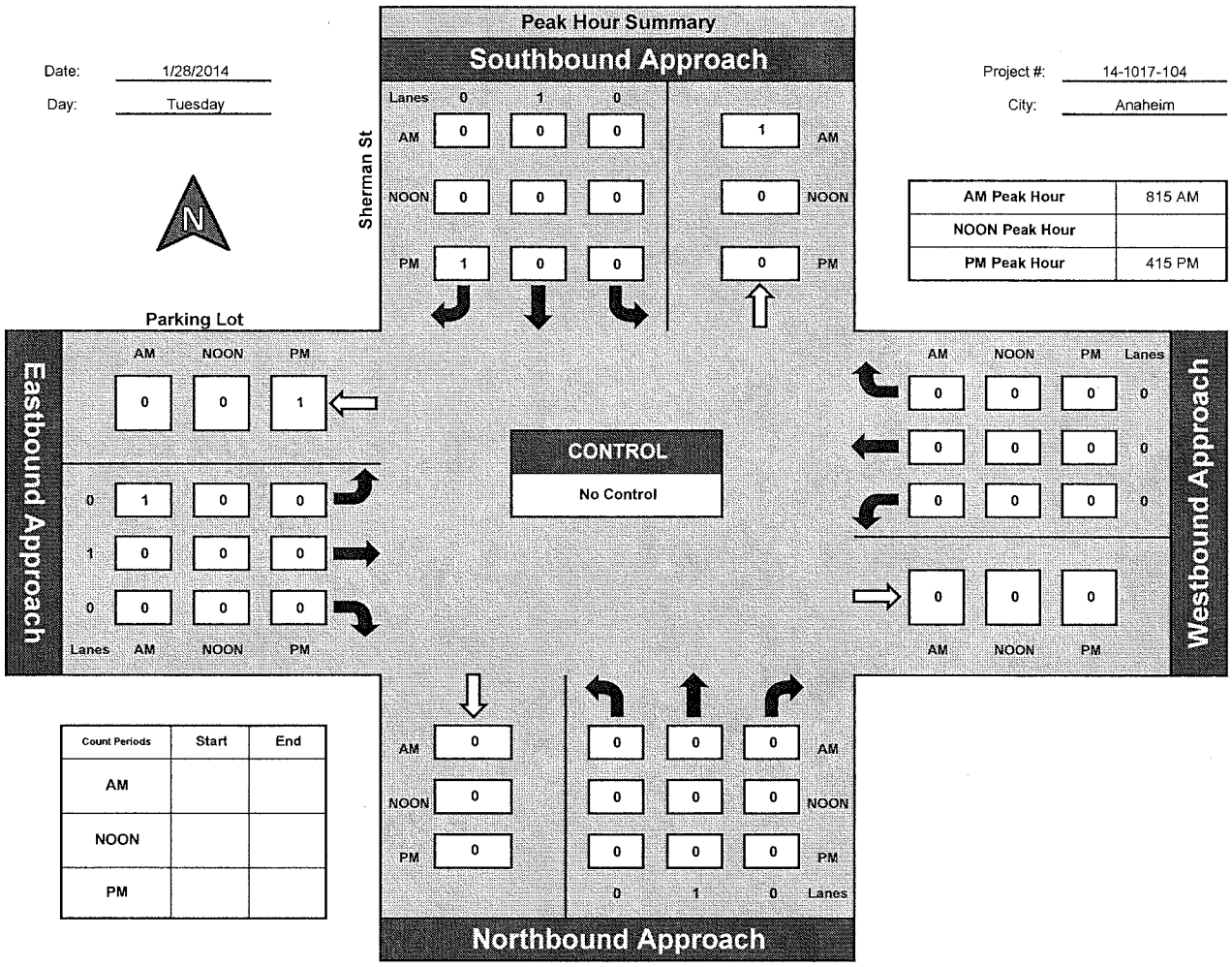
Sherman St and Parking Lot , Anaheim

Date: 1/28/2014

Day: Tuesday

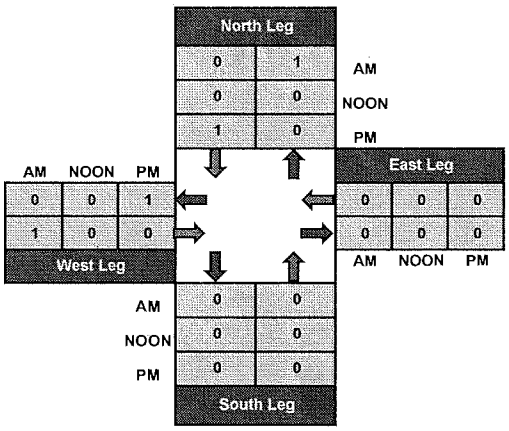
Project #: 14-1017-104

City: Anaheim

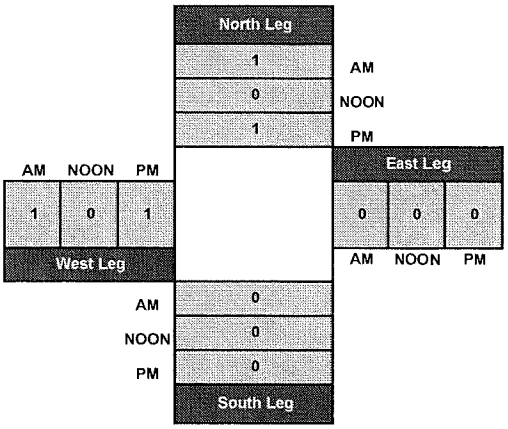


AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Tuesday

City: Anaheim **Date:** 1/28/2014

TOTALS

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 0	WR 0	TOTAL
6:00 AM							0						0
6:15 AM							0						0
6:30 AM							0						0
6:45 AM							0						0
7:00 AM							0						0
7:15 AM							0						0
7:30 AM							0						0
7:45 AM							0						0
8:00 AM							0						0
8:15 AM							1						1
8:30 AM							0						0
8:45 AM							0						0
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Tuesday

City: Anaheim **Date:** 1/28/2014

TOTALS

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM						0							0
4:15 PM						1							1
4:30 PM						0							0
4:45 PM						0							0
5:00 PM						0							0
5:15 PM						0							0
5:30 PM						0							0
5:45 PM						0							0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.000			0.250			0.000			0.000		0.250

UTURNS

NB	5B	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

Cars

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
6:00 AM							0						0				
6:15 AM							0						0				
6:30 AM							0						0				
6:45 AM							0						0				
7:00 AM							0						0				
7:15 AM							0						0				
7:30 AM							0						0				
7:45 AM							0						0				
8:00 AM							0						0				
8:15 AM							1						1				
8:30 AM							0						0				
8:45 AM							0						0				
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	815 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1				
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

Cars

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM						0							0
4:15 PM						1							1
4:30 PM						0							0
4:45 PM						0							0
5:00 PM						0							0
5:15 PM						0							0
5:30 PM						0							0
5:45 PM						0							0
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.250			0.000			0.000			0.250

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

2 Axle Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

2 Axle Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

3 Axle Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250

UTURNS				
NB	SB	EB	WB	
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Tuesday

City: Anaheim | **4 Axle+ Trucks** | **Date:** 1/28/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Sherman St and Site Dwy/Access #4 , Anaheim

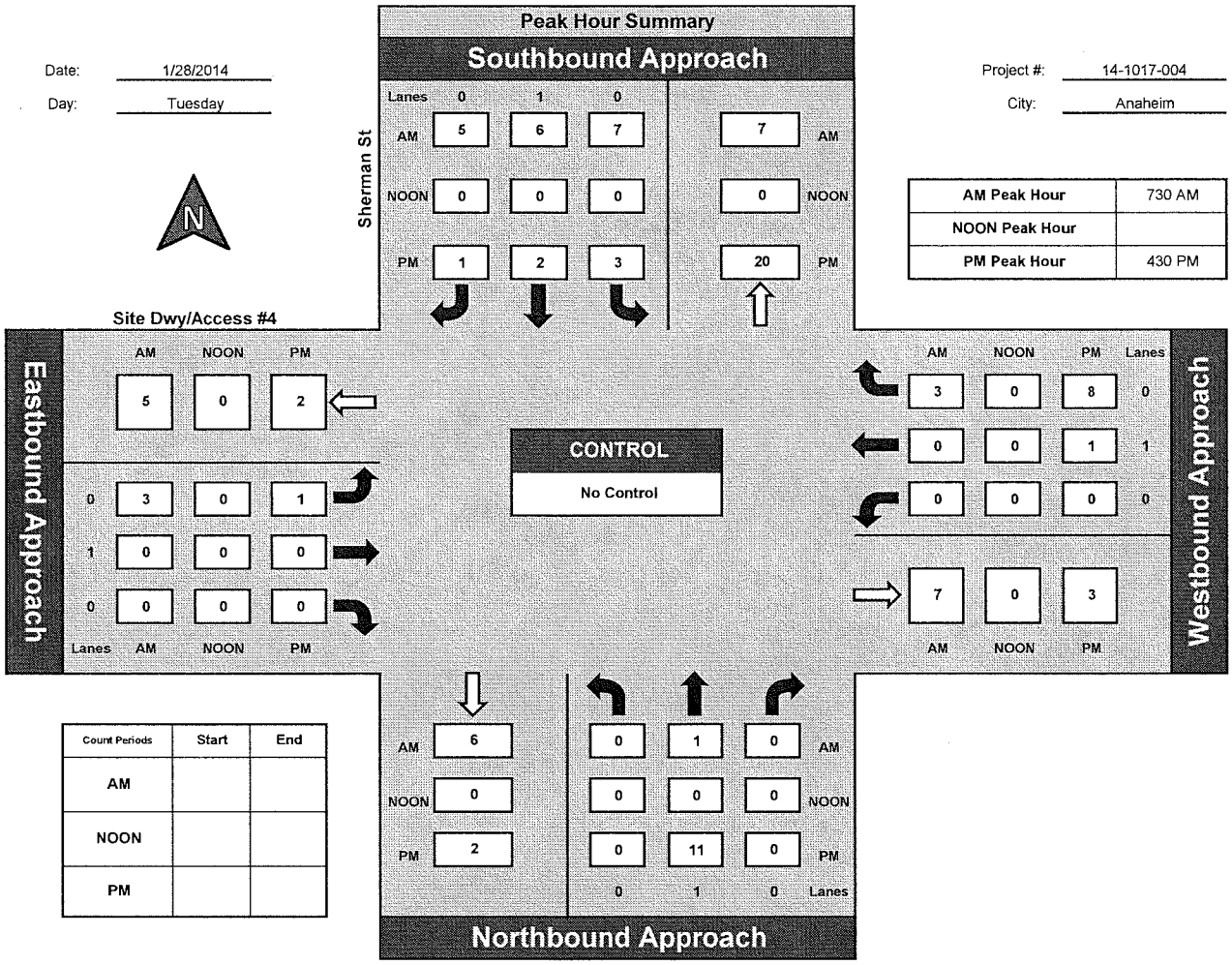
Date: 1/28/2014

Day: Tuesday

Project #: 14-1017-004

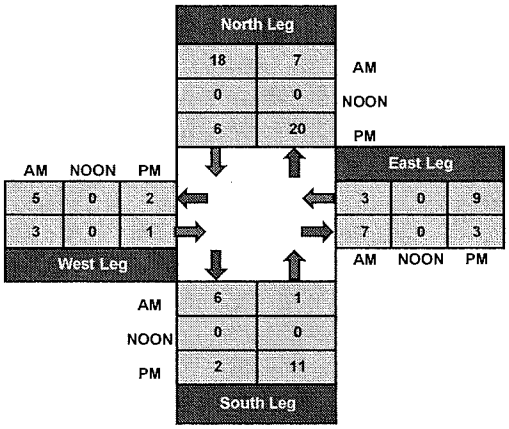
City: Anaheim

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

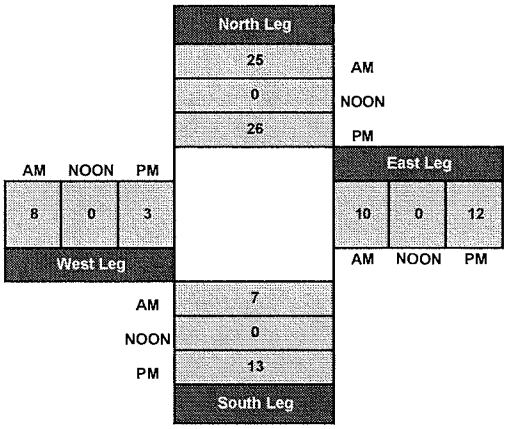


Count Periods	Start	End
AM		
NOON		
PM		

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

TOTALS

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0		3	1	1	0			0		0	5
6:15 AM		2		1	0	4	1			0		0	8
6:30 AM		0		0	0	0	0			0		0	0
6:45 AM		0		1	0	3	0			0		0	4
7:00 AM		1		0	1	0	1			0		0	3
7:15 AM		0		0	1	0	0			0		0	1
7:30 AM		0		2	3	1	1			0		0	7
7:45 AM		0		1	0	3	0			0		0	4
8:00 AM		0		3	2	0	2			0		2	9
8:15 AM		1		1	1	1	0			0		1	5
8:30 AM		0		3	1	1	0			1		0	6
8:45 AM		0		0	0	0	0			0		0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	15	10	14	5	0	0	1	0	3	52
APPROACH %'s :	0.00%	100.00%	0.00%	38.46%	25.64%	35.90%	100.00%	0.00%	0.00%	25.00%	0.00%	75.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	1	0	7	6	5	3	0	0	0	0	3	25
PEAK HR FACTOR :		0.250			0.750			0.375			0.375		0.694

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Tuesday

City: Anaheim **Date:** 1/28/2014

TOTALS

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		1		0	0	1	1				0	0	3
4:15 PM		0		1	0	0	0				0	0	1
4:30 PM		4		0	1	1	0				0	1	7
4:45 PM		2		2	1	0	0				0	0	5
5:00 PM		3		1	0	0	1				1	3	9
5:15 PM		2		0	0	0	0				0	4	6
5:30 PM		0		1	0	0	0				0	3	4
5:45 PM		1		0	1	0	0				0	1	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	13	0	5	3	2	2	0	0	0	1	12	38
APPROACH %'s :	0.00%	100.00%	0.00%	50.00%	30.00%	20.00%	100.00%	0.00%	0.00%	0.00%	7.69%	92.31%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	11	0	3	2	1	1	0	0	0	1	8	27
PEAK HR FACTOR :		0.688			0.500			0.250			0.563		0.750

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

Cars

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0		3	1	1	0			0		0	5
6:15 AM		2		1	0	4	0			0		0	7
6:30 AM		0		0	0	0	0			0		0	0
6:45 AM		0		1	0	2	0			0		0	3
7:00 AM		0		0	0	0	1			0		0	1
7:15 AM		0		0	1	0	0			0		0	1
7:30 AM		0		2	3	1	0			0		0	6
7:45 AM		0		1	0	3	0			0		0	4
8:00 AM		0		3	2	0	2			0		2	9
8:15 AM		1		0	1	0	0			0		0	2
8:30 AM		0		3	1	1	0			1		0	6
8:45 AM		0		0	0	0	0			0		0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	3	0	14	9	12	3	0	0	1	0	2	44
APPROACH %'s :	0.00%	100.00%	0.00%	40.00%	25.71%	34.29%	100.00%	0.00%	0.00%	33.33%	0.00%	66.67%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	1	0	6	6	4	2	0	0	0	0	2	21
PEAK HR FACTOR :		0.250			0.667			0.250			0.250		0.583

CONTROL : No Control

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

Cars

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		1		0	0	1	1				0	0	3
4:15 PM		0		1	0	0	0				0	0	1
4:30 PM		4		0	1	1	0				0	1	7
4:45 PM		2		2	1	0	0				0	0	5
5:00 PM		3		0	0	0	1				1	2	7
5:15 PM		2		0	0	0	0				0	4	6
5:30 PM		0		1	0	0	0				0	3	4
5:45 PM		1		0	1	0	0				0	1	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	13	0	4	3	2	2	0	0	0	1	11	36
APPROACH %'s :	0.00%	100.00%	0.00%	44.44%	33.33%	22.22%	100.00%	0.00%	0.00%	0.00%	8.33%	91.67%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	11	0	2	2	1	1	0	0	0	1	7	25
PEAK HR FACTOR :		0.688			0.417			0.250			0.500		0.893

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

2 Axle Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0			0	0	0						0
6:15 AM		0			0	0	1						1
6:30 AM		0			0	0	0						0
6:45 AM		0			0	0	0						0
7:00 AM		1			1	0	0						2
7:15 AM		0			0	0	0						0
7:30 AM		0			0	0	0						0
7:45 AM		0			0	0	0						0
8:00 AM		0			0	0	0						0
8:15 AM		0			0	1	0						1
8:30 AM		0			0	0	0						0
8:45 AM		0			0	0	0						0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	1	1	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	50.00%	50.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.000			0.250			0.000			0.000		0.583

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

2 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.893

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM				0								0	0
6:15 AM				0								0	0
6:30 AM				0								0	0
6:45 AM				0								0	0
7:00 AM				0								0	0
7:15 AM				0								0	0
7:30 AM				0								0	0
7:45 AM				0								0	0
8:00 AM				0								0	0
8:15 AM				1								1	2
8:30 AM				0								0	0
8:45 AM				0								0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1	0	0	0	0	0	0	0	1	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	1	0	0	0	0	0	0	0	1	2
PEAK HR FACTOR :	0.000			0.250			0.000			0.250			0.583

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

3 Axle Trucks

City: Anaheim | **Date:** 1/28/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.893

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Tuesday

City: Anaheim **4 Axle+ Trucks** **Date:** 1/28/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM						0	0						0
6:15 AM						0	0						0
6:30 AM						0	0						0
6:45 AM						1	0						1
7:00 AM						0	0						0
7:15 AM						0	0						0
7:30 AM						0	1						1
7:45 AM						0	0						0
8:00 AM						0	0						0
8:15 AM						0	0						0
8:30 AM						0	0						0
8:45 AM						0	0						0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	1	0	0	0	0	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.583

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Tuesday

City: Anaheim | **Date:** 1/28/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM				0								0	0
4:15 PM				0								0	0
4:30 PM				0								0	0
4:45 PM				0								0	0
5:00 PM				1								1	2
5:15 PM				0								0	0
5:30 PM				0								0	0
5:45 PM				0								0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1	0	0	0	0	0	0	0	1	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	1	0	0	0	0	0	0	0	1	2
PEAK HR FACTOR :		0.000			0.250			0.000			0.250		0.893

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

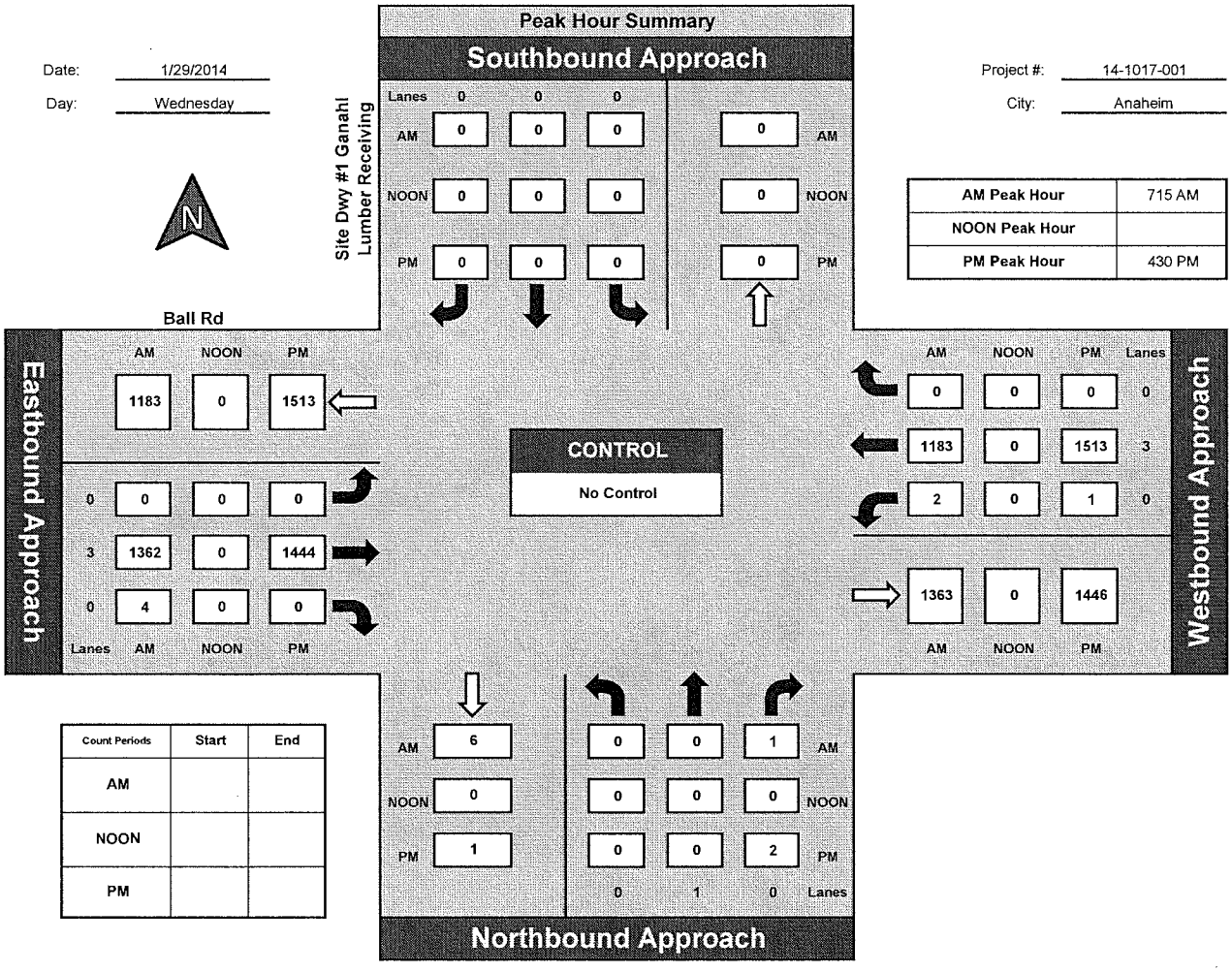
ITM Peak Hour Summary

Prepared by:

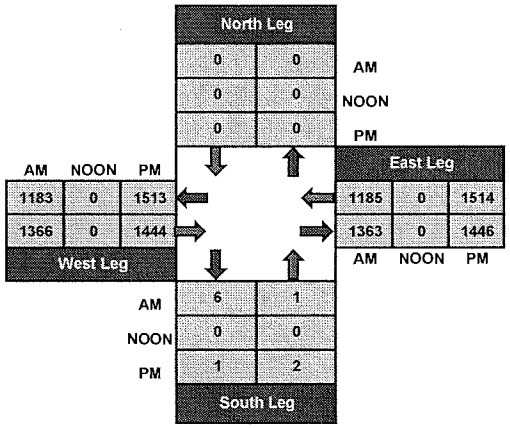
NDS

National Data & Surveying Services

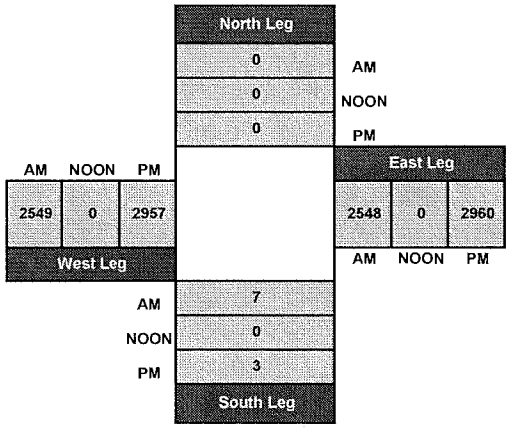
Site Dwy #1 Ganahl Lumber Receiving and Ball Rd , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Wednesday

TOTALS

City: Anaheim **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM			0					128	0	0	174		302
6:15 AM			0					168	0	0	162		330
6:30 AM			0					217	1	1	214		433
6:45 AM			0					277	0	1	258		536
7:00 AM			0					267	0	0	244		511
7:15 AM			0					308	2	0	285		595
7:30 AM			0					406	0	0	291		697
7:45 AM			1					370	1	0	317		689
8:00 AM			0					278	1	2	290		571
8:15 AM			0					300	1	0	286		587
8:30 AM			0					264	0	3	244		511
8:45 AM			0					222	0	2	266		490
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	1	0	0	0	0	3205	6	9	3031	0	6252
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.81%	0.19%	0.30%	99.70%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	1362	4	2	1183	0	2552
PEAK HR FACTOR :	0.250			0.000			0.841			0.935			0.915

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Wednesday

City: Anaheim **Date:** 1/29/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM			0					327	3	1	283		614
4:15 PM			0					313	1	0	334		648
4:30 PM			2					392	0	1	336		731
4:45 PM			0					341	0	0	363		704
5:00 PM			0					392	0	0	407		799
5:15 PM			0					319	0	0	407		726
5:30 PM			0					350	0	1	365		716
5:45 PM			0					330	0	1	319		650
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	2764	4	4	2814	0	5588
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.86%	0.14%	0.14%	99.86%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	1444	0	1	1513	0	2960
PEAK HR FACTOR :		0.250			0.000			0.921			0.930		0.926

UTURNS				
NB	SB	EB	WB	
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Dav:** Wednesday

City: Anaheim | **Cars** | **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM			0					121	0	0	164		285
6:15 AM			0					163	0	0	152		315
6:30 AM			0					200	1	0	204		405
6:45 AM			0					259	0	1	254		514
7:00 AM			0					257	0	0	231		488
7:15 AM			0					289	2	0	276		567
7:30 AM			0					395	0	0	280		675
7:45 AM			1					364	1	0	305		671
8:00 AM			0					259	1	0	278		538
8:15 AM			0					286	0	0	275		561
8:30 AM			0					247	0	0	231		478
8:45 AM			0					209	0	0	252		461
TOTAL VOLUMES :	0	0	1	0	0	0	0	3049	5	1	2902	0	5958
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.84%	0.16%	0.03%	99.97%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	1307	4	0	1139	0	2451
PEAK HR FACTOR :	0.250			0.000			0.830			0.934			0.908

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

Cars

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM			0					319	2	0	269		590
4:15 PM			0					309	1	0	325		635
4:30 PM			2					387	0	1	327		717
4:45 PM			0					333	0	0	357		690
5:00 PM			0					385	0	0	397		782
5:15 PM			0					315	0	0	400		715
5:30 PM			0					347	0	1	362		710
5:45 PM			0					326	0	1	314		641
TOTAL VOLUMES :	NL 0	NT 0	NR 2	SL 0	ST 0	SR 0	EL 0	ET 2721	ER 3	WL 3	WT 2751	WR 0	TOTAL 5480
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.89%	0.11%	0.11%	99.89%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	1420	0	1	1481	0	2904
PEAK HR FACTOR :		0.250			0.000			0.917			0.926		0.928

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

2 Axle Trucks

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	0	0	0	3	0	0	3	0					
6:00 AM								4		0	6		10				
6:15 AM								2		0	3		5				
6:30 AM								13		0	5		18				
6:45 AM								11		0	1		12				
7:00 AM								8		0	6		14				
7:15 AM								9		0	5		14				
7:30 AM								7		0	4		11				
7:45 AM								3		0	5		8				
8:00 AM								14		0	5		19				
8:15 AM								9		0	7		16				
8:30 AM								10		3	6		19				
8:45 AM								8		0	10		18				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	98	0	3	63	0	164	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	4.55%	95.45%	0.00%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	33	0	0	19	0	52				
PEAK HR FACTOR :	0.000			0.000			0.589			0.950			0.908				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Wednesday

City: Anaheim **2 Axle Trucks** **Date:** 1/29/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM							4	1	1	6			12
4:15 PM							3	0	0	6			9
4:30 PM							2	0	0	6			8
4:45 PM							5	0	0	3			8
5:00 PM							3	0	0	2			5
5:15 PM							1	0	0	6			7
5:30 PM							2	0	0	2			4
5:45 PM							1	0	0	2			3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	21	1	1	33	0	56
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	95.45%	4.55%	2.94%	97.06%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	11	0	0	17	0	28
PEAK HR FACTOR :		0.000			0.000			0.550			0.708		0.928

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Wednesday

3 Axle Trucks

City: Anaheim | **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM								1		0	1		2
6:15 AM								1		0	3		4
6:30 AM								2		0	1		3
6:45 AM								5		0	1		6
7:00 AM								1		0	4		5
7:15 AM								7		0	1		8
7:30 AM								2		0	3		5
7:45 AM								2		0	3		5
8:00 AM								3		0	2		5
8:15 AM								2		0	2		4
8:30 AM								3		0	1		4
8:45 AM								1		1	2		4
TOTAL VOLUMES :	0	0	0	0	0	0	0	30	0	1	24	0	55
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	4.00%	96.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	14	0	0	9	0	23
PEAK HR FACTOR :	0.000			0.000			0.500			0.750			0.908

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Wednesday

3 Axle Trucks

City: Anaheim **Date:** 1/29/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								2			1		3
4:15 PM								0			0		0
4:30 PM								2			0		2
4:45 PM								0			1		1
5:00 PM								1			6		7
5:15 PM								1			1		2
5:30 PM								0			0		0
5:45 PM								2			2		4
TOTAL VOLUMES :	0	0	0	0	0	0	0	8	0	0	11	0	19
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	0	0	8	0	12
PEAK HR FACTOR :		0.000			0.000			0.500			0.333		0.928

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM								2	0	0	3		5
6:15 AM								2	0	0	4		6
6:30 AM								2	0	1	4		7
6:45 AM								2	0	0	2		4
7:00 AM								1	0	0	3		4
7:15 AM								3	0	0	3		6
7:30 AM								2	0	0	4		6
7:45 AM								1	0	0	4		5
8:00 AM								2	0	2	5		9
8:15 AM								3	1	0	2		6
8:30 AM								4	0	0	6		10
8:45 AM								4	0	1	2		7
TOTAL VOLUMES :	0	0	0	0	0	0	0	28	1	4	42	0	75
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	96.55%	3.45%	8.70%	91.30%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	2	16	0	26
PEAK HR FACTOR :	0.000			0.000			0.667			0.643			0.908

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Wednesday

City: Anaheim **4 Axle+ Trucks** **Date:** 1/29/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								2			7		9
4:15 PM								1			3		4
4:30 PM								1			3		4
4:45 PM								3			2		5
5:00 PM								3			2		5
5:15 PM								2			0		2
5:30 PM								1			1		2
5:45 PM								1			1		2
TOTAL VOLUMES :	0	0	0	0	0	0	0	14	0	0	19	0	33
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	9	0	0	7	0	16
PEAK HR FACTOR :		0.000			0.000			0.750			0.583		0.928

UTURNS			
NB	SB	EB	WB
0	0	0	0

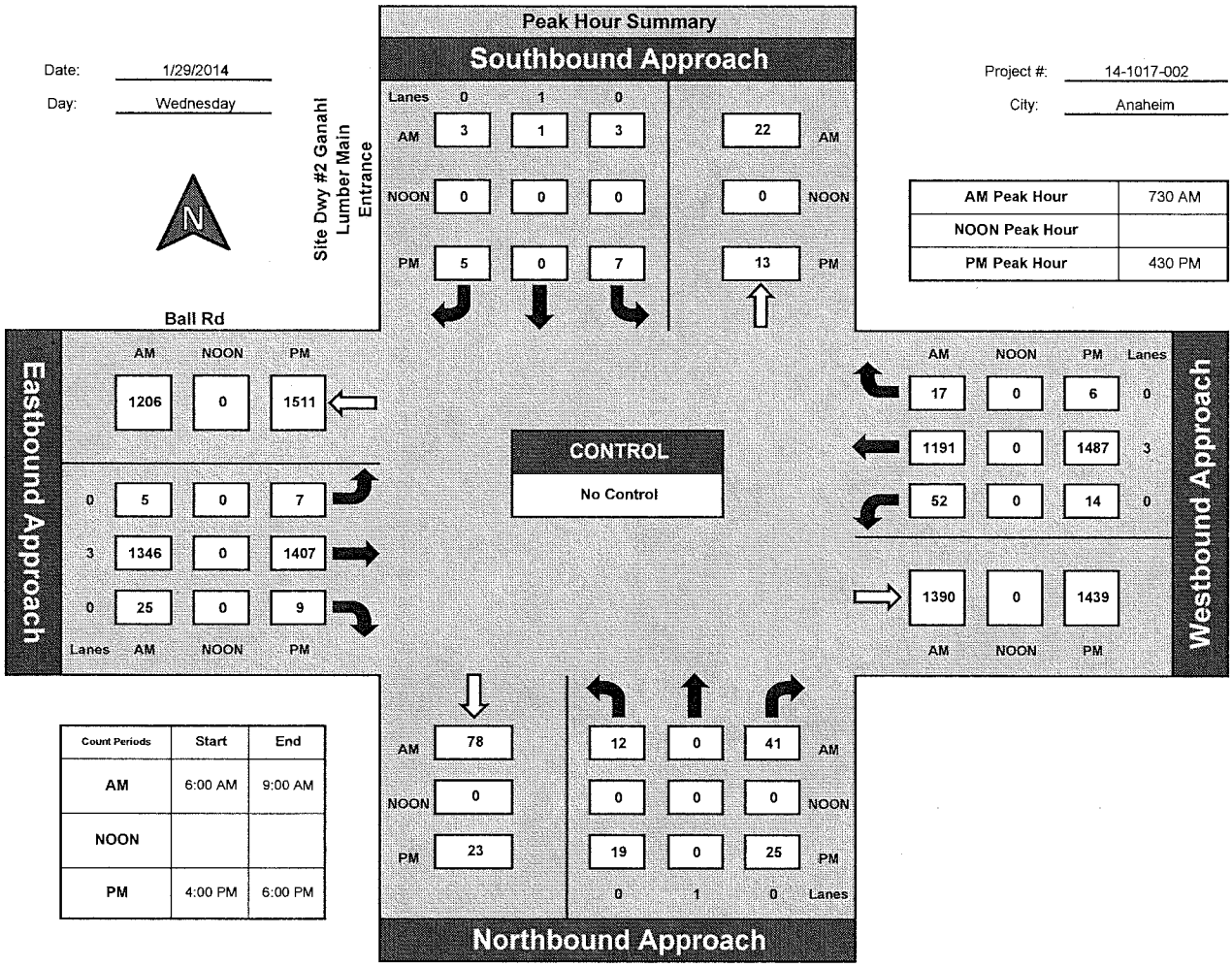
CONTROL : No Control

ITM Peak Hour Summary

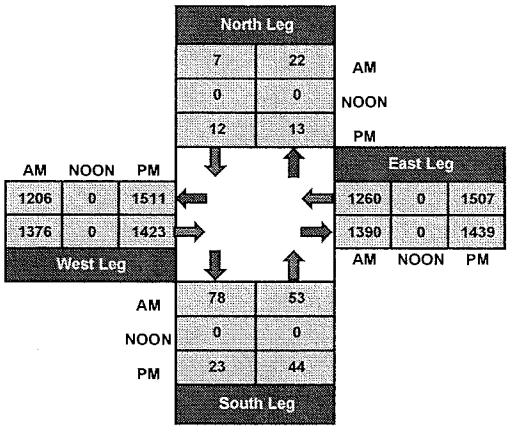
Prepared by:

National Data & Surveying Services

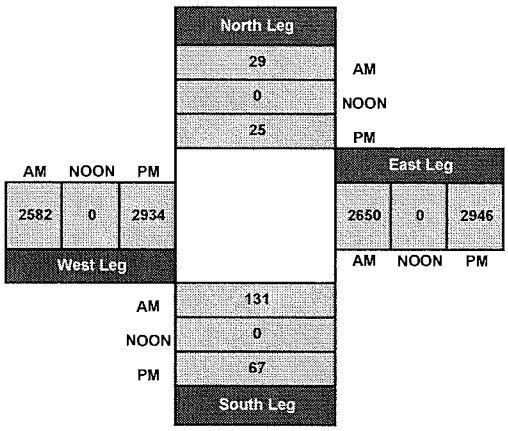
Site Dwy #2 Ganahl Lumber Main Entrance and Ball Rd , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Wednesday

City: Anaheim **TOTALS** **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	2		1	0	0	0	2	118	8	8	165	0	304
6:15 AM	2		5	0	0	0	0	162	13	9	163	0	354
6:30 AM	5		5	0	0	0	0	216	6	12	212	1	457
6:45 AM	4		5	0	0	0	0	245	10	4	252	2	522
7:00 AM	1		10	1	0	0	1	254	9	11	250	1	538
7:15 AM	6		9	0	0	0	0	306	3	14	273	1	612
7:30 AM	2		13	2	0	1	0	414	7	10	280	6	735
7:45 AM	3		6	0	0	0	1	357	8	10	330	5	720
8:00 AM	3		13	1	1	2	2	280	4	13	283	3	605
8:15 AM	4		9	0	0	0	2	295	6	19	298	3	636
8:30 AM	3		14	1	0	1	3	244	9	17	245	2	539
8:45 AM	7		18	2	2	0	1	204	12	8	267	6	527
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	42	0	108	7	3	4	12	3095	95	135	3018	30	6549
APPROACH %'s :	28.00%	0.00%	72.00%	50.00%	21.43%	28.57%	0.37%	96.66%	2.97%	4.24%	94.82%	0.94%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	12	0	41	3	1	3	5	1346	25	52	1191	17	2696
PEAK HR FACTOR :	0.828			0.438			0.817			0.913			0.917

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Wednesday

City: Anaheim **Date:** 1/29/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM	6		11	2		1	0	319	5	7	293	4	648
4:15 PM	7		10	3		2	3	311	6	3	315	2	662
4:30 PM	8		8	2		0	2	377	4	4	322	2	729
4:45 PM	4		6	2		4	3	340	4	4	368	3	738
5:00 PM	6		6	1		1	1	376	1	4	394	0	790
5:15 PM	1		5	2		0	1	314	0	2	403	1	729
5:30 PM	2		3	5		3	2	345	4	0	335	1	700
5:45 PM	3		3	1		2	0	322	2	0	324	0	657
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	37	0	52	18	0	13	12	2704	26	24	2754	13	5653
APPROACH %'s :	41.57%	0.00%	58.43%	58.06%	0.00%	41.94%	0.44%	98.61%	0.95%	0.86%	98.67%	0.47%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	19	0	25	7	0	5	7	1407	9	14	1487	6	2986
PEAK HR FACTOR :	0.688			0.500			0.929			0.928			0.945

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Wednesday

City: Anaheim | **Cars** | **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	2		1	0	0	0	2	108	8	8	155	0	284
6:15 AM	2		5	0	0	0	0	155	13	8	153	0	336
6:30 AM	5		4	0	0	0	0	196	6	10	203	1	425
6:45 AM	4		4	0	0	0	0	231	10	3	245	2	499
7:00 AM	1		9	1	0	0	1	245	9	10	236	1	513
7:15 AM	6		8	0	0	0	0	288	3	13	262	1	581
7:30 AM	2		13	2	0	1	0	402	6	9	269	6	710
7:45 AM	2		6	0	0	0	1	349	8	10	313	5	694
8:00 AM	2		13	1	1	2	2	265	3	13	269	3	574
8:15 AM	4		9	0	0	0	2	283	5	19	283	3	608
8:30 AM	3		12	1	0	1	3	227	8	15	230	2	502
8:45 AM	7		15	2	2	0	1	192	12	7	252	6	496
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	40	0	99	7	3	4	12	2941	91	125	2870	30	6222
APPROACH %'s :	28.78%	0.00%	71.22%	50.00%	21.43%	28.57%	0.39%	96.62%	2.99%	4.13%	94.88%	0.99%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	10	0	41	3	1	3	5	1299	22	51	1134	17	2586
PEAK HR FACTOR :		0.850			0.438			0.813			0.916		0.911

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

Cars

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM	6		11	2		1	0	310	5	7	278	4	624
4:15 PM	7		10	3		2	2	307	6	1	306	2	646
4:30 PM	8		8	2		0	2	371	4	3	310	2	710
4:45 PM	4		6	2		4	3	334	4	4	363	2	726
5:00 PM	6		6	1		0	1	369	0	4	385	0	772
5:15 PM	1		4	2		0	1	310	0	2	398	1	719
5:30 PM	2		3	5		3	2	340	4	0	332	1	692
5:45 PM	3		3	1		2	0	318	2	0	319	0	648
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	37	0	51	18	0	12	11	2659	25	21	2691	12	5537
APPROACH %'s :	42.05%	0.00%	57.95%	60.00%	0.00%	40.00%	0.41%	98.66%	0.93%	0.77%	98.79%	0.44%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	19	0	24	7	0	4	7	1384	8	13	1456	5	2927
PEAK HR FACTOR :		0.672			0.458			0.928			0.919		0.948

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Wednesday

City: Anaheim **2 Axle Trucks** **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
6:00 AM	0		0					5	0	0	5		10
6:15 AM	0		0					3	0	1	4		8
6:30 AM	0		1					13	0	2	4		20
6:45 AM	0		1					10	0	1	3		15
7:00 AM	0		1					7	0	0	8		16
7:15 AM	0		1					10	0	1	6		18
7:30 AM	0		0					5	1	1	5		12
7:45 AM	1		0					5	0	0	9		15
8:00 AM	1		0					10	1	0	5		17
8:15 AM	0		0					7	1	0	10		18
8:30 AM	0		2					11	1	1	9		24
8:45 AM	0		3					7	0	1	8		19
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	0	9	0	0	0	0	93	4	8	76	0	192
APPROACH %'s :	18.18%	0.00%	81.82%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	95.88%	4.12%	9.52%	90.48%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	2	0	0	0	0	0	0	27	3	1	29	0	62
PEAK HR FACTOR :	0.500			0.000			0.682			0.750			0.911

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

2 Axle Trucks

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM			0			0	0	4		0	6	0	10
4:15 PM			0			0	1	3		2	4	0	10
4:30 PM			0			0	0	3		0	9	0	12
4:45 PM			0			0	0	4		0	3	1	8
5:00 PM			0			1	0	4		0	3	0	8
5:15 PM			1			0	0	2		0	4	0	7
5:30 PM			0			0	0	4		0	2	0	6
5:45 PM			0			0	0	1		0	2	0	3
TOTAL VOLUMES :	NL 0	NT 0	NR 1	SL 0	ST 0	SR 1	EL 1	ET 25	ER 0	WL 2	WT 33	WR 1	TOTAL 64
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	3.85%	96.15%	0.00%	5.56%	91.67%	2.78%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	1	0	0	1	0	13	0	0	19	1	35
PEAK HR FACTOR :		0.250			0.250			0.813			0.556		0.948

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Wednesday

3 Axle Trucks

City: Anaheim | **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	3	0	0	3	0					
6:00 AM								3		0	2		5				
6:15 AM								2		0	2		4				
6:30 AM								4		0	1		5				
6:45 AM								2		0	2		4				
7:00 AM								0		1	2		3				
7:15 AM								4		0	2		6				
7:30 AM								4		0	2		6				
7:45 AM								2		0	3		5				
8:00 AM								3		0	3		6				
8:15 AM								3		0	2		5				
8:30 AM								3		1	2		6				
8:45 AM								1		0	3		4				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	31	0	2	26	0	59	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	7.14%	92.86%	0.00%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	12	0	0	10	0	22				
PEAK HR FACTOR :	0.000			0.000			0.750			0.833			0.911				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Wednesday

City: Anaheim | **3 Axle Trucks** | **Date:** 1/29/2014

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
4:00 PM								3	0	0	2		5
4:15 PM								0	0	0	1		1
4:30 PM								2	0	1	0		3
4:45 PM								0	0	0	1		1
5:00 PM								0	1	0	3		4
5:15 PM								1	0	0	1		2
5:30 PM								0	0	0	0		0
5:45 PM								2	0	0	1		3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	8	1	1	9	0	19
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	88.89%	11.11%	10.00%	90.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	3	1	1	5	0	10
PEAK HR FACTOR :		0.000			0.000			0.500			0.500		0.948

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM								2			3		5
6:15 AM								2			4		6
6:30 AM								3			4		7
6:45 AM								2			2		4
7:00 AM								2			4		6
7:15 AM								4			3		7
7:30 AM								3			4		7
7:45 AM								1			5		6
8:00 AM								2			6		8
8:15 AM								2			3		5
8:30 AM								3			4		7
8:45 AM								4			4		8
TOTAL VOLUMES :	0	0	0	0	0	0	0	30	0	0	46	0	76
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	18	0	26
PEAK HR FACTOR :	0.000			0.000			0.667			0.750			0.911

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002

City: Anaheim

4 Axle+ Trucks

PM

Day: Wednesday

Date: 1/29/2014

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM								2			7		9
4:15 PM								1			4		5
4:30 PM								1			3		4
4:45 PM								2			1		3
5:00 PM								3			3		6
5:15 PM								1			0		1
5:30 PM								1			1		2
5:45 PM								1			2		3
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 0	ET 12	ER 0	WL 0	WT 21	WR 0	TOTAL 33
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	7	0	0	7	0	14
PEAK HR FACTOR :		0.000			0.000			0.583			0.583		0.948

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

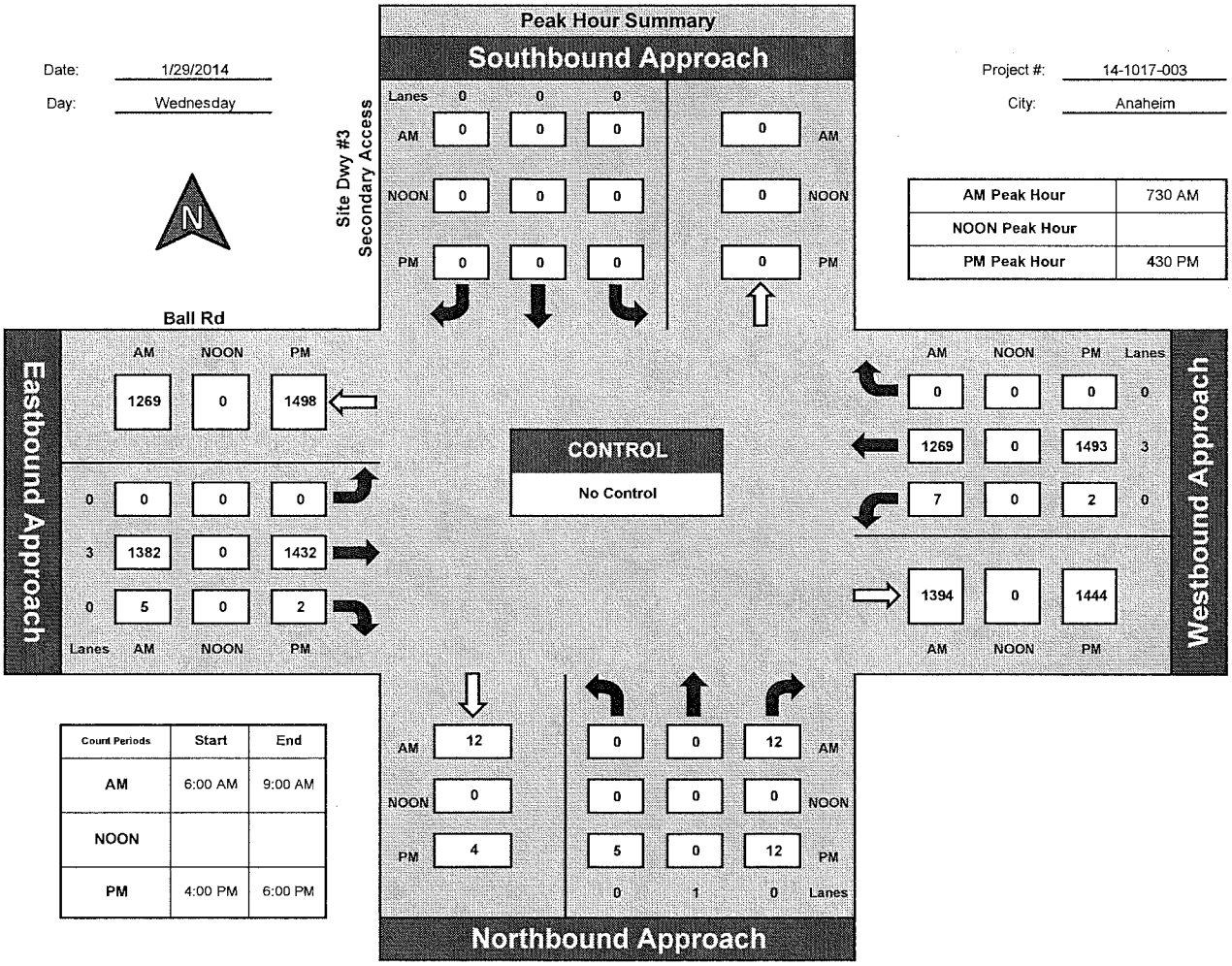
CONTROL : No Control

ITM Peak Hour Summary

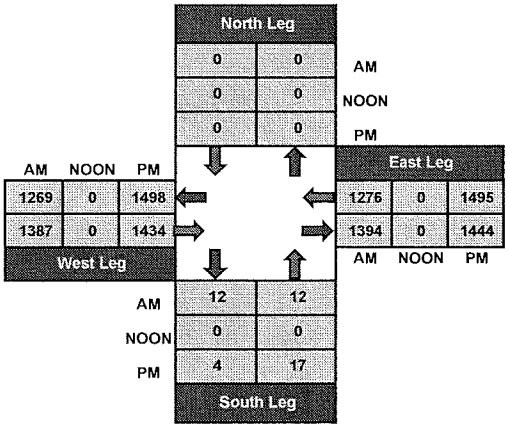
Prepared by:

National Data & Surveying Services

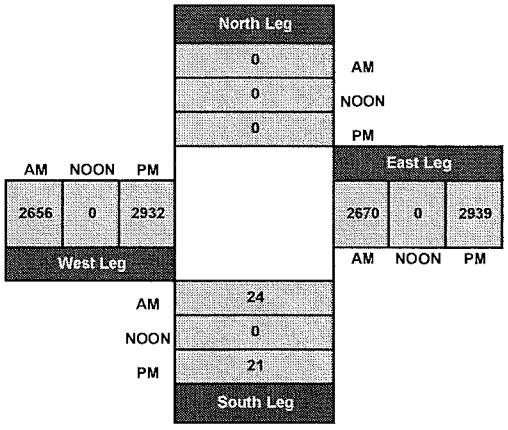
Site Dwy #3 Secondary Access and Ball Rd , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Wednesday

City: Anaheim **TOTALS** **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	2		2					125	0	0	174		303
6:15 AM	1		4					161	0	1	165		332
6:30 AM	2		0					223	0	5	218		448
6:45 AM	0		1					261	1	0	263		526
7:00 AM	0		2					260	0	4	252		518
7:15 AM	0		0					302	0	1	294		597
7:30 AM	0		3					419	2	1	309		734
7:45 AM	0		3					377	0	0	334		714
8:00 AM	0		2					291	1	3	315		612
8:15 AM	0		4					295	2	3	311		615
8:30 AM	2		0					251	1	3	268		525
8:45 AM	0		1					215	0	0	291		507
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	7	0	22	0	0	0	0	3180	7	21	3194	0	6431
APPROACH %'s :	24.14%	0.00%	75.86%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.78%	0.22%	0.65%	99.35%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	12	0	0	0	0	1382	5	7	1269	0	2675
PEAK HR FACTOR :	0.750			0.000			0.824			0.955			0.911

CONTROL : No Control

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Wednesday

City: Anaheim **Date:** 1/29/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM	3		3					331	0	0	296		633
4:15 PM	1		2					318	0	2	340		663
4:30 PM	1		3					391	0	2	344		741
4:45 PM	0		3					347	0	0	370		720
5:00 PM	2		6					384	0	0	392		784
5:15 PM	2		0					310	2	0	387		701
5:30 PM	0		0					351	0	1	370		722
5:45 PM	1		1					330	0	1	318		651
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	10	0	18	0	0	0	0	2762	2	6	2817	0	5615
APPROACH %'s :	35.71%	0.00%	64.29%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.93%	0.07%	0.21%	99.79%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	5	0	12	0	0	0	0	1432	2	2	1493	0	2946
PEAK HR FACTOR :		0.531			0.000			0.917			0.953		0.939

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Wednesday

City: Anaheim | **Cars** | **Date:** 1/29/2014

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	0		0					118	0	0	166		284
6:15 AM	0		1					155	0	1	157		314
6:30 AM	1		0					202	0	5	206		414
6:45 AM	0		0					241	1	0	256		498
7:00 AM	0		1					247	0	4	239		491
7:15 AM	0		0					283	0	1	284		568
7:30 AM	0		3					409	2	1	296		711
7:45 AM	0		2					369	0	0	320		691
8:00 AM	0		2					274	1	3	299		579
8:15 AM	0		4					283	2	2	297		588
8:30 AM	0		0					231	1	3	251		486
8:45 AM	0		1					200	0	0	275		476
TOTAL VOLUMES :	1	0	14	0	0	0	0	3012	7	20	3046	0	6100
APPROACH %'s :	6.67%	0.00%	93.33%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.77%	0.23%	0.65%	99.35%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	11	0	0	0	0	1335	5	6	1212	0	2569
PEAK HR FACTOR :		0.688			0.000			0.815			0.952		0.903

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Wednesday

City: Anaheim | **Cars** | **Date:** 1/29/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM	3		3					323	0	0	278		607
4:15 PM	1		2					314	0	2	331		650
4:30 PM	1		3					385	0	2	332		723
4:45 PM	0		3					338	0	0	361		702
5:00 PM	2		6					377	0	0	384		769
5:15 PM	2		0					305	2	0	381		690
5:30 PM	0		0					346	0	1	366		713
5:45 PM	1		1					326	0	1	313		642
TOTAL VOLUMES :	10	0	18	0	0	0	0	2714	2	6	2746	0	5496
APPROACH %'s :	35.71%	0.00%	64.29%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.93%	0.07%	0.22%	99.78%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	5	0	12	0	0	0	0	1405	2	2	1458	0	2884
PEAK HR FACTOR :		0.531			0.000			0.914			0.951		0.938

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Wednesday

City: Anaheim **Date:** 1/29/2014

2 Axle Trucks

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	1		0					4		0	6		11
6:15 AM	0		3					4		0	3		10
6:30 AM	0		0					17		0	7		24
6:45 AM	0		0					15		0	3		18
7:00 AM	0		0					9		0	7		16
7:15 AM	0		0					12		0	5		17
7:30 AM	0		0					6		0	6		12
7:45 AM	0		0					5		0	7		12
8:00 AM	0		0					12		0	7		19
8:15 AM	0		0					8		1	10		19
8:30 AM	0		0					12		0	11		23
8:45 AM	0		0					10		0	11		21
TOTAL VOLUMES :	NL 1	NT 0	NR 3	SL 0	ST 0	SR 0	EL 0	ET 114	ER 0	WL 1	WT 83	WR 0	TOTAL 202
APPROACH %'s :	25.00%	0.00%	75.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	1.19%	98.81%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	31	0	1	30	0	62
PEAK HR FACTOR :	0.000			0.000			0.646			0.705			0.903

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Wednesday

City: Anaheim **Date:** 1/29/2014

2 Axle Trucks

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								5			9		14
4:15 PM								3			6		9
4:30 PM								3			7		10
4:45 PM								6			6		12
5:00 PM								5			3		8
5:15 PM								2			5		7
5:30 PM								4			3		7
5:45 PM								1			2		3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	29	0	0	41	0	70
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	16	0	0	21	0	37
PEAK HR FACTOR :	0.000			0.000			0.667			0.750			0.938

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

3 Axle Trucks

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM			2					1			1		4
6:15 AM			0					1			2		3
6:30 AM			0					1			1		2
6:45 AM			0					3			2		5
7:00 AM			1					2			3		6
7:15 AM			0					4			1		5
7:30 AM			0					2			3		5
7:45 AM			1					2			3		6
8:00 AM			0					3			2		5
8:15 AM			0					1			2		3
8:30 AM			0					4			2		6
8:45 AM			0					2			2		4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	4	0	0	0	0	26	0	0	24	0	54
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	8	0	0	10	0	19
PEAK HR FACTOR :	0.250			0.000			0.667			0.833			0.903

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Wednesday

City: Anaheim **3 Axle Trucks** **Date:** 1/29/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM								2			1		3
4:15 PM								0			1		1
4:30 PM								2			2		4
4:45 PM								0			1		1
5:00 PM								0			2		2
5:15 PM								1			1		2
5:30 PM								0			0		0
5:45 PM								2			2		4
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 0	ET 7	ER 0	WL 0	WT 10	WR 0	TOTAL 17
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	3	0	0	6	0	9
PEAK HR FACTOR :		0.000			0.000			0.375			0.750		0.938

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	1		0					2			1		4
6:15 AM	1		0					1			3		5
6:30 AM	1		0					3			4		8
6:45 AM	0		1					2			2		5
7:00 AM	0		0					2			3		5
7:15 AM	0		0					3			4		7
7:30 AM	0		0					2			4		6
7:45 AM	0		0					1			4		5
8:00 AM	0		0					2			7		9
8:15 AM	0		0					3			2		5
8:30 AM	2		0					4			4		10
8:45 AM	0		0					3			3		6
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	0	1	0	0	0	0	28	0	0	41	0	75
APPROACH %'s :	83.33%	0.00%	16.67%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	17	0	25
PEAK HR FACTOR :		0.000			0.000			0.667			0.607		0.903

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Wednesday

City: Anaheim | **4 Axle+ Trucks** | **Date:** 1/29/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								1			8		9
4:15 PM								1			2		3
4:30 PM								1			3		4
4:45 PM								3			2		5
5:00 PM								2			3		5
5:15 PM								2			0		2
5:30 PM								1			1		2
5:45 PM								1			1		2
TOTAL VOLUMES :	0	0	0	0	0	0	0	12	0	0	20	0	32
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	8	0	16
PEAK HR FACTOR :		0.000			0.000			0.667			0.667		0.938

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

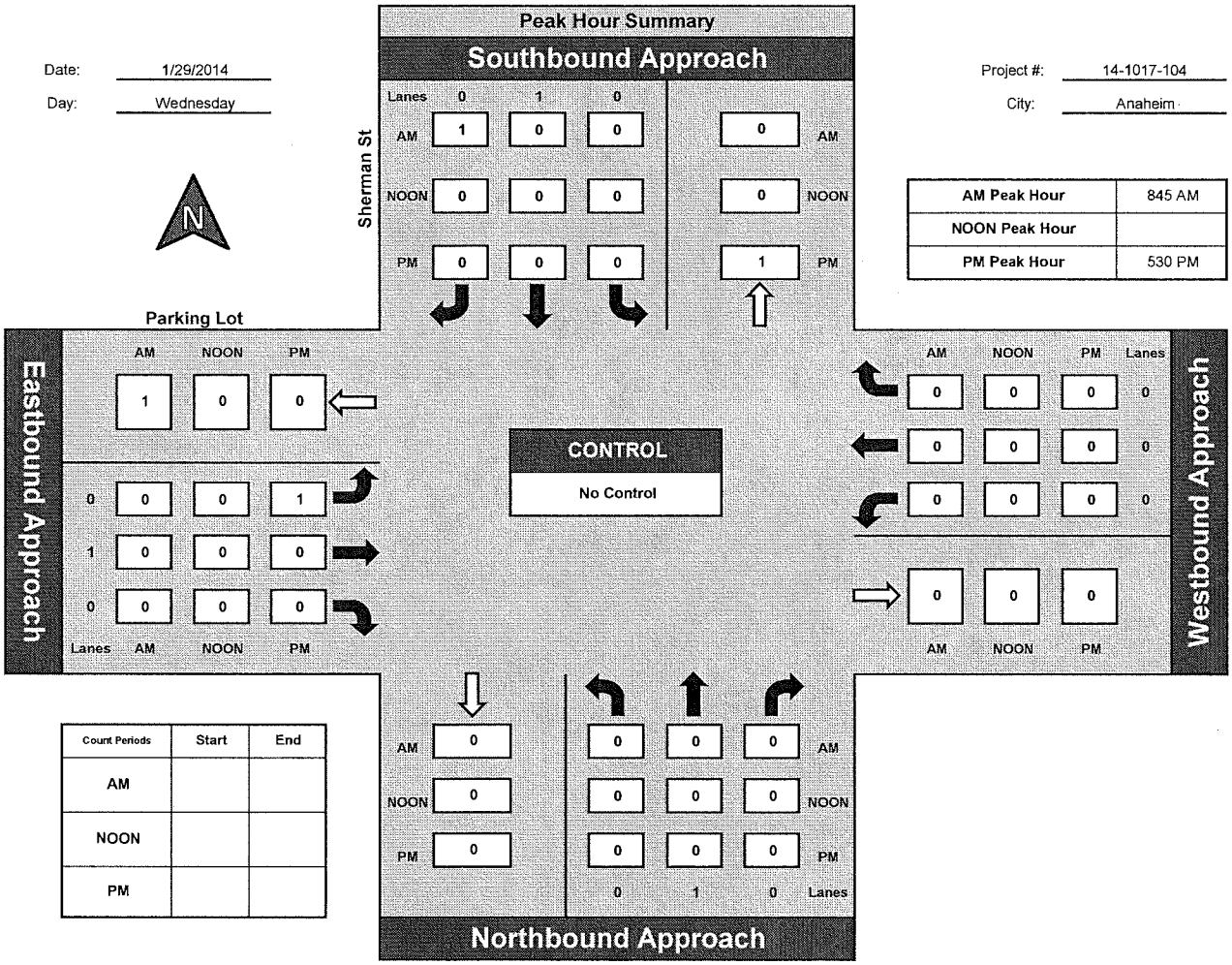
Sherman St and Parking Lot , Anaheim

Date: 1/29/2014

Day: Wednesday

Project #: 14-1017-104

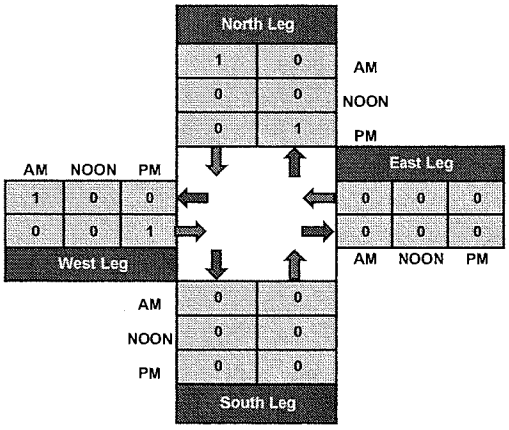
City: Anaheim



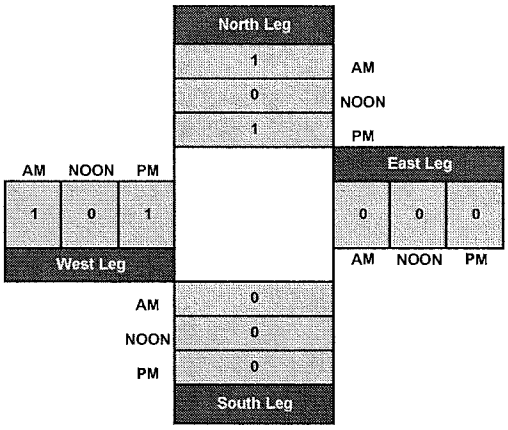
AM Peak Hour	845 AM
NOON Peak Hour	
PM Peak Hour	530 PM

Count Periods	Start	End
AM		
NOON		
PM		

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Wednesday

City: Anaheim **Date:** 1/29/2014

TOTALS

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM						0							0
6:15 AM						0							0
6:30 AM						0							0
6:45 AM						0							0
7:00 AM						0							0
7:15 AM						0							0
7:30 AM						0							0
7:45 AM						0							0
8:00 AM						0							0
8:15 AM						0							0
8:30 AM						0							0
8:45 AM						1							1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	845 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.250			0.000			0.000			0.250

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Wednesday

City: Anaheim **TOTALS** **Date:** 1/29/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM							1						1
4:15 PM							0						0
4:30 PM							0						0
4:45 PM							0						0
5:00 PM							0						0
5:15 PM							0						0
5:30 PM							1						1
5:45 PM							0						0
TOTAL VOLUMES :	0	0	0	0	0	0	2	0	0	0	0	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **Cars** | **Date:** 1/29/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
6:00 AM						0							0				
6:15 AM						0							0				
6:30 AM						0							0				
6:45 AM						0							0				
7:00 AM						0							0				
7:15 AM						0							0				
7:30 AM						0							0				
7:45 AM						0							0				
8:00 AM						0							0				
8:15 AM						0							0				
8:30 AM						0							0				
8:45 AM						1							1				
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	845 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1				
PEAK HR FACTOR :	0.000			0.250			0.000			0.000			0.250				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **Cars** | **Date:** 1/29/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM							1						1
4:15 PM							0						0
4:30 PM							0						0
4:45 PM							0						0
5:00 PM							0						0
5:15 PM							0						0
5:30 PM							1						1
5:45 PM							0						0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	2	0	0	0	0	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

2 Axle Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	845 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

2 Axle Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

3 Axle Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
6:00 AM													0				
6:15 AM													0				
6:30 AM													0				
6:45 AM													0				
7:00 AM													0				
7:15 AM													0				
7:30 AM													0				
7:45 AM													0				
8:00 AM													0				
8:15 AM													0				
8:30 AM													0				
8:45 AM													0				
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	845 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

3 Axle Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250

UTURNS				
NB	SB	EB	WB	
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
6:00 AM													0				
6:15 AM													0				
6:30 AM													0				
6:45 AM													0				
7:00 AM													0				
7:15 AM													0				
7:30 AM													0				
7:45 AM													0				
8:00 AM													0				
8:15 AM													0				
8:30 AM													0				
8:45 AM													0				
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	845 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Wednesday

City: Anaheim | **4 Axle+ Trucks** | **Date:** 1/29/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

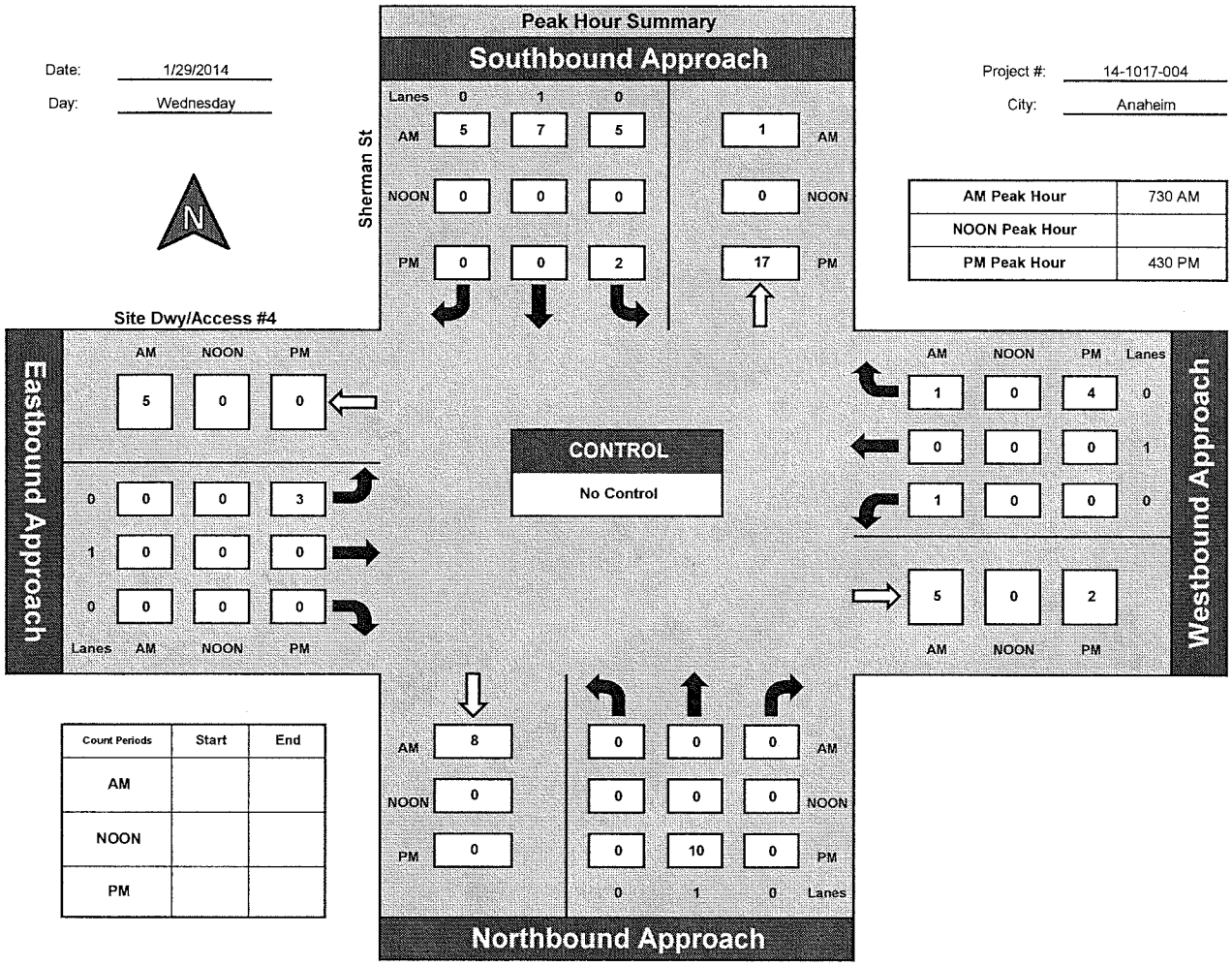
CONTROL : No Control

ITM Peak Hour Summary

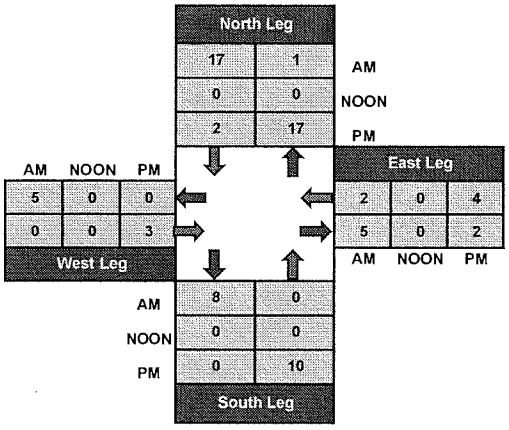
Prepared by:

National Data & Surveying Services

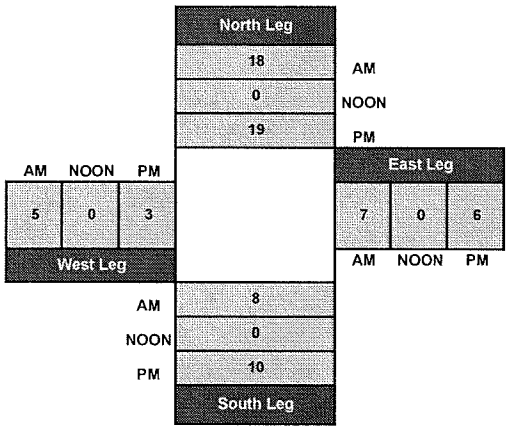
Sherman St and Site Dwy/Access #4 , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Wednesday

City: Anaheim **Date:** 1/29/2014

TOTALS

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0		0	0	0	1			0		0	1
6:15 AM		0		2	1	3	0			0		0	6
6:30 AM		0		0	0	0	0			0		0	0
6:45 AM		0		0	1	1	0			0		0	2
7:00 AM		0		0	0	3	1			0		0	4
7:15 AM		1		2	0	0	0			0		0	3
7:30 AM		0		0	1	1	0			0		1	3
7:45 AM		0		2	4	2	0			0		0	8
8:00 AM		0		1	2	1	0			0		0	4
8:15 AM		0		2	0	1	0			1		0	4
8:30 AM		0		0	0	0	0			0		0	0
8:45 AM		1		0	1	1	1			0		0	4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	9	10	13	3	0	0	1	0	1	39
APPROACH %'s :	0.00%	100.00%	0.00%	28.13%	31.25%	40.63%	100.00%	0.00%	0.00%	50.00%	0.00%	50.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	5	7	5	0	0	0	1	0	1	19
PEAK HR FACTOR :		0.000			0.531			0.000			0.500		0.594

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

TOTALS

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		1		2	0		1					0	4
4:15 PM		1		0	0		0					0	1
4:30 PM		2		2	0		0					0	4
4:45 PM		2		0	0		0					1	3
5:00 PM		5		0	0		2					1	8
5:15 PM		1		0	0		1					2	4
5:30 PM		0		0	1		0					1	2
5:45 PM		0		0	0		0					2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	12	0	4	1	0	4	0	0	0	0	7	28
APPROACH %'s :	0.00%	100.00%	0.00%	80.00%	20.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	10	0	2	0	0	3	0	0	0	0	4	19
PEAK HR FACTOR :		0.500			0.250			0.375			0.500		0.594

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

City: Anaheim | Cars | **Date:** 1/29/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM				0	0	0	0			0		0	0
6:15 AM				2	0	3	0			0		0	5
6:30 AM				0	0	0	0			0		0	0
6:45 AM				0	1	1	0			0		0	2
7:00 AM				0	0	3	1			0		0	4
7:15 AM				2	0	0	0			0		0	2
7:30 AM				0	1	1	0			0		1	3
7:45 AM				2	4	2	0			0		0	8
8:00 AM				1	2	1	0			0		0	4
8:15 AM				2	0	0	0			1		0	3
8:30 AM				0	0	0	0			0		0	0
8:45 AM				0	0	1	0			0		0	1
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 9	ST 8	SR 12	EL 1	ET 0	ER 0	WL 1	WT 0	WR 1	TOTAL 32
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	31.03%	27.59%	41.38%	100.00%	0.00%	0.00%	50.00%	0.00%	50.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	5	7	4	0	0	0	1	0	1	18
PEAK HR FACTOR :	0.000			0.500			0.000			0.500			0.563

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

Cars

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		1		2	0		1					0	4
4:15 PM		1		0	0		0					0	1
4:30 PM		2		2	0		0					0	4
4:45 PM		2		0	0		0					1	3
5:00 PM		S		0	0		2					1	8
5:15 PM		1		0	0		1					2	4
5:30 PM		0		0	1		0					1	2
5:45 PM		0		0	0		0					2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	12	0	4	1	0	4	0	0	0	0	7	28
APPROACH %'s :	0.00%	100.00%	0.00%	80.00%	20.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	10	0	2	0	0	3	0	0	0	0	4	19
PEAK HR FACTOR :		0.500			0.250			0.375			0.500		0.594

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

City: Anaheim | **2 Axle Trucks** | **Date:** 1/29/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		0			0		1						1
6:15 AM		0			0		0						0
6:30 AM		0			0		0						0
6:45 AM		0			0		0						0
7:00 AM		0			0		0						0
7:15 AM		0			0		0						0
7:30 AM		0			0		0						0
7:45 AM		0			0		0						0
8:00 AM		0			0		0						0
8:15 AM		0			0		0						0
8:30 AM		0			0		0						0
8:45 AM		1			1		0						2
TOTAL VOLUMES :	0	1	0	0	1	0	1	0	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.563

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Wednesday

City: Anaheim **2 Axle Trucks** **Date:** 1/29/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.594

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

3 Axle Trucks

City: Anaheim | **Date:** 1/29/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM													0				
6:15 AM													0				
6:30 AM													0				
6:45 AM													0				
7:00 AM													0				
7:15 AM													0				
7:30 AM													0				
7:45 AM													0				
8:00 AM													0				
8:15 AM													0				
8:30 AM													0				
8:45 AM													0				
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.563				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

3 Axle Trucks

City: Anaheim | **Date:** 1/29/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.594

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

City: Anaheim | **Date:** 1/29/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0			0	0	0						0
6:15 AM		0			1	0	0						1
6:30 AM		0			0	0	0						0
6:45 AM		0			0	0	0						0
7:00 AM		0			0	0	0						0
7:15 AM		1			0	0	0						1
7:30 AM		0			0	0	0						0
7:45 AM		0			0	0	0						0
8:00 AM		0			0	0	0						0
8:15 AM		0			0	1	0						1
8:30 AM		0			0	0	0						0
8:45 AM		0			0	0	1						1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	1	1	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	50.00%	50.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.000			0.250			0.000			0.000		0.563

UTURNS				
NB	SB	EB	WB	
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Wednesday

City: Anaheim | **4 Axle+ Trucks** | **Date:** 1/29/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.594

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

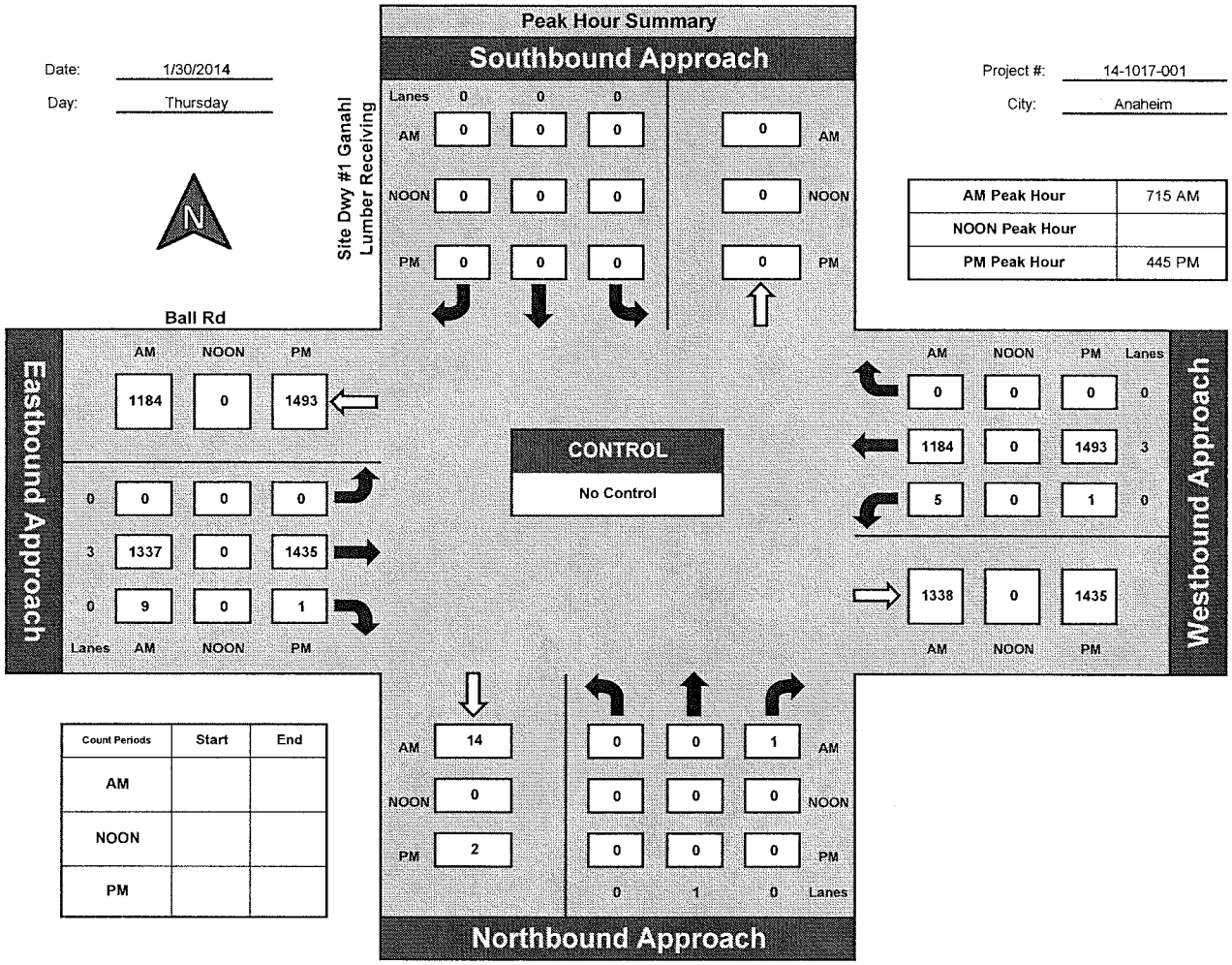
CONTROL : No Control

ITM Peak Hour Summary

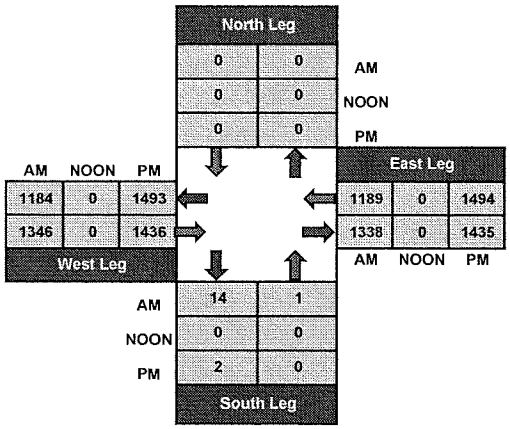
Prepared by:

National Data & Surveying Services

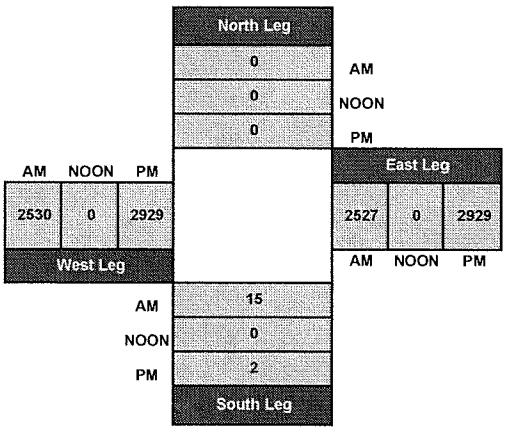
Site Dwy #1 Ganahl Lumber Receiving and Ball Rd , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Thursday

City: Anaheim **TOTALS** **Date:** 1/30/2014

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM			0				0	142	0	0	172		314
6:15 AM			0				0	168	0	1	175		344
6:30 AM			0				0	234	0	2	213		449
6:45 AM			0				0	225	0	1	254		480
7:00 AM			0				1	268	2	0	250		521
7:15 AM			0				0	326	3	0	280		609
7:30 AM			0				0	392	2	2	290		686
7:45 AM			1				0	309	2	2	319		633
8:00 AM			0				0	310	2	1	295		608
8:15 AM			0				0	292	1	0	296		589
8:30 AM			0				0	285	0	1	270		556
8:45 AM			0				0	251	2	0	267		520
TOTAL VOLUMES :	NL 0	NT 0	NR 1	SL 0	ST 0	SR 0	EL 1	ET 3202	ER 14	WL 10	WT 3081	WR 0	TOTAL 6309
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.03%	99.53%	0.44%	0.32%	99.68%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	1337	9	5	1184	0	2536
PEAK HR FACTOR :		0.250			0.000			0.854			0.926		0.924

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM			0					364	0	1	338		703
4:15 PM			0					360	1	0	340		701
4:30 PM			1					362	0	0	330		693
4:45 PM			0					327	0	0	359		686
5:00 PM			0					385	0	0	404		789
5:15 PM			0					347	0	0	378		725
5:30 PM			0					376	1	1	352		730
5:45 PM			1					298	0	0	339		638
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	2819	2	2	2840	0	5665
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.93%	0.07%	0.07%	99.93%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1435	1	1	1493	0	2930
PEAK HR FACTOR :		0.000			0.000			0.932			0.925		0.928

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

Cars

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL	NB	SB	EB	WB
6:00 AM			0				0	134	0	0	163		297				
6:15 AM			0				0	158	0	0	164		322				
6:30 AM			0				0	226	0	0	205		431				
6:45 AM			0				0	209	0	1	245		455				
7:00 AM			0				1	256	1	0	240		498				
7:15 AM			0				0	318	3	0	267		588				
7:30 AM			0				0	380	1	2	278		661				
7:45 AM			1				0	301	1	1	301		605				
8:00 AM			0				0	295	1	0	284		580				
8:15 AM			0				0	281	0	0	280		561				
8:30 AM			0				0	272	0	0	254		526				
8:45 AM			0				0	230	0	0	247		477				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	1	0	0	0	1	3060	7	4	2928	0	6001	0	0	0	0
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.03%	99.74%	0.23%	0.14%	99.86%	0.00%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	0	1	0	0	0	0	1294	6	3	1130	0	2434				
PEAK HR FACTOR :	0.250			0.000			0.853			0.938			0.921				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Thursday

City: Anaheim **Cars** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM			0					352	0	1	330		683
4:15 PM			0					354	1	0	329		684
4:30 PM			1					361	0	0	325		687
4:45 PM			0					321	0	0	347		668
5:00 PM			0					378	0	0	398		776
5:15 PM			0					341	0	0	370		711
5:30 PM			0					374	1	1	346		722
5:45 PM			1					296	0	0	335		632
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	2777	2	2	2780	0	5563
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.93%	0.07%	0.07%	99.93%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1414	1	1	1461	0	2877
PEAK HR FACTOR :		0.000			0.000			0.936			0.918		0.927

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

2 Axle Trucks

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	0	0	0	3	0	0	3	0					
6:00 AM								1	0	0	4		5				
6:15 AM								7	0	0	1		8				
6:30 AM								7	0	0	7		14				
6:45 AM								10	0	0	4		14				
7:00 AM								9	0	0	7		16				
7:15 AM								5	0	0	6		11				
7:30 AM								4	0	0	7		11				
7:45 AM								3	0	1	7		11				
8:00 AM								8	1	0	8		17				
8:15 AM								4	0	0	6		10				
8:30 AM								10	0	1	9		20				
8:45 AM								11	1	0	14		26				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	79	2	2	80	0	163	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	97.53%	2.47%	2.44%	97.56%	0.00%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	20	1	1	28	0	50				
PEAK HR FACTOR :	0.000			0.000			0.583			0.906			0.921				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Thursday

City: Anaheim **2 Axle Trucks** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								8			4		12
4:15 PM								4			9		13
4:30 PM								1			3		4
4:45 PM								6			6		12
5:00 PM								4			4		8
5:15 PM								1			4		5
5:30 PM								2			4		6
5:45 PM								1			2		3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	27	0	0	36	0	63
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	13	0	0	18	0	31
PEAK HR FACTOR :		0.000			0.000			0.542			0.750		0.927

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

3 Axle Trucks

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM								3	0		3		6
6:15 AM								0	0		3		3
6:30 AM								0	0		0		0
6:45 AM								3	0		2		5
7:00 AM								1	0		1		2
7:15 AM								3	0		2		5
7:30 AM								3	0		3		6
7:45 AM								1	0		3		4
8:00 AM								2	0		3		5
8:15 AM								3	1		3		7
8:30 AM								1	0		1		2
8:45 AM								4	0		2		6
TOTAL VOLUMES :	0	0	0	0	0	0	0	24	1	0	26	0	51
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	96.00%	4.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	9	0	0	11	0	20
PEAK HR FACTOR :	0.000			0.000			0.750			0.917			0.921

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 **Day:** Thursday

3 Axle Trucks

City: Anaheim **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								1			1		2
4:15 PM								0			1		1
4:30 PM								0			1		1
4:45 PM								0			0		0
5:00 PM								0			0		0
5:15 PM								3			2		5
5:30 PM								0			1		1
5:45 PM								0			1		1
TOTAL VOLUMES :	0	0	0	0	0	0	0	4	0	0	7	0	11
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	3	0	0	3	0	6
PEAK HR FACTOR :	0.000			0.000			0.250			0.375			0.927

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL	NB	SB	EB	WB
6:00 AM								4	0	0	2		6				
6:15 AM								3	0	1	7		11				
6:30 AM								1	0	2	1		4				
6:45 AM								3	0	0	3		6				
7:00 AM								2	1	0	2		5				
7:15 AM								0	0	0	5		5				
7:30 AM								5	1	0	2		8				
7:45 AM								4	1	0	8		13				
8:00 AM								5	0	1	0		6				
8:15 AM								4	0	0	7		11				
8:30 AM								2	0	0	6		8				
8:45 AM								6	1	0	4		11				
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 0	ET 39	ER 4	WL 4	WT 47	WR 0	TOTAL 94	NB 0	SB 0	EB 0	WB 0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	90.70%	9.30%	7.84%	92.16%	0.00%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	14	2	1	15	0	32				
PEAK HR FACTOR :		0.000			0.000			0.667			0.500		0.921				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-001 | **Day:** Thursday

City: Anaheim | **4 Axle+ Trucks** | **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #1 Ganahl Lumber Receiving			Site Dwy #1 Ganahl Lumber Receiving			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								3			3		6
4:15 PM								2			1		3
4:30 PM								0			1		1
4:45 PM								0			6		6
5:00 PM								3			2		5
5:15 PM								2			2		4
5:30 PM								0			1		1
5:45 PM								1			1		2
TOTAL VOLUMES :	0	0	0	0	0	0	0	11	0	0	17	0	28
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	5	0	0	11	0	16
PEAK HR FACTOR :	0.000			0.000			0.417			0.458			0.927

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

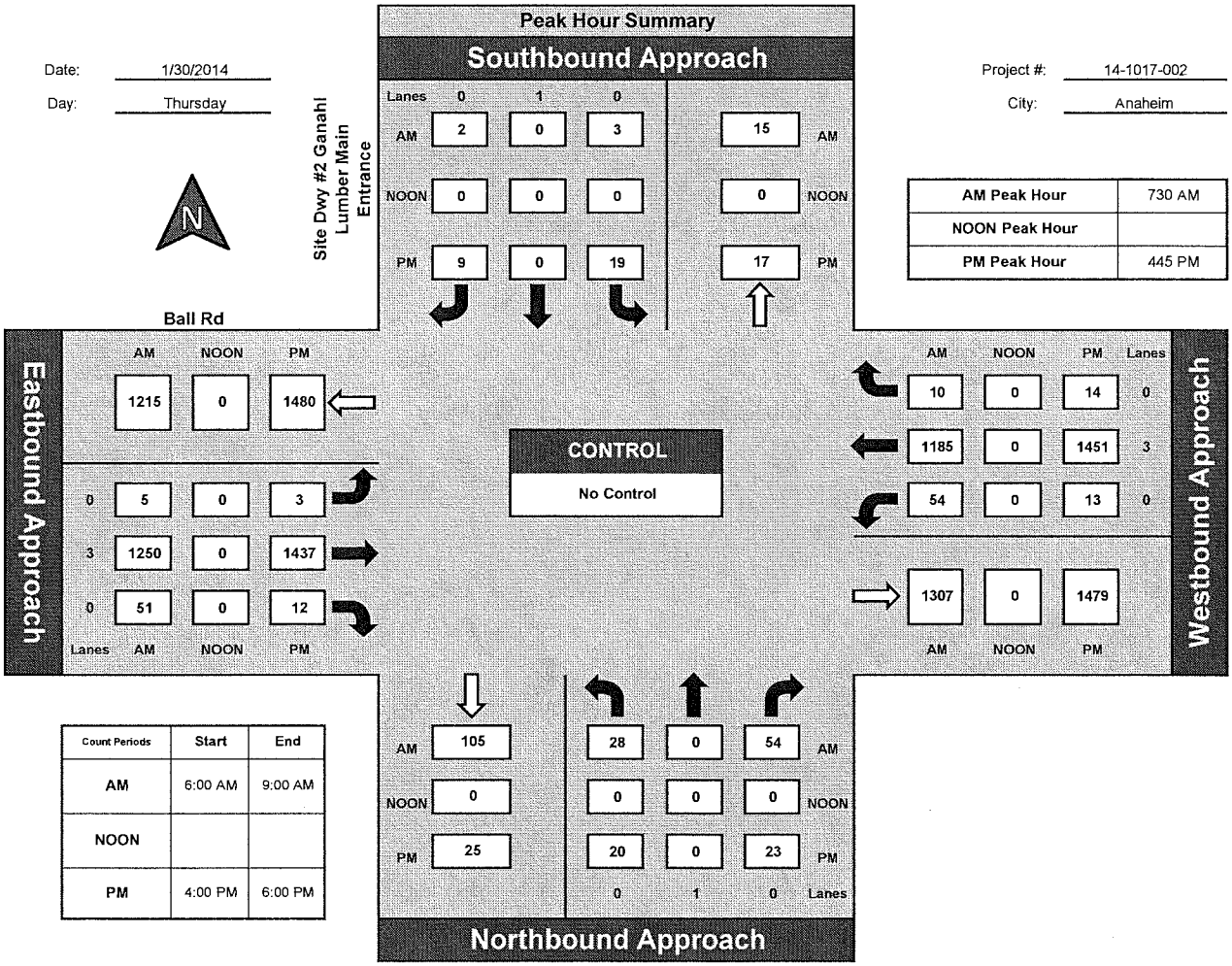
ITM Peak Hour Summary

Prepared by:

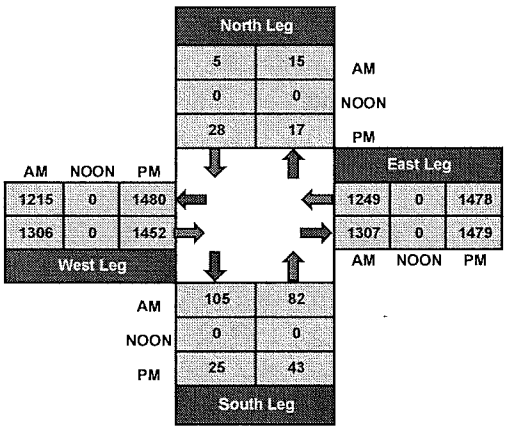
NDS

National Data & Surveying Services

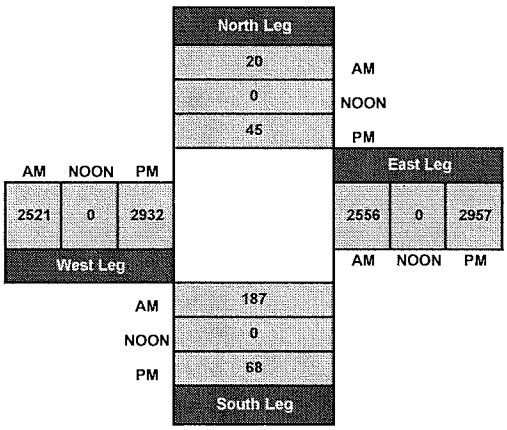
Site Dwy #2 Ganahl Lumber Main Entrance and Ball Rd , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Thursday

City: Anaheim **TOTALS** **Date:** 1/30/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	1		3	0		0	1	133	8	5	164	0	315
6:15 AM	0		4	0		0	0	154	11	8	177	0	354
6:30 AM	4		4	0		0	0	233	5	7	201	1	455
6:45 AM	4		7	0		0	0	214	5	6	261	3	500
7:00 AM	4		6	1		0	0	259	7	12	246	0	535
7:15 AM	3		5	0		0	1	317	13	11	282	1	633
7:30 AM	9		7	1		0	1	375	15	9	281	3	701
7:45 AM	4		14	2		1	1	305	11	13	323	6	680
8:00 AM	6		14	0		1	2	285	15	15	286	0	624
8:15 AM	9		19	0		0	1	285	10	17	295	1	637
8:30 AM	10		11	2		0	2	272	14	10	261	5	587
8:45 AM	8		14	2		1	2	235	12	10	256	5	545
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	62	0	108	8	0	3	11	3067	126	123	3033	25	6566
APPROACH %'s :	36.47%	0.00%	63.53%	72.73%	0.00%	27.27%	0.34%	95.72%	3.93%	3.87%	95.35%	0.79%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	28	0	54	3	0	2	5	1250	51	54	1185	10	2642
PEAK HR FACTOR :	0.732			0.417			0.835			0.913			0.942

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

TOTALS

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM	6		7	0		1	0	367	3	6	313	1	704
4:15 PM	4		6	3		1	1	346	4	7	340	4	716
4:30 PM	5		6	1		1	0	351	3	6	324	3	700
4:45 PM	6		5	6		4	1	324	3	2	354	4	709
5:00 PM	7		10	7		2	2	383	6	3	388	3	811
5:15 PM	6		4	4		1	0	351	2	3	372	5	748
5:30 PM	1		4	2		2	0	379	1	5	337	2	733
5:45 PM	1		4	6		0	0	298	2	3	328	1	643
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	36	0	46	29	0	12	4	2799	24	35	2756	23	5764
APPROACH %'s :	43.90%	0.00%	56.10%	70.73%	0.00%	29.27%	0.14%	99.01%	0.85%	1.24%	97.94%	0.82%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	20	0	23	19	0	9	3	1437	12	13	1451	14	3001
PEAK HR FACTOR :	0.632			0.700			0.928			0.938			0.925

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

Cars

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	1		3	0		0	1	126	7	4	154	0	296
6:15 AM	0		4	0		0	0	146	11	8	165	0	334
6:30 AM	4		4	0		0	0	226	4	7	192	1	438
6:45 AM	4		6	0		0	0	200	5	6	252	3	476
7:00 AM	4		6	1		0	0	248	7	12	237	0	515
7:15 AM	3		5	0		0	1	310	13	11	268	1	612
7:30 AM	9		6	1		0	1	364	15	9	270	3	678
7:45 AM	4		14	2		0	0	299	11	12	305	6	653
8:00 AM	5		12	0		1	2	271	15	15	276	0	597
8:15 AM	9		19	0		0	1	274	10	16	278	1	608
8:30 AM	10		11	2		0	2	256	14	10	242	5	552
8:45 AM	8		14	2		1	2	214	12	10	235	5	503
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	61	0	104	8	0	2	10	2934	124	120	2874	25	6262
APPROACH %'s :	36.97%	0.00%	63.03%	80.00%	0.00%	20.00%	0.33%	95.63%	4.04%	3.97%	95.20%	0.83%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	27	0	51	3	0	1	4	1208	51	52	1129	10	2536
PEAK HR FACTOR :		0.696			0.500			0.831			0.922		0.935

UTURNS	NB	SB	EB	WB

	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Thursday

City: Anaheim **Cars** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM	6		7	0		1	0	355	3	5	304	1	682
4:15 PM	4		6	3		1	1	340	4	6	330	4	699
4:30 PM	5		6	1		1	0	350	3	6	316	3	691
4:45 PM	6		5	6		4	0	319	3	2	345	2	692
5:00 PM	7		9	6		1	2	376	6	3	382	3	795
5:15 PM	6		3	4		1	0	345	2	3	364	5	733
5:30 PM	1		4	2		2	0	374	1	5	331	1	721
5:45 PM	1		4	5		0	0	296	2	3	324	1	636
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	36	0	44	27	0	11	3	2755	24	33	2696	20	5649
APPROACH %'s :	45.00%	0.00%	55.00%	71.05%	0.00%	28.95%	0.11%	99.03%	0.86%	1.20%	98.07%	0.73%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	20	0	21	18	0	8	2	1414	12	13	1422	11	2941
PEAK HR FACTOR :		0.641			0.650			0.930			0.932		0.925

UTURNS				
NB	5B	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

2 Axle Trucks

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	0		0					1	0	1	5		7
6:15 AM	0		0					5	0	0	1		6
6:30 AM	0		0					6	1	0	7		14
6:45 AM	0		1					9	0	0	4		14
7:00 AM	0		0					8	0	0	6		14
7:15 AM	0		0					5	0	0	7		12
7:30 AM	0		1					3	0	0	5		9
7:45 AM	0		0					3	0	1	8		12
8:00 AM	1		2					6	0	0	6		15
8:15 AM	0		0					4	0	1	7		12
8:30 AM	0		0					10	0	0	10		20
8:45 AM	0		0					11	0	0	13		24
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	4	0	0	0	0	71	1	3	79	0	159
APPROACH %'s :	20.00%	0.00%	80.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	98.61%	1.39%	3.66%	96.34%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	1	0	3	0	0	0	0	16	0	2	26	0	48
PEAK HR FACTOR :	0.333			0.000			0.667			0.778			0.935

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Thursday

City: Anaheim **2 Axle Trucks** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM			0	0		0	0	8		1	5	0	14
4:15 PM			0	0		0	0	4		1	8	0	13
4:30 PM			0	0		0	0	1		0	4	0	5
4:45 PM			0	0		0	1	5		0	5	2	13
5:00 PM			1	1		1	0	4		0	4	0	11
5:15 PM			1	0		0	0	2		0	4	0	7
5:30 PM			0	0		0	0	5		0	4	0	9
5:45 PM			0	0		0	0	1		0	2	0	3
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	2	1	0	1	1	30	0	2	36	2	75
APPROACH %'s :	0.00%	0.00%	100.00%	50.00%	0.00%	50.00%	3.23%	96.77%	0.00%	5.00%	90.00%	5.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	2	1	0	1	1	16	0	0	17	2	40
PEAK HR FACTOR :	0.500			0.250			0.708			0.679			0.925

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Thursday

3 Axle Trucks

City: Anaheim **Date:** 1/30/2014

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
6:00 AM						0		3			2		5
6:15 AM						0		0			2		2
6:30 AM						0		0			0		0
6:45 AM						0		2			2		4
7:00 AM						0		1			1		2
7:15 AM						0		2			2		4
7:30 AM						0		3			3		6
7:45 AM						1		1			2		4
8:00 AM						0		3			3		6
8:15 AM						0		3			3		6
8:30 AM						0		4			2		6
8:45 AM						0		3			4		7
TOTAL VOLUMES :	0	0	0	0	0	1	0	25	0	0	26	0	52
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	10	0	0	11	0	22
PEAK HR FACTOR :	0.000			0.250			0.833			0.917			0.935

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Thursday

City: Anaheim | **3 Axle Trucks** | **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
4:00 PM				0				1			1		2
4:15 PM				0				0			1		1
4:30 PM				0				0			1		1
4:45 PM				0				0			0		0
5:00 PM				0				0			0		0
5:15 PM				0				2			1		3
5:30 PM				0				0			1		1
5:45 PM				1				0			1		2
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 1	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 6	WR 0	TOTAL 10
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	2	0	0	2	0	4
PEAK HR FACTOR :	0.000			0.000			0.250			0.500			0.925

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM							0	3	1		3		7
6:15 AM							0	3	0		9		12
6:30 AM							0	1	0		2		3
6:45 AM							0	3	0		3		6
7:00 AM							0	2	0		2		4
7:15 AM							0	0	0		5		5
7:30 AM							0	5	0		3		8
7:45 AM							1	2	0		8		11
8:00 AM							0	5	0		1		6
8:15 AM							0	4	0		7		11
8:30 AM							0	2	0		7		9
8:45 AM							0	7	0		4		11
TOTAL VOLUMES :	0	0	0	0	0	0	1	37	1	0	54	0	93
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2.56%	94.87%	2.56%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	16	0	0	19	0	36
PEAK HR FACTOR :	0.000			0.000			0.850			0.594			0.935

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-002 **Day:** Thursday

City: Anaheim **4 Axle+ Trucks** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #2 Ganahl Lumber Main Entrance			Site Dwy #2 Ganahl Lumber Main Entrance			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	3	0	0	3	0	
4:00 PM								3			3	0	6
4:15 PM								2			1	0	3
4:30 PM								0			3	0	3
4:45 PM								0			4	0	4
5:00 PM								3			2	0	5
5:15 PM								2			3	0	5
5:30 PM								0			1	1	2
5:45 PM								1			1	0	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	11	0	0	18	1	30
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	94.74%	5.26%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	5	0	0	10	1	16
PEAK HR FACTOR :	0.000			0.000			0.417			0.688			0.925

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Site Dwy #3 Secondary Access and Ball Rd , Anaheim

Date: 1/30/2014

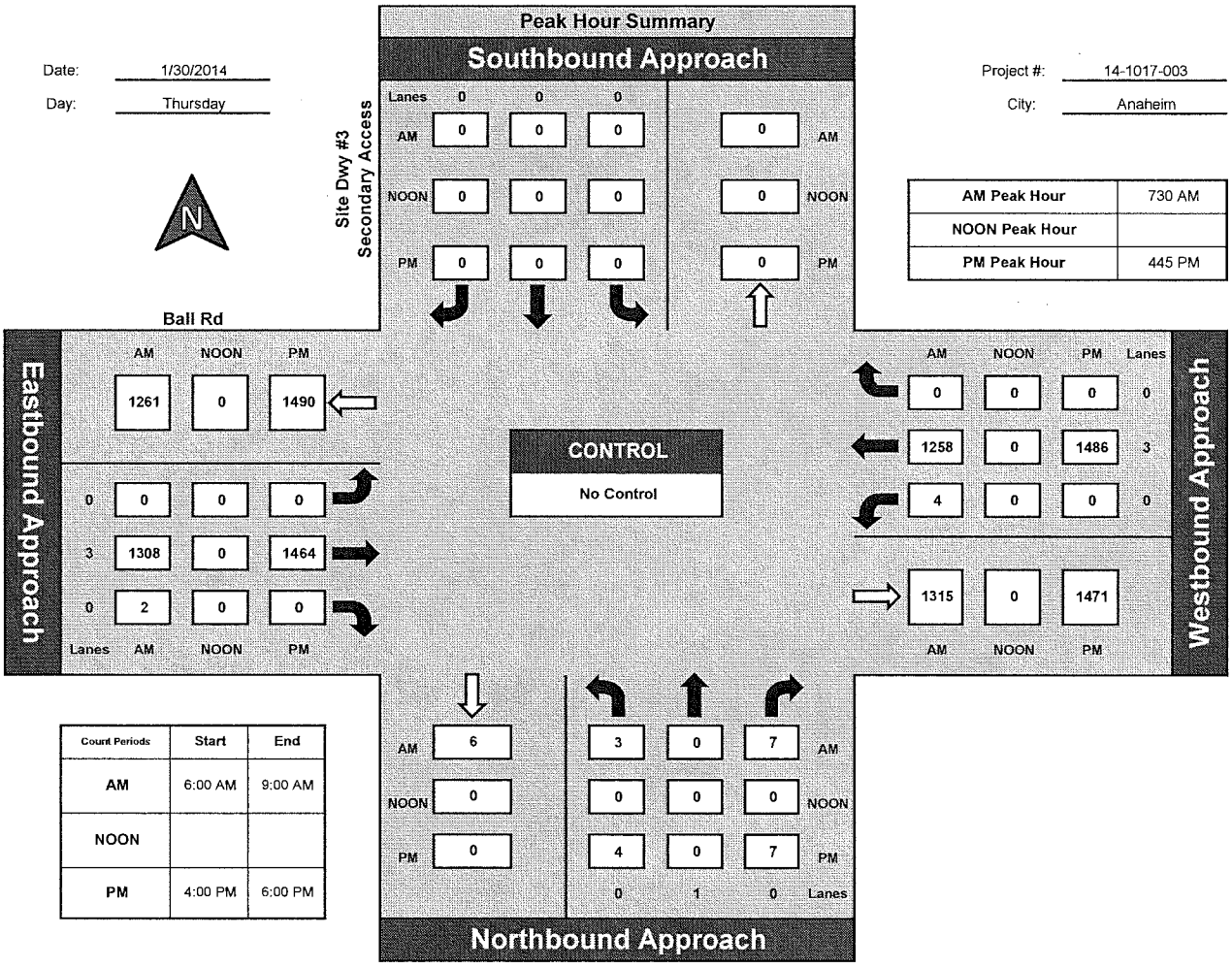
Day: Thursday

Project #: 14-1017-003

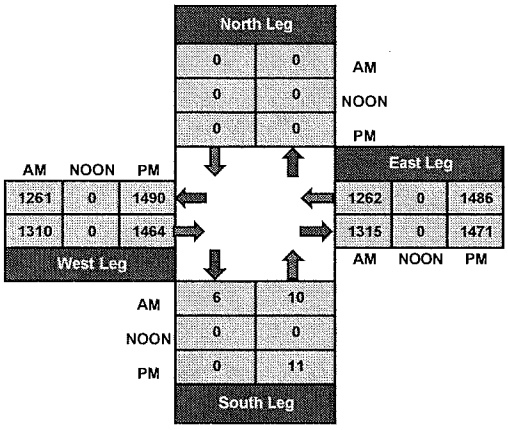
City: Anaheim

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

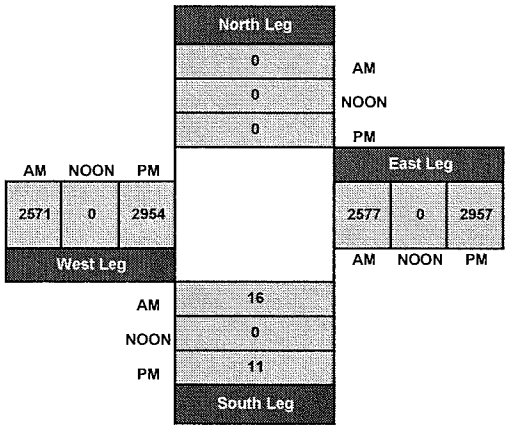
Count Periods	Start	End
AM	6:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

TOTALS

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	1		2					140	0	1	177		321
6:15 AM	1		1					153	0	1	180		336
6:30 AM	0		0					240	0	0	222		462
6:45 AM	1		2					213	2	0	256		474
7:00 AM	0		1					279	0	1	262		543
7:15 AM	1		3					312	1	2	286		605
7:30 AM	2		1					389	0	0	306		698
7:45 AM	0		0					317	1	1	337		656
8:00 AM	0		4					290	0	1	307		602
8:15 AM	1		2					312	1	2	308		626
8:30 AM	1		6					279	2	2	272		562
8:45 AM	1		4					234	1	1	271		512
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	9	0	26	0	0	0	0	3169	8	12	3184	0	6408
APPROACH %'s :	25.71%	0.00%	74.29%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.75%	0.25%	0.38%	99.62%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	3	0	7	0	0	0	0	1308	2	4	1258	0	2582
PEAK HR FACTOR :		0.625			0.000			0.842			0.933		0.925

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003

City: Anaheim

TOTALS

PM

Day: Thursday

Date: 1/30/2014

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM	0		4					360		1	339		704
4:15 PM	1		2					354		0	321		678
4:30 PM	1		2					359		2	342		706
4:45 PM	1		3					327		0	344		675
5:00 PM	2		1					401		0	404		808
5:15 PM	0		2					350		0	386		738
5:30 PM	1		1					386		0	352		740
5:45 PM	0		2					322		0	335		659
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	6	0	17	0	0	0	0	2859	0	3	2823	0	5708
APPROACH %'s :	26.09%	0.00%	73.91%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.11%	99.89%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	4	0	7	0	0	0	0	1464	0	0	1486	0	2961
PEAK HR FACTOR :	0.688			0.000			0.913			0.920			0.916

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **Cars** **Date:** 1/30/2014

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 3	ER 0	WL 0	WT 3	WR 0	TOTAL
6:00 AM	0		0					131	0	1	167		299
6:15 AM	0		0					144	0	1	169		314
6:30 AM	0		0					233	0	0	213		446
6:45 AM	0		1					199	2	0	248		450
7:00 AM	0		1					266	0	1	253		521
7:15 AM	0		3					303	1	2	276		585
7:30 AM	1		1					377	0	0	291		670
7:45 AM	0		0					310	1	1	320		632
8:00 AM	0		3					274	0	1	299		577
8:15 AM	0		2					300	1	2	290		595
8:30 AM	1		2					265	1	2	252		523
8:45 AM	1		3					213	1	1	252		471
TOTAL VOLUMES :	NL 3	NT 0	NR 16	SL 0	ST 0	SR 0	EL 0	ET 3015	ER 7	WL 12	WT 3030	WR 0	TOTAL 6083
APPROACH %'s :	15.79%	0.00%	84.21%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	99.77%	0.23%	0.39%	99.61%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	1	0	6	0	0	0	0	1261	2	4	1200	0	2474
PEAK HR FACTOR :		0.583			0.000			0.838			0.938		0.923

UTURNS	NB	SB	EB	WB

	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **Cars** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM	0		3					349		1	330		683
4:15 PM	1		2					347		0	310		660
4:30 PM	1		2					358		2	334		697
4:45 PM	1		3					321		0	334		659
5:00 PM	2		1					394		0	396		793
5:15 PM	0		2					342		0	377		721
5:30 PM	1		1					379		0	345		726
5:45 PM	0		2					318		0	331		651
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	6	0	16	0	0	0	0	2808	0	3	2757	0	5590
APPROACH %'s :	27.27%	0.00%	72.73%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.11%	99.89%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	4	0	7	0	0	0	0	1436	0	0	1452	0	2899
PEAK HR FACTOR :		0.688			0.000			0.911			0.917		0.914

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **2 Axle Trucks** **Date:** 1/30/2014

AM

NS/ EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	1		0					3	0		6		10
6:15 AM	0		0					6	0		1		7
6:30 AM	0		0					6	0		7		13
6:45 AM	0		0					9	0		4		13
7:00 AM	0		0					10	0		6		16
7:15 AM	0		0					5	0		4		9
7:30 AM	0		0					4	0		11		15
7:45 AM	0		0					3	0		7		10
8:00 AM	0		0					8	0		5		13
8:15 AM	0		0					5	0		8		13
8:30 AM	0		2					10	1		11		24
8:45 AM	0		0					11	0		12		23
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	2	0	0	0	0	80	1	0	82	0	166
APPROACH %'s :	33.33%	0.00%	66.67%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	98.77%	1.23%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	20	0	0	31	0	51
PEAK HR FACTOR :	0.000			0.000			0.625			0.705			0.923

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **2 Axle Trucks** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM			1					7			5		13
4:15 PM			0					5			9		14
4:30 PM			0					1			4		5
4:45 PM			0					6			6		12
5:00 PM			0					5			6		11
5:15 PM			0					3			4		7
5:30 PM			0					7			4		11
5:45 PM			0					2			2		4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	1	0	0	0	0	36	0	0	40	0	77
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	145 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	21	0	0	20	0	41
PEAK HR FACTOR :		0.000			0.000			0.750			0.833		0.914

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 | **Day:** Thursday

3 Axle Trucks

City: Anaheim | **Date:** 1/30/2014

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	0	0	0	3	0	0	3	0					
6:00 AM			1					2			1		4				
6:15 AM			0					0			2		2				
6:30 AM			0					0			0		0				
6:45 AM			0					2			2		4				
7:00 AM			0					1			1		2				
7:15 AM			0					4			1		5				
7:30 AM			0					2			4		6				
7:45 AM			0					1			2		3				
8:00 AM			0					4			2		6				
8:15 AM			0					3			3		6				
8:30 AM			2					2			2		6				
8:45 AM			0					4			3		7				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	3	0	0	0	0	25	0	0	23	0	51	0	0	0	0
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	10	0	0	11	0	21				
PEAK HR FACTOR :	0.000			0.000			0.625			0.688			0.923				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **3 Axle Trucks** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								1			2		3
4:15 PM								0			1		1
4:30 PM								0			1		1
4:45 PM								0			0		0
5:00 PM								0			0		0
5:15 PM								2			1		3
5:30 PM								0			1		1
5:45 PM								1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	4	0	0	7	0	11
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	2	0	0	2	0	4
PEAK HR FACTOR :	0.000			0.000			0.250			0.500			0.914

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
6:00 AM	0		1					4			3		8
6:15 AM	1		1					3			8		13
6:30 AM	0		0					1			2		3
6:45 AM	1		1					3			2		7
7:00 AM	0		0					2			2		4
7:15 AM	1		0					0			5		6
7:30 AM	1		0					6			0		7
7:45 AM	0		0					3			8		11
8:00 AM	0		1					4			1		6
8:15 AM	1		0					4			7		12
8:30 AM	0		0					2			7		9
8:45 AM	0		1					6			4		11
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	0	5	0	0	0	0	38	0	0	49	0	97
APPROACH %'s :	50.00%	0.00%	50.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	2	0	1	0	0	0	0	17	0	0	16	0	36
PEAK HR FACTOR :	0.750			0.000			0.708			0.500			0.923

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-003 **Day:** Thursday

City: Anaheim **4 Axle+ Trucks** **Date:** 1/30/2014

PM

NS/EW Streets:	Site Dwy #3 Secondary Access			Site Dwy #3 Secondary Access			Ball Rd			Ball Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	3	0	0	3	0	
4:00 PM								3			2		5
4:15 PM								2			1		3
4:30 PM								0			3		3
4:45 PM								0			4		4
5:00 PM								2			2		4
5:15 PM								3			4		7
5:30 PM								0			2		2
5:45 PM								1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	11	0	0	19	0	30
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	5	0	0	12	0	17
PEAK HR FACTOR :	0.000			0.000			0.417			0.750			0.914

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

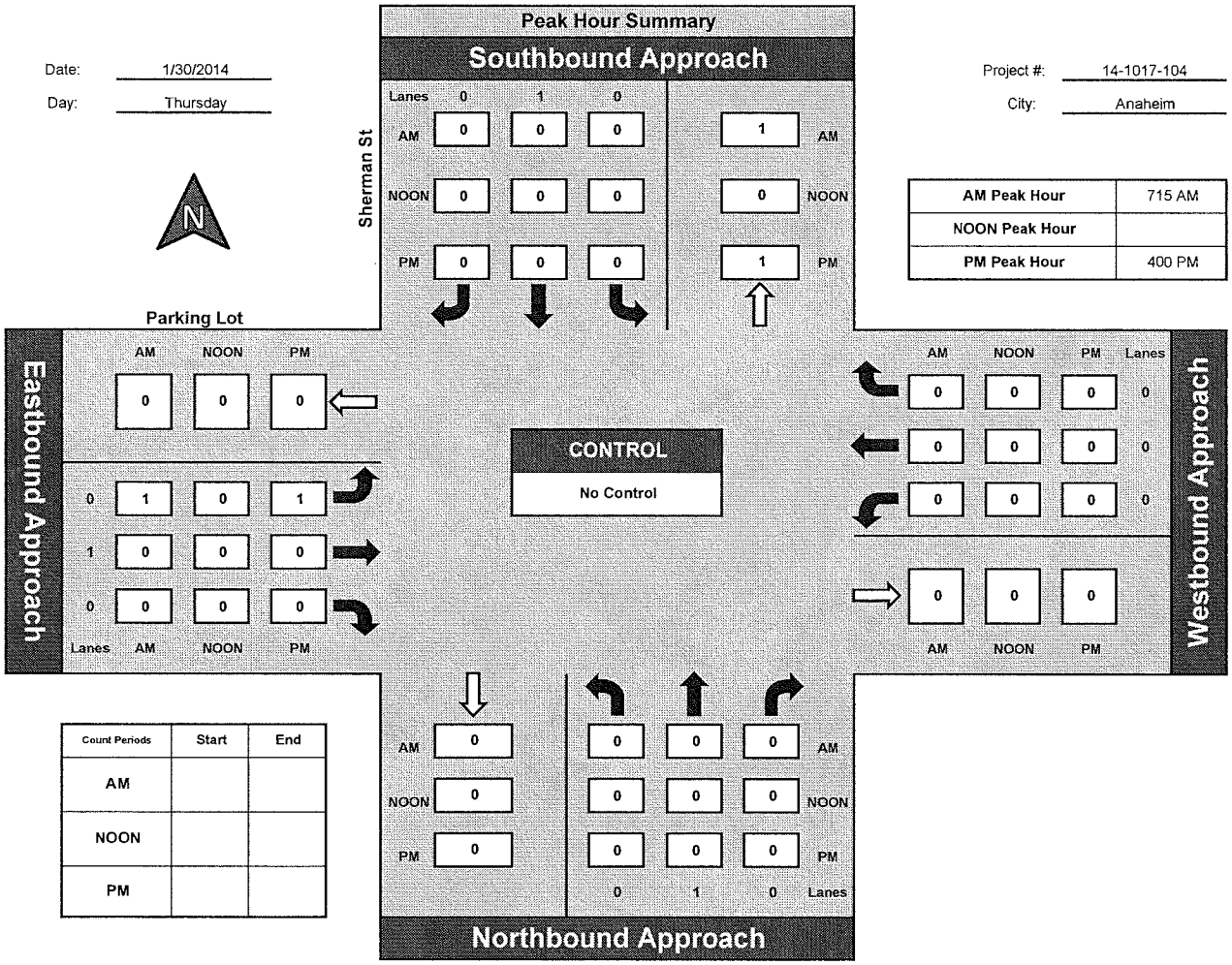
ITM Peak Hour Summary

Prepared by:

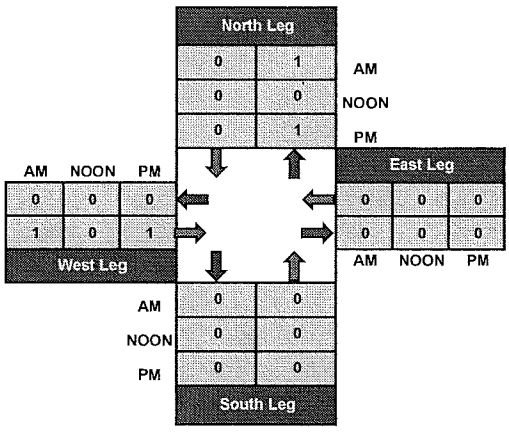
NDS

National Data & Surveying Services

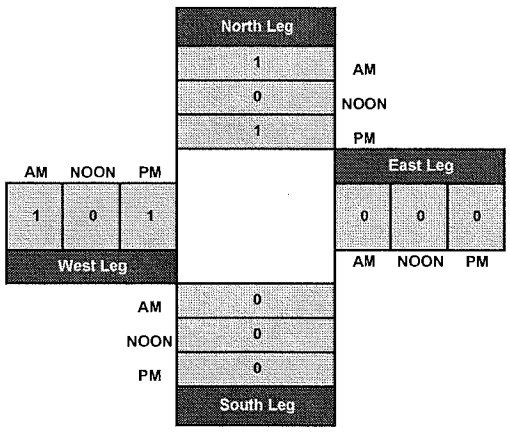
Sherman St and Parking Lot , Anaheim



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Thursday

City: Anaheim **TOTALS** **Date:** 1/30/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM							0						0
6:15 AM							0						0
6:30 AM							0						0
6:45 AM							0						0
7:00 AM							0						0
7:15 AM							1						1
7:30 AM							0						0
7:45 AM							0						0
8:00 AM							0						0
8:15 AM							0						0
8:30 AM							0						0
8:45 AM							0						0

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :		0.000			0.000			0.250			0.000		0.250

CONTROL : No Control

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

TOTALS

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM							1						1
4:15 PM							0						0
4:30 PM							0						0
4:45 PM							0						0
5:00 PM							0						0
5:15 PM							0						0
5:30 PM							0						0
5:45 PM							0						0
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Thursday

City: Anaheim | **Cars** | **Date:** 1/30/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM							0						0
6:15 AM							0						0
6:30 AM							0						0
6:45 AM							0						0
7:00 AM							0						0
7:15 AM							1						1
7:30 AM							0						0
7:45 AM							0						0
8:00 AM							0						0
8:15 AM							0						0
8:30 AM							0						0
8:45 AM							0						0

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

Cars

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM							1						1
4:15 PM							0						0
4:30 PM							0						0
4:45 PM							0						0
5:00 PM							0						0
5:15 PM							0						0
5:30 PM							0						0
5:45 PM							0						0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.250

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 **Day:** Thursday

2 Axle Trucks

City: Anaheim **Date:** 1/30/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

2 Axle Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Thursday

3 Axle Trucks

City: Anaheim | **Date:** 1/30/2014

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
6:00 AM													0				
6:15 AM													0				
6:30 AM													0				
6:45 AM													0				
7:00 AM													0				
7:15 AM													0				
7:30 AM													0				
7:45 AM													0				
8:00 AM													0				
8:15 AM													0				
8:30 AM													0				
8:45 AM													0				
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

3 Axle Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	0	0					
6:00 AM													0				
6:15 AM													0				
6:30 AM													0				
6:45 AM													0				
7:00 AM													0				
7:15 AM													0				
7:30 AM													0				
7:45 AM													0				
8:00 AM													0				
8:15 AM													0				
8:30 AM													0				
8:45 AM													0				
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.250				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-104 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Parking Lot			Parking Lot			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.250

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Sherman St and Site Dwy/Access #4 , Anaheim

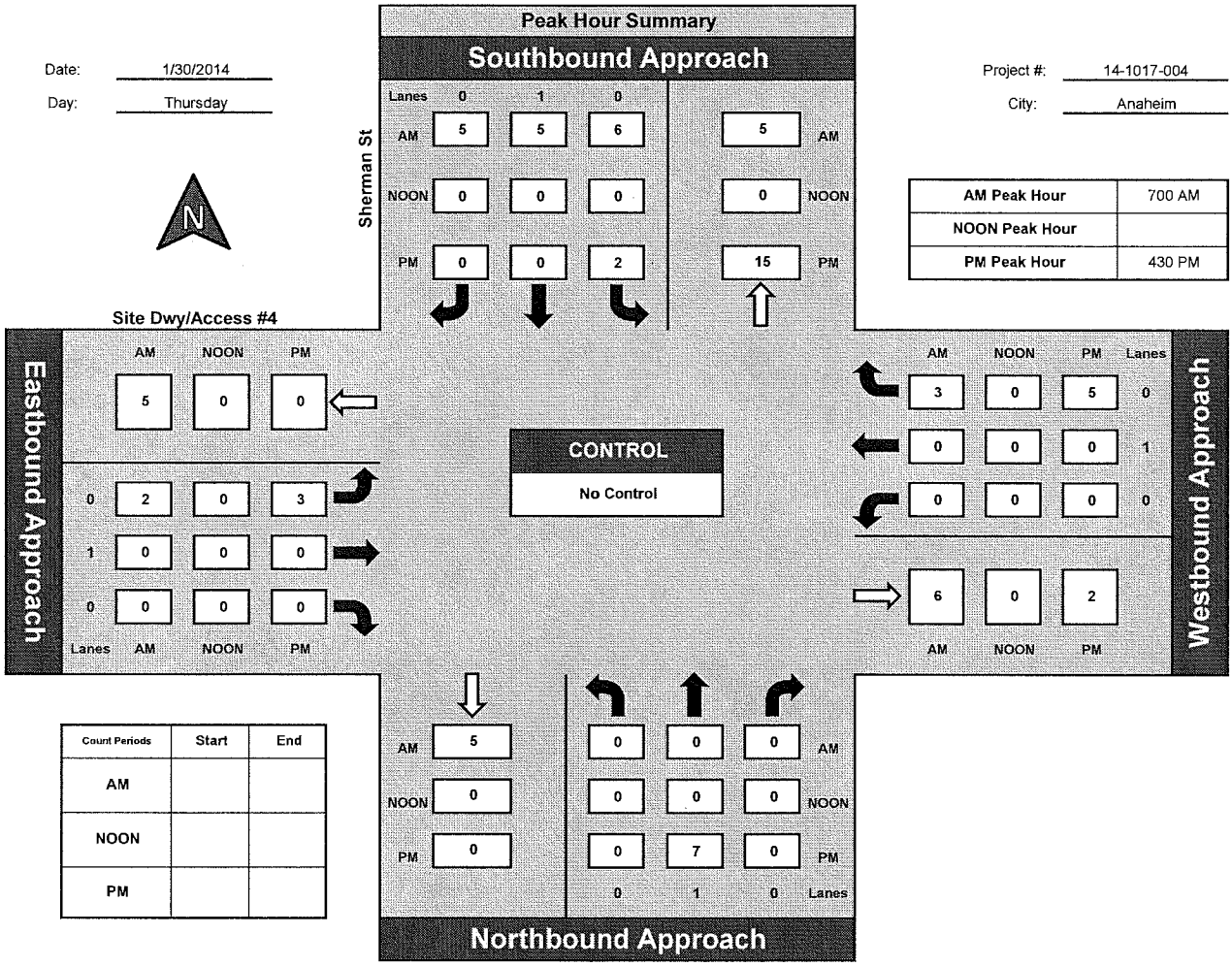
Date: 1/30/2014

Day: Thursday

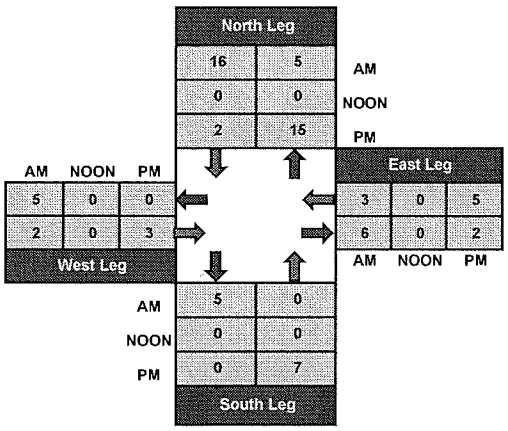
Project #: 14-1017-004

City: Anaheim

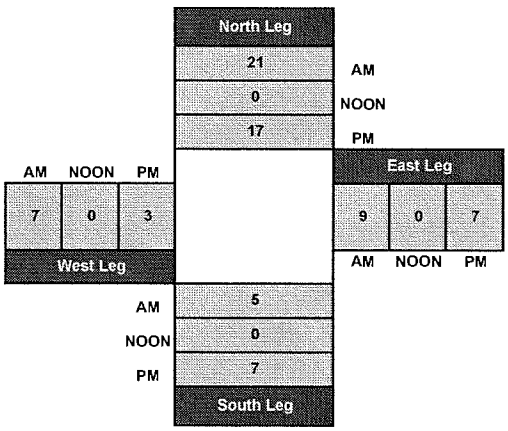
AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	430 PM



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

TOTALS

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0		0	1	4	1					0	6
6:15 AM		0		1	1	2	0					0	4
6:30 AM		0		2	0	2	0					1	5
6:45 AM		0		0	0	0	0					0	0
7:00 AM		0		2	0	3	2					0	7
7:15 AM		0		0	2	0	0					0	2
7:30 AM		0		3	1	1	0					3	8
7:45 AM		0		1	2	1	0					0	4
8:00 AM		0		0	3	0	0					0	3
8:15 AM		1		1	1	2	0					0	5
8:30 AM		0		1	2	0	0					0	3
8:45 AM		0		0	0	1	1					0	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	11	13	16	4	0	0	0	0	4	49
APPROACH %'s :	0.00%	100.00%	0.00%	27.50%	32.50%	40.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	6	5	5	2	0	0	0	0	3	21
PEAK HR FACTOR :		0.000			0.800			0.250			0.250		0.656

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

TOTALS

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		0		0			2					0	2
4:15 PM		0		1			0					0	1
4:30 PM		2		2			0					1	5
4:45 PM		2		0			0					2	4
5:00 PM		1		0			3					0	4
5:15 PM		2		0			0					2	4
5:30 PM		0		0			0					3	3
5:45 PM		1		1			0					0	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	8	0	4	0	0	5	0	0	0	0	8	25
APPROACH %'s :	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	7	0	2	0	0	3	0	0	0	0	5	17
PEAK HR FACTOR :		0.875			0.250			0.250			0.625		0.850

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

Cars

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM				0	1	3	0					0	4
6:15 AM				1	1	2	0					0	4
6:30 AM				2	0	2	0					1	5
6:45 AM				0	0	0	0					0	0
7:00 AM				2	0	3	1					0	6
7:15 AM				0	2	0	0					0	2
7:30 AM				2	1	1	0					2	6
7:45 AM				1	2	1	0					0	4
8:00 AM				0	2	0	0					0	2
8:15 AM				1	1	1	0					0	3
8:30 AM				1	2	0	0					0	3
8:45 AM				0	0	1	0					0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	10	12	14	1	0	0	0	0	3	40
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	27.78%	33.33%	38.89%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	5	5	5	1	0	0	0	0	2	18
PEAK HR FACTOR :	0.000			0.750			0.250			0.250			0.750

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

Cars

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		0		0			2					0	2
4:15 PM		0		1			0					0	1
4:30 PM		2		2			0					1	5
4:45 PM		2		0			0					2	4
5:00 PM		1		0			3					0	4
5:15 PM		2		0			0					2	4
5:30 PM		0		0			0					3	3
5:45 PM		1		1			0					0	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	8	0	4	0	0	5	0	0	0	0	8	25
APPROACH %'s :	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	7	0	2	0	0	3	0	0	0	0	5	17
PEAK HR FACTOR :		0.875			0.250			0.250			0.625		0.850

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

2 Axle Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0			0		1						1
6:15 AM		0			0		0						0
6:30 AM		0			0		0						0
6:45 AM		0			0		0						0
7:00 AM		0			0		0						0
7:15 AM		0			0		0						0
7:30 AM		0			0		0						0
7:45 AM		0			0		0						0
8:00 AM		0			1		0						1
8:15 AM		1			0		0						1
8:30 AM		0			0		0						0
8:45 AM		0			0		0						0

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	0	1	0	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.750

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Thursday

City: Anaheim **2 Axle Trucks** **Date:** 1/30/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.850

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 **Day:** Thursday

City: Anaheim **Date:** 1/30/2014

3 Axle Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM				0								0	0
6:15 AM				0								0	0
6:30 AM				0								0	0
6:45 AM				0								0	0
7:00 AM				0								0	0
7:15 AM				0								0	0
7:30 AM				1								1	2
7:45 AM				0								0	0
8:00 AM				0								0	0
8:15 AM				0								0	0
8:30 AM				0								0	0
8:45 AM				0								0	0

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1	0	0	0	0	0	0	0	1	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	1	0	0	0	0	0	0	0	1	2
PEAK HR FACTOR :	0.000			0.250			0.000			0.250			0.750

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

3 Axle Trucks

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.850

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Thursday

City: Anaheim | **Date:** 1/30/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM						1	0						1
6:15 AM						0	0						0
6:30 AM						0	0						0
6:45 AM						0	0						0
7:00 AM						0	1						1
7:15 AM						0	0						0
7:30 AM						0	0						0
7:45 AM						0	0						0
8:00 AM						0	0						0
8:15 AM						1	0						1
8:30 AM						0	0						0
8:45 AM						0	1						1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	2	2	0	0	0	0	0	4
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.750

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-004 | **Day:** Thursday

City: Anaheim | **4 Axle+ Trucks** | **Date:** 1/30/2014

PM

NS/EW Streets:	Sherman St			Sherman St			Site Dwy/Access #4			Site Dwy/Access #4			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.850

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

APPENDIX B-IV

EXISTING TRIP GENERATION COUNTS

(LOS ALAMITOS)

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

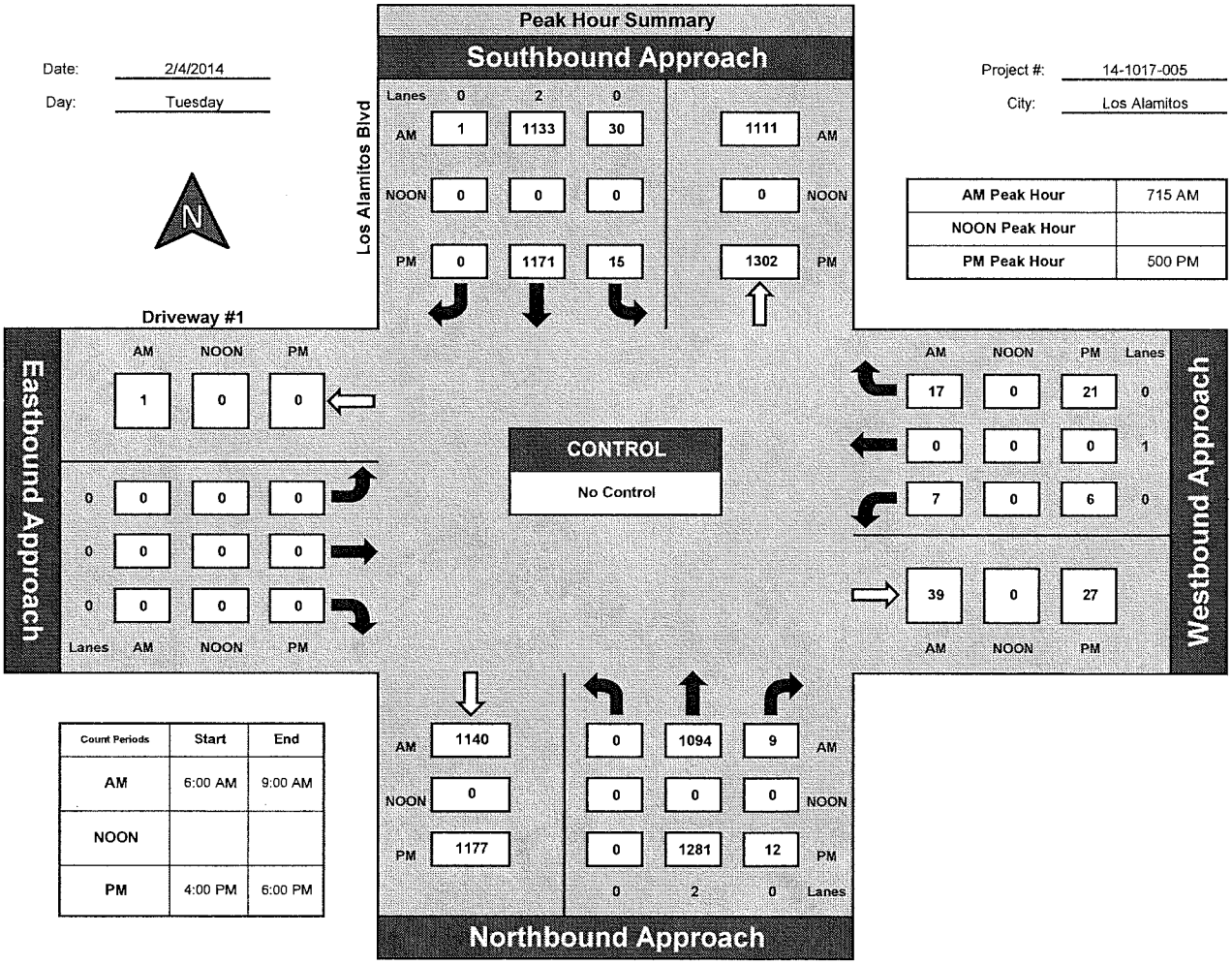
Los Alamitos Blvd and Driveway #1 , Los Alamitos

Date: 2/4/2014

Day: Tuesday

Project #: 14-1017-005

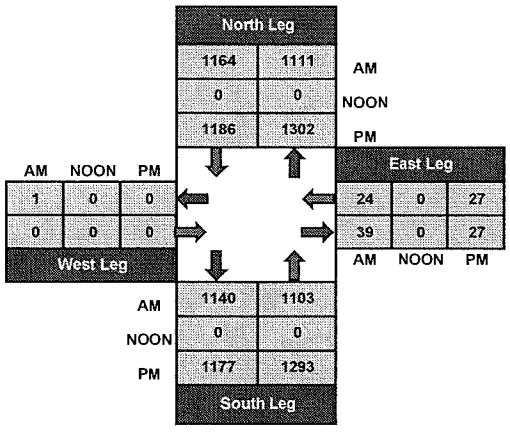
City: Los Alamitos



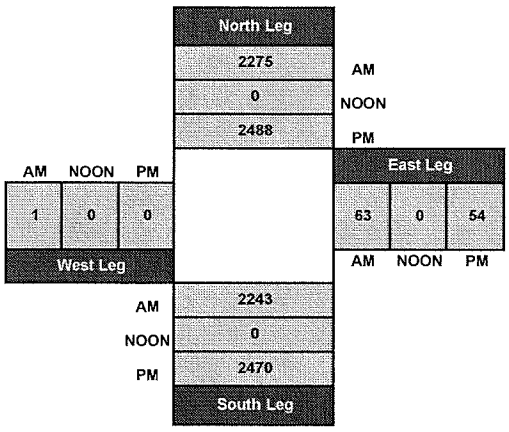
AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	6:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

TOTALS

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM	0	84	2	5	123	0				2		0	216
6:15 AM	0	76	1	1	144	0				0		2	224
6:30 AM	0	132	3	1	190	0				3		3	332
6:45 AM	0	128	1	7	221	0				1		4	362
7:00 AM	0	176	2	2	200	0				2		4	386
7:15 AM	0	316	1	9	240	0				2		6	574
7:30 AM	0	365	2	3	357	1				0		5	733
7:45 AM	0	201	3	12	333	0				1		1	551
8:00 AM	0	212	3	6	203	0				4		5	433
8:15 AM	0	192	3	12	219	0				3		6	435
8:30 AM	1	181	2	7	205	0				1		4	401
8:45 AM	1	171	6	13	218	0				3		7	419
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	2234	29	78	2653	1	0	0	0	22	0	47	5066
APPROACH %'s :	0.09%	98.63%	1.28%	2.86%	97.11%	0.04%	#DIV/0!	#DIV/0!	#DIV/0!	31.88%	0.00%	68.12%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1094	9	30	1133	1	0	0	0	7	0	17	2291
PEAK HR FACTOR :		0.751			0.806			0.000			0.667		0.781

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

TOTALS

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM	0	328	3	9	284					2		10	636
4:15 PM	0	304	3	3	267					1		9	587
4:30 PM	1	320	9	3	279					2		8	622
4:45 PM	0	336	5	2	291					3		7	644
5:00 PM	0	314	2	5	286					2		6	615
5:15 PM	0	306	5	7	285					1		5	609
5:30 PM	0	321	3	3	303					3		5	638
5:45 PM	0	340	2	0	297					0		5	644
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	2569	32	32	2292	0	0	0	0	14	0	55	4995
APPROACH %'s :	0.04%	98.73%	1.23%	1.38%	98.62%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	20.29%	0.00%	79.71%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1281	12	15	1171	0	0	0	0	6	0	21	2506
PEAK HR FACTOR :		0.945			0.969			0.000			0.844		0.973

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Cars

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM	0	82	2	5	122	0				2		0	213
6:15 AM	0	75	1	1	139	0				0		2	218
6:30 AM	0	123	3	1	183	0				3		2	315
6:45 AM	0	121	1	6	212	0				1		4	345
7:00 AM	0	174	2	2	193	0				2		4	377
7:1S AM	0	308	1	9	235	0				2		5	560
7:30 AM	0	360	2	3	355	1				0		5	726
7:45 AM	0	198	3	12	329	0				1		1	544
8:00 AM	0	209	3	6	198	0				4		5	425
8:15 AM	0	190	3	12	212	0				3		6	426
8:30 AM	1	178	2	7	196	0				1		4	389
8:45 AM	1	163	6	13	215	0				3		7	408
TOTAL VOLUMES :	2	2181	29	77	2589	1	0	0	0	22	0	45	4946
APPROACH %'s :	0.09%	98.60%	1.31%	2.89%	97.08%	0.04%	#DIV/0!	#DIV/0!	#DIV/0!	32.84%	0.00%	67.16%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1075	9	30	1117	1	0	0	0	7	0	16	2255
PEAK HR FACTOR :		0.749			0.799			0.000			0.639		0.777

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Tuesday

City: Los Alamitos **Cars** **Date:** 2/4/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM	0	320	3	9	283					2		10	627
4:15 PM	0	301	3	3	265					1		9	582
4:30 PM	1	319	9	3	278					2		8	620
4:45 PM	0	335	5	2	291					3		7	643
5:00 PM	0	312	2	5	283					2		6	610
5:15 PM	0	306	5	7	284					1		5	608
5:30 PM	0	318	3	3	301					3		5	633
5:45 PM	0	340	2	0	297					0		5	644
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	2551	32	32	2282	0	0	0	0	14	0	55	4967
APPROACH %'s :	0.04%	98.72%	1.24%	1.38%	98.62%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	20.29%	0.00%	79.71%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1276	12	15	1165	0	0	0	0	6	0	21	2495
PEAK HR FACTOR :		0.942			0.970			0.000			0.844		0.969

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

2 Axle Trucks

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		1		0	1							0	2
6:15 AM		1		0	5							0	6
6:30 AM		6		0	5							1	12
6:45 AM		5		1	6							0	12
7:00 AM		2		0	5							0	7
7:15 AM		7		0	5							1	13
7:30 AM		4		0	1							0	5
7:45 AM		3		0	4							0	7
8:00 AM		3		0	4							0	7
8:15 AM		1		0	5							0	6
8:30 AM		3		0	6							0	9
8:45 AM		7		0	3							0	10
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	43	0	1	50	0	0	0	0	0	0	2	96
APPROACH %'s :	0.00%	100.00%	0.00%	1.96%	98.04%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	17	0	0	14	0	0	0	0	0	0	1	32
PEAK HR FACTOR :		0.607			0.700			0.000			0.250		0.727

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

2 Axle Trucks

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		8			1								9
4:15 PM		2			2								4
4:30 PM		0			1								1
4:45 PM		1			0								1
5:00 PM		2			2								4
5:15 PM		0			1								1
5:30 PM		3			2								5
5:45 PM		0			0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	16	0	0	9	0	0	0	0	0	0	0	25
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	5	0	0	5	0	0	0	0	0	0	0	10
PEAK HR FACTOR :		0.417			0.625			0.000			0.000		0.959

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

3 Axle Trucks

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		1			0								1
6:15 AM		0			0								0
6:30 AM		1			2								3
6:45 AM		1			3								4
7:00 AM		0			0								0
7:15 AM		0			0								0
7:30 AM		1			1								2
7:45 AM		0			0								0
8:00 AM		0			0								0
8:15 AM		0			0								0
8:30 AM		0			0								0
8:45 AM		1			0								1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	0	0	6	0	0	0	0	0	0	0	11
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.250			0.250			0.000			0.000		0.777

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Tuesday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/4/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM		0			0								0
4:15 PM		1			0								1
4:30 PM		1			0								1
4:45 PM		0			0								0
5:00 PM		0			1								1
5:15 PM		0			0								0
5:30 PM		0			0								0
5:45 PM		0			0								0
TOTAL VOLUMES :	NL 0	NT 2	NR 0	SL 0	ST 1	SR 0	EL 0	ET 0	ER 0	WL 0	WT 0	WR 0	TOTAL 3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.000			0.250			0.000			0.000		0.969

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		0			0								0
6:15 AM		0			0								0
6:30 AM		2			0								2
6:45 AM		1			0								1
7:00 AM		0			2								2
7:15 AM		1			0								1
7:30 AM		0			0								0
7:45 AM		0			0								0
8:00 AM		0			1								1
8:15 AM		1			2								3
8:30 AM		0			3								3
8:45 AM		0			0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	0	0	8	0	0	0	0	0	0	0	13
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.250			0.250			0.000			0.000		0.777

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Tuesday

City: Los Alamitos **4 Axle+ Trucks** **Date:** 2/4/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.969

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Tuesday

City: Los Alamitos **Forklifts** **Date:** 2/4/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.777

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Tuesday

City: Los Alamitos | **Forklifts** | **Date:** 2/4/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.969

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Driveway #2 and Catalina St , Los Alamitos

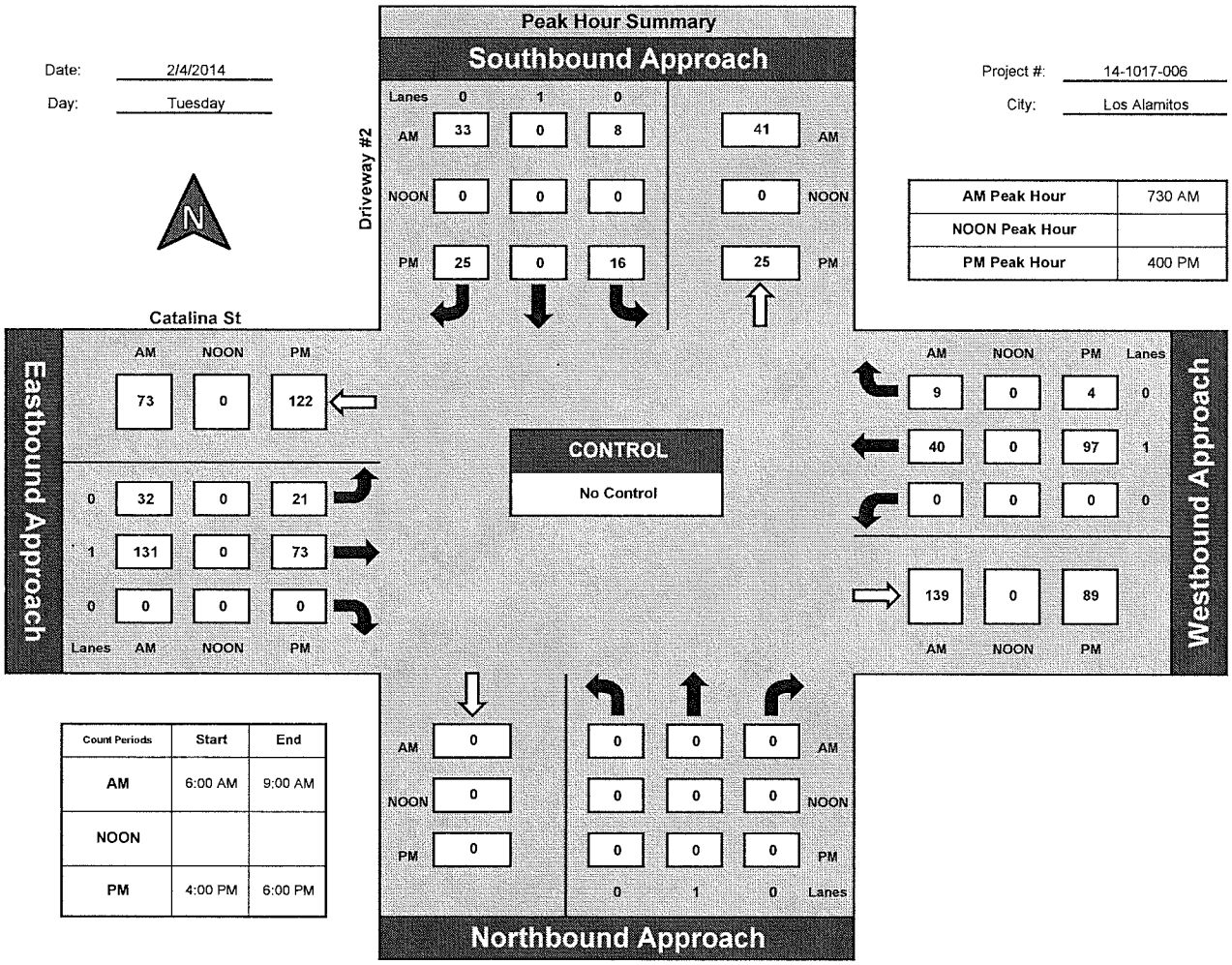
Date: 2/4/2014

Day: Tuesday

Project #: 14-1017-006

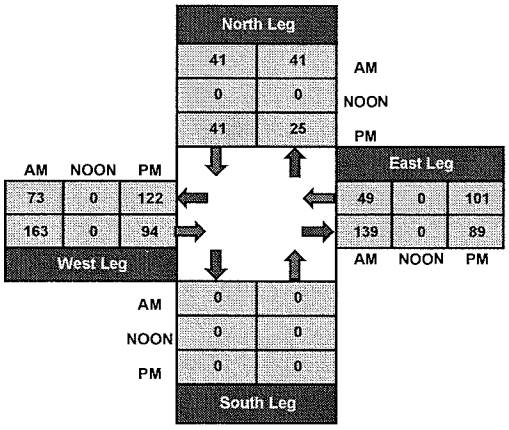
City: Los Alamitos

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	400 PM

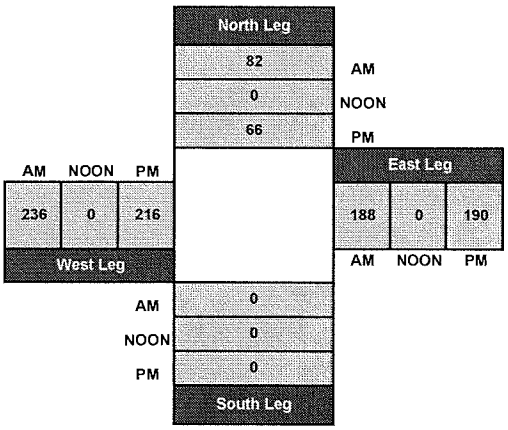


Count Periods	Start	End
AM	6:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

TOTALS

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM				0		3	9	13			30	2	57				
6:15 AM				2		3	5	13			8	2	33				
6:30 AM				0		7	3	11			7	2	30				
6:45 AM				2		6	10	19			2	3	42				
7:00 AM				2		2	8	15			3	2	32				
7:15 AM				2		11	10	18			6	1	48				
7:30 AM				1		7	11	26			10	2	57				
7:45 AM				2		12	6	42			11	2	75				
8:00 AM				2		8	9	33			11	2	65				
8:15 AM				3		6	6	30			8	3	56				
8:30 AM				2		9	7	23			10	4	55				
8:45 AM				4		14	9	24			6	1	58				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	22	0	88	93	267	0	0	112	26	608	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	20.00%	0.00%	80.00%	25.83%	74.17%	0.00%	0.00%	81.16%	18.84%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	8	0	33	32	131	0	0	40	9	253				
PEAK HR FACTOR :	0.000			0.732			0.849			0.942			0.843				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

TOTALS

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM				6		5	6	14			33	1	65
4:15 PM				4		7	4	12			20	1	48
4:30 PM				3		10	6	20			24	1	64
4:45 PM				3		3	5	27			20	1	59
5:00 PM				3		3	2	21			26	1	56
5:15 PM				2		4	4	15			18	2	45
5:30 PM				3		5	4	13			32	3	60
5:45 PM				2		3	1	35			13	0	54
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 26	ST 0	SR 40	EL 32	ET 157	ER 0	WL 0	WT 186	WR 10	TOTAL 451
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	39.39%	0.00%	60.61%	16.93%	83.07%	0.00%	0.00%	94.90%	5.10%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	16	0	25	21	73	0	0	97	4	236
PEAK HR FACTOR :	0.000			0.788			0.734			0.743			0.908

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Cars

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM				0		3	9	13			30	2	57
6:15 AM				2		3	5	11			8	2	31
6:30 AM				0		7	3	11			7	2	30
6:45 AM				2		5	10	18			2	3	40
7:00 AM				2		2	8	15			3	2	32
7:15 AM				2		11	8	17			6	1	45
7:30 AM				1		6	11	26			10	2	56
7:45 AM				2		12	6	42			11	2	75
8:00 AM				2		8	8	33			11	2	64
8:15 AM				3		4	5	30			8	2	52
8:30 AM				2		7	5	21			10	4	49
8:45 AM				4		14	8	24			5	1	56
TOTAL VOLUMES :	0	0	0	22	0	82	86	261	0	0	111	25	587
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	21.15%	0.00%	78.85%	24.78%	75.22%	0.00%	0.00%	81.62%	18.38%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	8	0	30	30	131	0	0	40	8	247
PEAK HR FACTOR :	0.000			0.679			0.839			0.923			0.823

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Cars

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM				5		5	6	14			31	1	62
4:15 PM				4		7	4	12			20	1	48
4:30 PM				3		10	6	19			24	1	63
4:45 PM				3		3	5	27			20	1	59
5:00 PM				3		3	2	21			26	1	56
5:15 PM				2		4	4	15			18	2	45
5:30 PM				3		5	4	13			32	3	60
5:45 PM				2		3	1	35			13	0	54
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	25	0	40	32	156	0	0	184	10	447
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	38.46%	0.00%	61.54%	17.02%	82.98%	0.00%	0.00%	94.85%	5.15%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	15	0	25	21	72	0	0	95	4	232
PEAK HR FACTOR :	0.000			0.769			0.727			0.773			0.921

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

2 Axle Trucks

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM						0	0	0			0	0	0				
6:15 AM						0	0	2			0	0	2				
6:30 AM						0	0	0			0	0	0				
6:45 AM						0	0	1			0	0	1				
7:00 AM						0	0	0			0	0	0				
7:15 AM						0	2	1			0	0	3				
7:30 AM						1	0	0			0	0	1				
7:45 AM						0	0	0			0	0	0				
8:00 AM						0	1	0			0	0	1				
8:15 AM						2	1	0			0	1	4				
8:30 AM						2	2	2			0	0	6				
8:45 AM						0	1	0			1	0	2				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	5	7	6	0	0	1	1	20	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	53.85%	46.15%	0.00%	0.00%	50.00%	50.00%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	3	2	0	0	0	0	1	6				
PEAK HR FACTOR :	0.000			0.375			0.500			0.250			0.823				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

2 Axle Trucks

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM				1			0			2			3
4:15 PM				0			0			0			0
4:30 PM				0			1			0			1
4:45 PM				0			0			0			0
5:00 PM				0			0			0			0
5:15 PM				0			0			0			0
5:30 PM				0			0			0			0
5:45 PM				0			0			0			0
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 1	ST 0	SR 0	EL 0	ET 1	ER 0	WL 0	WT 2	WR 0	TOTAL 4
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	1	0	0	0	1	0	0	2	0	4
PEAK HR FACTOR :		0.000			0.250			0.250			0.250		0.921

UTURNS	NB	SB	EB	WB

	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0
APPROACH %'s :				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | 3 Axle Trucks | **Date:** 2/4/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM						0							0
6:15 AM						0							0
6:30 AM						0							0
6:45 AM						1							1
7:00 AM						0							0
7:15 AM						0							0
7:30 AM						0							0
7:45 AM						0							0
8:00 AM						0							0
8:15 AM						0							0
8:30 AM						0							0
8:45 AM						0							0

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.823

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

3 Axle Trucks

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.921

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.823

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Tuesday

City: Los Alamitos **4 Axle+ Trucks** **Date:** 2/4/2014

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
4:00 PM													0				
4:15 PM													0				
4:30 PM													0				
4:45 PM													0				
5:00 PM													0				
5:15 PM													0				
5:30 PM													0				
5:45 PM													0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	400 PM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.921				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Forklifts** | **Date:** 2/4/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.823

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Forklifts

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
4:00 PM													0				
4:15 PM													0				
4:30 PM													0				
4:45 PM													0				
5:00 PM													0				
5:15 PM													0				
5:30 PM													0				
5:45 PM													0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	400 PM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.921				

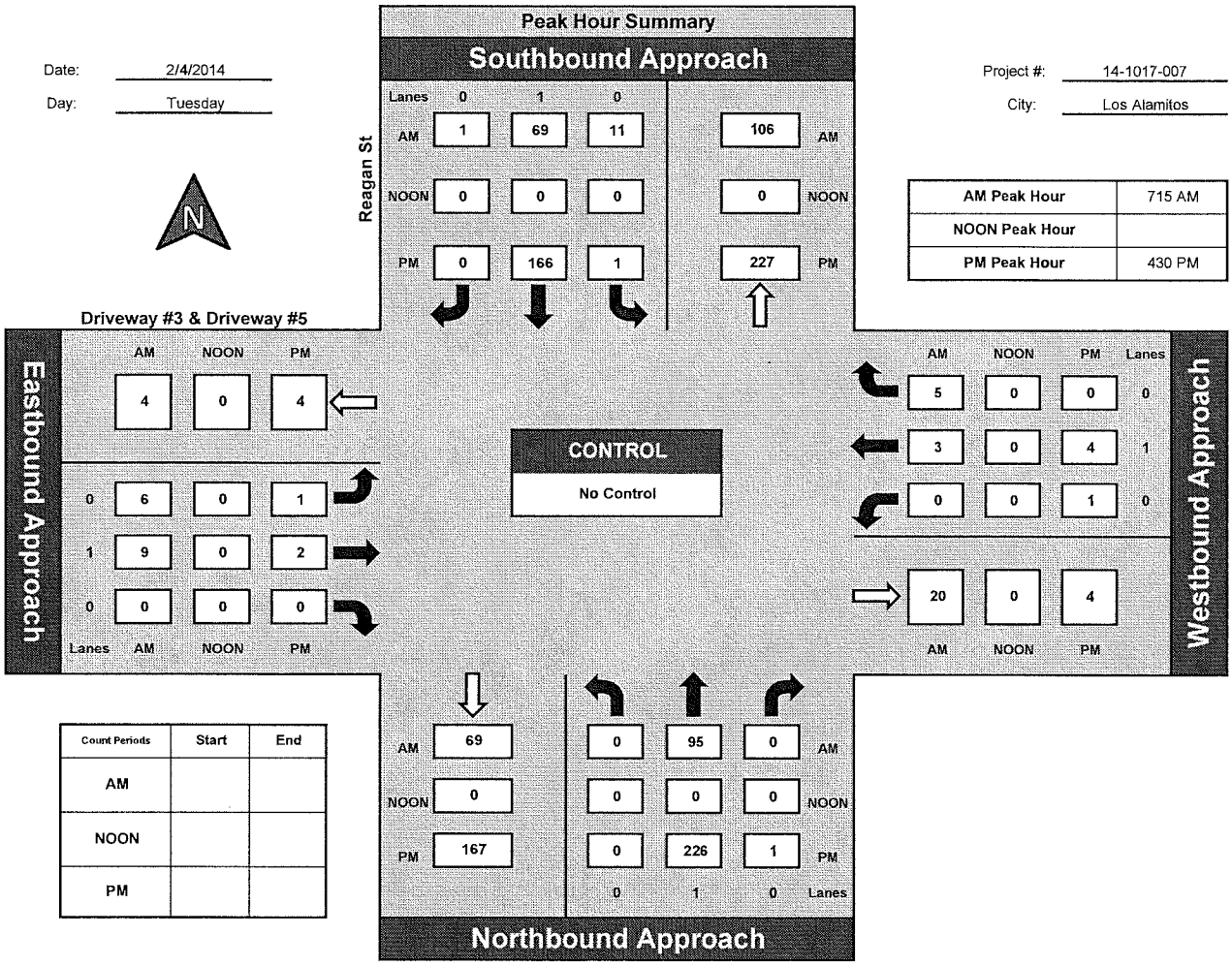
CONTROL : No Control

ITM Peak Hour Summary

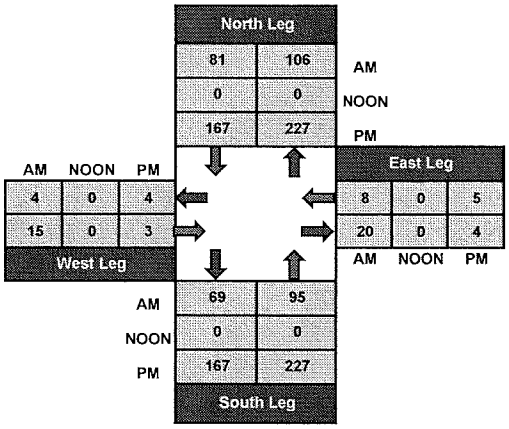
Prepared by:

National Data & Surveying Services

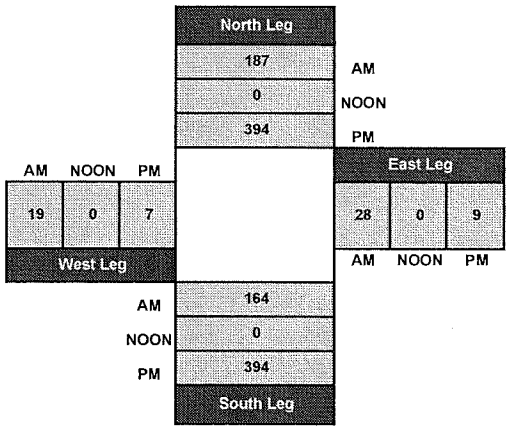
Reagan St and Driveway #3 & Driveway #5 , Los Alamitos



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

TOTALS

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		6	2	0	4	1	1	2			1	0	17
6:15 AM		4	1	2	5	1	1	4			0	0	18
6:30 AM		7	0	3	6	1	3	0			0	0	20
6:45 AM		16	0	0	6	0	0	0			0	0	22
7:00 AM		22	0	3	8	1	1	0			0	0	35
7:15 AM		32	0	4	18	1	3	0			1	1	60
7:30 AM		16	0	1	28	0	1	3			1	3	53
7:45 AM		24	0	2	13	0	2	5			0	0	46
8:00 AM		23	0	4	10	0	0	1			1	1	40
8:15 AM		23	0	1	9	0	0	1			1	0	35
8:30 AM		21	0	1	11	1	0	0			2	2	38
8:45 AM		17	3	4	12	1	0	0			2	0	39
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	211	6	25	130	7	12	16	0	0	9	7	423
APPROACH %'s :	0.00%	97.24%	2.76%	15.43%	80.25%	4.32%	42.86%	57.14%	0.00%	0.00%	56.25%	43.75%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	95	0	11	69	1	6	9	0	0	3	5	199
PEAK HR FACTOR :		0.742			0.698			0.536			0.500		0.829

UTURNS	NB	SB	EB	WB
	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

TOTALS

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		37	0	0	35		0	0		0	0		72
4:15 PM		41	0	1	38		0	0		0	0		80
4:30 PM		66	1	0	41		0	1		0	2		111
4:45 PM		64	0	0	51		1	0		0	0		116
5:00 PM		57	0	0	29		0	0		1	1		88
5:15 PM		39	0	1	45		0	1		0	1		87
5:30 PM		30	0	0	31		0	2		1	1		65
5:45 PM		41	0	0	31		0	0		0	0		72
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	375	1	2	301	0	1	4	0	2	5	0	691
APPROACH %'s :	0.00%	99.73%	0.27%	0.66%	99.34%	0.00%	20.00%	80.00%	0.00%	28.57%	71.43%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	226	1	1	166	0	1	2	0	1	4	0	402
PEAK HR FACTOR :		0.847			0.819			0.750			0.625		0.866

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Cars

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		6	2	0	3	0	1	2			0	0	14
6:15 AM		2	1	2	4	1	1	2			0	0	13
6:30 AM		7	0	2	6	0	2	0			0	0	17
6:45 AM		15	0	0	5	0	0	0			0	0	20
7:00 AM		22	0	3	8	1	1	0			0	0	35
7:15 AM		30	0	2	18	0	2	0			1	1	54
7:30 AM		16	0	1	28	0	1	3			0	2	51
7:45 AM		22	0	1	13	0	1	2			0	0	39
8:00 AM		22	0	2	9	0	0	0			1	1	35
8:15 AM		22	0	1	7	0	0	0			0	0	30
8:30 AM		19	0	0	11	1	0	0			1	2	34
8:45 AM		17	3	3	11	1	0	0			0	0	35
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	200	6	17	123	4	9	9	0	0	3	6	377
APPROACH %'s :	0.00%	97.09%	2.91%	11.81%	85.42%	2.78%	50.00%	50.00%	0.00%	0.00%	33.33%	66.67%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	90	0	6	68	0	4	5	0	0	2	4	179
PEAK HR FACTOR :	0.750			0.638			0.563			0.750			0.829

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007

City: Los Alamitos

Cars

PM

Day: Tuesday

Date: 2/4/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		34	0	0	35		0			0			69
4:15 PM		41	0	0	38		0			0			79
4:30 PM		66	1	0	40		0			0			107
4:45 PM		64	0	0	51		1			0			116
5:00 PM		56	0	0	27		0			1			84
5:15 PM		39	0	1	45		0			0			85
5:30 PM		30	0	0	31		0			1			62
5:45 PM		41	0	0	30		0			0			71
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	371	1	1	297	0	1	0	0	2	0	0	673
APPROACH %'s :	0.00%	99.73%	0.27%	0.34%	99.66%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	225	1	1	163	0	1	0	0	1	0	0	392
PEAK HR FACTOR :		0.843			0.804			0.250			0.250		0.845

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

2 Axle Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0		0	0							0	0
6:15 AM		0		0	1							0	1
6:30 AM		0		0	0							0	0
6:45 AM		0		0	0							0	0
7:00 AM		0		0	0							0	0
7:15 AM		1		2	0							0	3
7:30 AM		0		0	0							1	1
7:45 AM		1		0	0							0	1
8:00 AM		1		2	1							0	4
8:15 AM		0		0	2							0	2
8:30 AM		2		0	0							0	2
8:45 AM		0		0	0							0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	0	4	4	0	0	0	0	0	0	1	14
APPROACH %'s :	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	3	0	4	1	0	0	0	0	0	0	1	9
PEAK HR FACTOR :		0.750			0.417			0.000			0.250		0.829

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/4/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
4:00 PM		3			0			0					3				
4:15 PM		0			0			0					0				
4:30 PM		0			1			0					1				
4:45 PM		0			0			0					0				
5:00 PM		1			2			0					3				
5:15 PM		0			0			0					0				
5:30 PM		0			0			1					1				
5:45 PM		0			1			0					1				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	4	0	0	4	0	0	1	0	0	0	0	9	0	0	0	0
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	430 PM												TOTAL				
PEAK HR VOL :	0	1	0	0	3	0	0	0	0	0	0	0	4				
PEAK HR FACTOR :		0.250			0.375			0.000			0.000		0.845				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

3 Axle Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0			1								1
6:15 AM		0			0								0
6:30 AM		0			0								0
6:45 AM		1			0								1
7:00 AM		0			0								0
7:15 AM		1			0								1
7:30 AM		0			0								0
7:45 AM		0			0								0
8:00 AM		0			0								0
8:15 AM		0			0								0
8:30 AM		0			0								0
8:45 AM		0			0								0
TOTAL VOLUMES :	0	2	0	0	1	0	0	0	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.250			0.000			0.000			0.000		0.829

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

3 Axle Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.845

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0		0	0	1	0						1
6:15 AM		2		0	0	0	0						2
6:30 AM		0		1	0	1	1						3
6:45 AM		0		0	1	0	0						1
7:00 AM		0		0	0	0	0						0
7:15 AM		0		0	0	1	1						2
7:30 AM		0		0	0	0	0						0
7:45 AM		1		1	0	0	1						3
8:00 AM		0		0	0	0	0						0
8:15 AM		1		0	0	0	0						1
8:30 AM		0		1	0	0	0						1
8:45 AM		0		1	1	0	0						2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	4	2	3	3	0	0	0	0	0	16
APPROACH %'s :	0.00%	100.00%	0.00%	44.44%	22.22%	33.33%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	1	0	1	2	0	0	0	0	0	5
PEAK HR FACTOR :	0.250			0.500			0.500			0.000			0.829

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
4:00 PM				0									0				
4:15 PM				1									1				
4:30 PM				0									0				
4:45 PM				0									0				
5:00 PM				0									0				
5:15 PM				0									0				
5:30 PM				0									0				
5:45 PM				0									0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	430 PM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.845				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

Forklifts

City: Los Alamitos | **Date:** 2/4/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM								0			1		1
6:15 AM								2			0		2
6:30 AM								0			0		0
6:45 AM								0			0		0
7:00 AM								0			0		0
7:15 AM								0			0		0
7:30 AM								0			1		1
7:45 AM								3			0		3
8:00 AM								1			0		1
8:15 AM								1			1		2
8:30 AM								0			1		1
8:45 AM								0			2		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	7	0	0	6	0	13
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	0	0	1	0	5
PEAK HR FACTOR :	0.000			0.000			0.333			0.250			0.829

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Forklifts

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM								0			0		0
4:15 PM								0			0		0
4:30 PM								1			2		3
4:45 PM								0			0		0
5:00 PM								0			1		1
5:15 PM								1			1		2
5:30 PM								1			1		2
5:45 PM								0			0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	3	0	0	5	0	8
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	2	0	0	4	0	6
PEAK HR FACTOR :	0.000			0.000			0.500			0.500			0.845

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

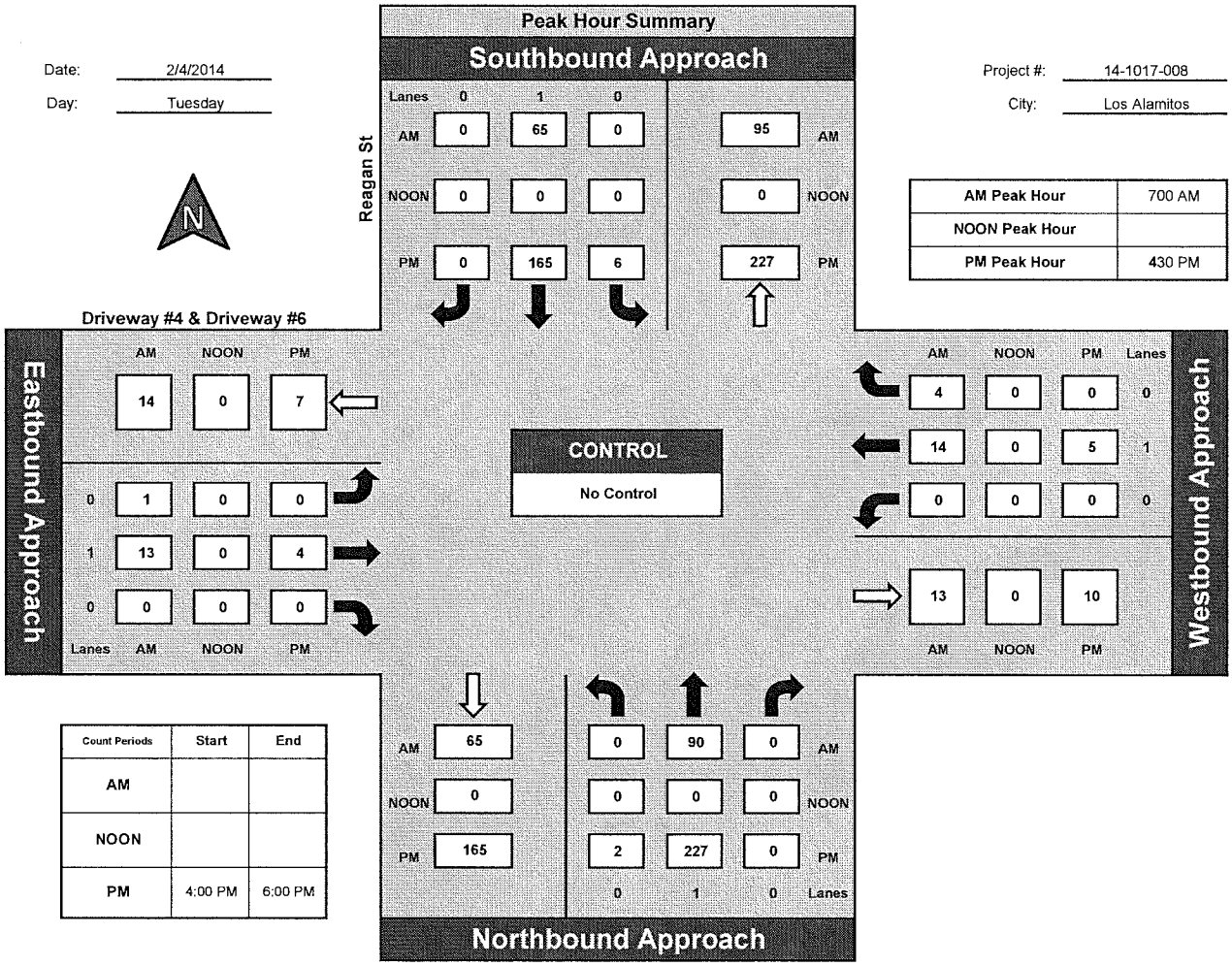
CONTROL : No Control

ITM Peak Hour Summary

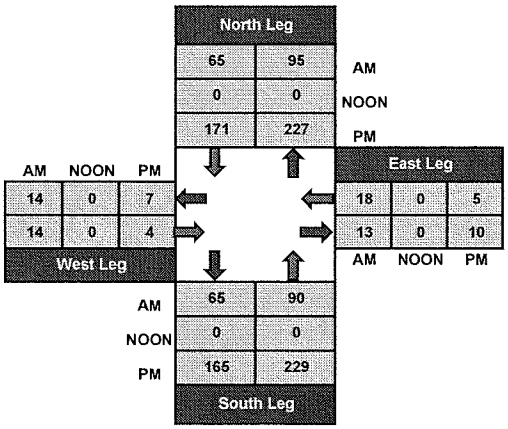
Prepared by:

National Data & Surveying Services

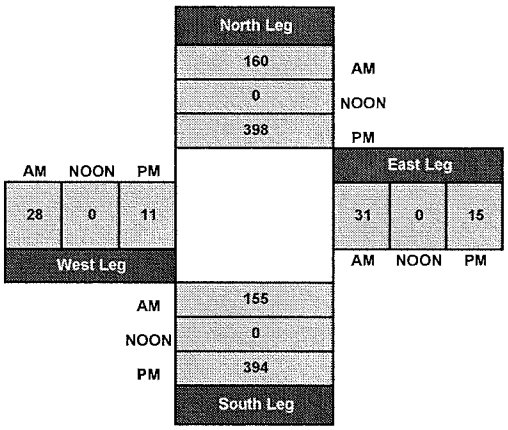
Reagan St and Driveway #4 & Driveway #6 , Los Alamitos



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008

City: Los Alamitos

TOTALS

AM

Day: Tuesday

Date: 2/4/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM		7		0	5	1	0	2	0	0	1	0	16				
6:15 AM		5		0	4	0	0	2	0	0	7	3	21				
6:30 AM		5		0	5	0	0	4	0	0	2	0	16				
6:45 AM		15		0	5	1	0	3	0	0	4	1	29				
7:00 AM		24		0	7	0	0	5	0	0	5	0	41				
7:15 AM		29		0	18	0	0	6	0	0	5	0	58				
7:30 AM		17		0	26	0	0	1	0	0	3	3	50				
7:45 AM		20		0	14	0	1	1	0	0	1	1	38				
8:00 AM		25		0	7	0	0	2	0	1	2	0	37				
8:15 AM		20		0	10	0	0	2	0	0	1	1	34				
8:30 AM		22		0	9	0	0	1	1	0	1	1	35				
8:45 AM		20		2	11	1	0	2	0	0	2	0	38				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	209	0	2	121	3	1	31	1	1	34	10	413	0	0	0	0
APPROACH %'s :	0.00%	100.00%	0.00%	1.59%	96.03%	2.38%	3.03%	93.94%	3.03%	2.22%	75.56%	22.22%					
PEAK HR START TIME :	700 AM												TOTAL				
PEAK HR VOL :	0	90	0	0	65	0	1	13	0	0	14	4	187				
PEAK HR FACTOR :		0.776			0.625			0.583			0.750		0.806				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Tuesday

City: Los Alamitos **Date:** 2/4/2014

TOTALS

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	0	37		0	35			7			5		84
4:15 PM	0	41		0	37			2			2		82
4:30 PM	0	65		6	38			0			1		110
4:45 PM	2	64		0	51			1			0		118
5:00 PM	0	57		0	30			1			3		91
5:15 PM	0	41		0	46			2			1		90
5:30 PM	0	29		2	30			3			2		66
5:45 PM	0	41		0	31			1			1		74
TOTAL VOLUMES :	NL 2	NT 375	NR 0	SL 8	ST 298	SR 0	EL 0	ET 17	ER 0	WL 0	WT 15	WR 0	TOTAL 715
APPROACH %'s :	0.53%	99.47%	0.00%	2.61%	97.39%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	2	227	0	6	165	0	0	4	0	0	5	0	409
PEAK HR FACTOR :		0.867			0.838			0.500			0.417		0.867

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Tuesday

City: Los Alamitos **Cars** **Date:** 2/4/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		7		0	5			0	0	0	0	0	12
6:15 AM		5		0	3			0	0	0	1	1	10
6:30 AM		5		0	5			1	0	0	0	0	11
6:45 AM		15		0	5			0	0	0	0	0	20
7:00 AM		24		0	7			0	0	0	0	0	31
7:15 AM		27		0	18			0	0	0	0	0	45
7:30 AM		17		0	26			0	0	0	0	2	45
7:45 AM		20		0	14			0	0	0	0	0	34
8:00 AM		24		0	6			0	0	1	0	0	31
8:15 AM		20		0	8			0	0	0	1	0	29
8:30 AM		21		0	9			0	1	0	0	0	31
8:45 AM		20		2	11			0	0	0	0	0	33
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	205	0	2	117	0	0	1	1	1	2	3	332
APPROACH %'s :	0.00%	100.00%	0.00%	1.68%	98.32%	0.00%	0.00%	50.00%	50.00%	16.67%	33.33%	50.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	88	0	0	65	0	0	0	0	0	0	2	155
PEAK HR FACTOR :		0.815			0.625			0.000			0.250		0.861

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Cars

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	34		0	35								69
4:15 PM	0	41		0	37								78
4:30 PM	0	65		6	37								108
4:45 PM	2	64		0	51								117
5:00 PM	0	56		0	28								84
5:15 PM	0	41		0	46								87
5:30 PM	0	29		2	30								61
5:45 PM	0	41		0	30								71
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	371	0	8	294	0	0	0	0	0	0	0	675
APPROACH %'s :	0.54%	99.46%	0.00%	2.65%	97.35%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	2	226	0	6	162	0	0	0	0	0	0	0	396
PEAK HR FACTOR :		0.864			0.824			0.000			0.000		0.846

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Tuesday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/4/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		0			0							0	0
6:15 AM		0			1							0	1
6:30 AM		0			0							0	0
6:45 AM		0			0							0	0
7:00 AM		0			0							0	0
7:15 AM		1			0							0	1
7:30 AM		0			0							1	1
7:45 AM		0			0							1	1
8:00 AM		1			1							0	2
8:15 AM		0			2							0	2
8:30 AM		1			0							1	2
8:45 AM		0			0							0	0
TOTAL VOLUMES :	NL 0	NT 3	NR 0	SL 0	ST 4	SR 0	EL 0	ET 0	ER 0	WL 0	WT 0	WR 3	TOTAL 10
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	2	3
PEAK HR FACTOR :		0.250			0.000			0.000			0.500		0.861

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

2 Axle Trucks

PM

NS/EW Streets:	Reagan St.			Reagan St.			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		3			0								3
4:15 PM		0			0								0
4:30 PM		0			1								1
4:45 PM		0			0								0
5:00 PM		1			2								3
5:15 PM		0			0								0
5:30 PM		0			0								0
5:45 PM		0			1								1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	0	4	0	0	0	0	0	0	0	8
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	1	0	0	3	0	0	0	0	0	0	0	4
PEAK HR FACTOR :		0.250			0.375			0.000			0.000		0.846

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008

City: Los Alamitos

3 Axle Trucks

AM

Day: Tuesday

Date: 2/4/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM		0				1						0	1				
6:15 AM		0				0						0	0				
6:30 AM		0				0						0	0				
6:45 AM		0				0						1	1				
7:00 AM		0				0						0	0				
7:15 AM		1				0						0	1				
7:30 AM		0				0						0	0				
7:45 AM		0				0						0	0				
8:00 AM		0				0						0	0				
8:15 AM		0				0						0	0				
8:30 AM		0				0						0	0				
8:45 AM		0				0						0	0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	1	0	0	0	1	0	0	0	0	0	1	3	0	0	0	0
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%					
PEAK HR START TIME :	700 AM												TOTAL				
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1				
PEAK HR FACTOR :		0.250			0.000			0.000			0.000		0.861				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

3 Axle Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.846

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM						0	0	1				0	1
6:15 AM						0	0	0				2	2
6:30 AM						0	0	0				0	0
6:45 AM						1	0	0				0	1
7:00 AM						0	0	0				0	0
7:15 AM						0	0	0				0	0
7:30 AM						0	0	0				0	0
7:45 AM						0	1	0				0	1
8:00 AM						0	0	0				0	0
8:15 AM						0	0	0				1	1
8:30 AM						0	0	0				0	0
8:45 AM						1	0	0				0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	2	1	1	0	0	0	3	7
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	50.00%	50.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.861

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #1 & Driveway #6			Driveway #1 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM											0		0
4:15 PM											0		0
4:30 PM											1		1
4:45 PM											0		0
5:00 PM											0		0
5:15 PM											0		0
5:30 PM											0		0
5:45 PM											0		0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	1	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	1	0	1
PEAK HR FACTOR :	0.000			0.000			0.000			0.250			0.846

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Tuesday

City: Los Alamitos **Forklifts** **Date:** 2/4/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM								1			1		2
6:15 AM								2			6		8
6:30 AM								3			2		5
6:45 AM								3			4		7
7:00 AM								5			5		10
7:15 AM								6			5		11
7:30 AM								1			3		4
7:45 AM								1			1		2
8:00 AM								2			2		4
8:15 AM								2			0		2
8:30 AM								1			1		2
8:45 AM								2			2		4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	29	0	0	32	0	61
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	13	0	0	14	0	27
PEAK HR FACTOR :	0.000			0.000			0.542			0.700			0.861

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Tuesday

City: Los Alamitos | **Date:** 2/4/2014

Forklifts

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM								7			5		12
4:15 PM								2			2		4
4:30 PM								0			0		0
4:45 PM								1			0		1
5:00 PM								1			3		4
5:15 PM								2			1		3
5:30 PM								3			2		5
5:45 PM								1			1		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	17	0	0	14	0	31
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	0	0	4	0	8
PEAK HR FACTOR :		0.000			0.000			0.500			0.333		0.846

UTURNS			
NB	SB	EB	WB
0	0	0	0

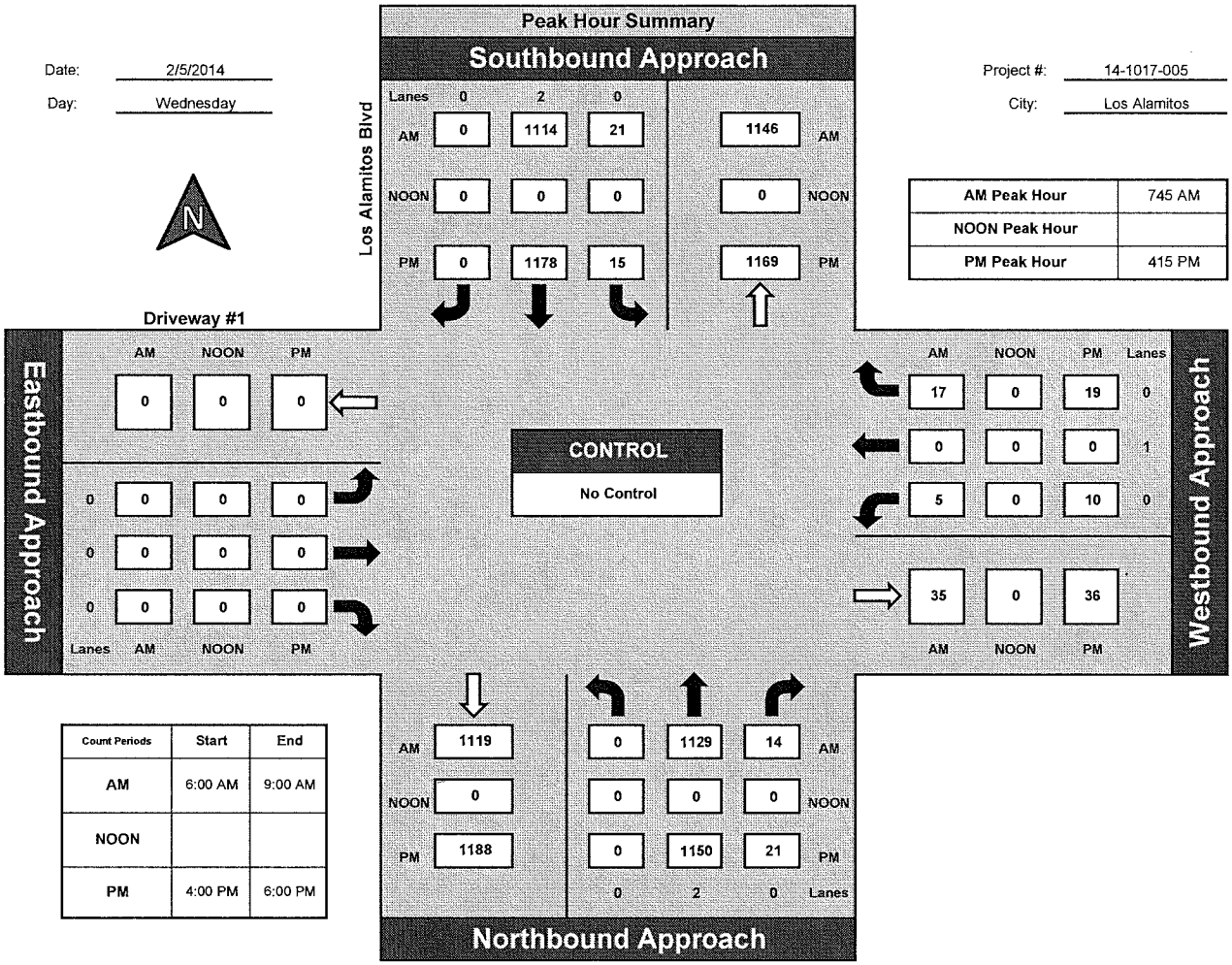
CONTROL : No Control

ITM Peak Hour Summary

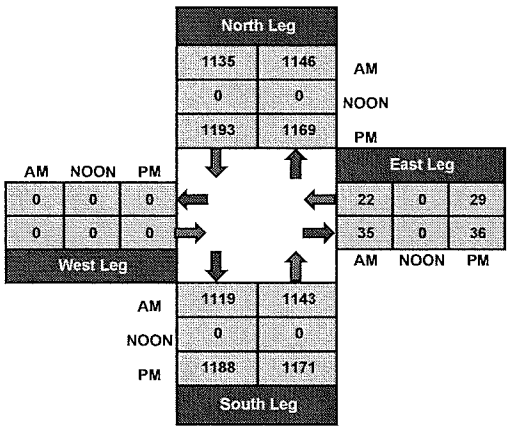
Prepared by:

National Data & Surveying Services

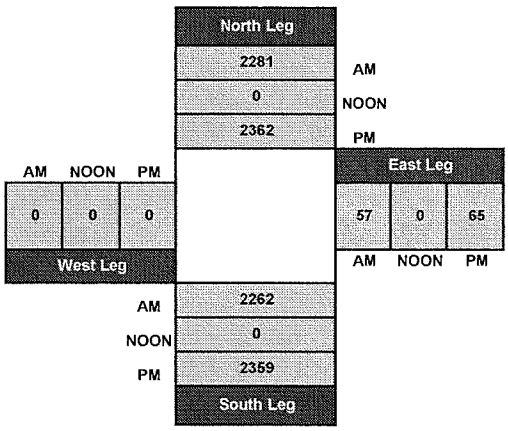
Los Alamitos Blvd and Driveway #1 , Los Alamitos



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Wednesday

City: Los Alamitos **Date:** 2/5/2014

TOTALS

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM	1	88	0	1	113					0		0	203
6:15 AM	0	74	1	5	122					0		1	203
6:30 AM	0	123	1	4	192					0		1	321
6:45 AM	0	100	1	6	213					1		3	324
7:00 AM	0	124	1	8	192					1		4	330
7:15 AM	1	144	1	5	210					1		2	364
7:30 AM	0	162	2	5	310					2		2	483
7:45 AM	0	208	0	10	278					1		3	500
8:00 AM	0	328	3	8	222					2		5	568
8:15 AM	0	340	8	1	288					0		3	640
8:30 AM	0	253	3	2	326					2		6	592
8:45 AM	0	159	5	9	220					1		7	401
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	2103	26	64	2686	0	0	0	0	11	0	37	4929
APPROACH %'s :	0.09%	98.69%	1.22%	2.33%	97.67%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	22.92%	0.00%	77.08%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	1129	14	21	1114	0	0	0	0	5	0	17	2300
PEAK HR FACTOR :	0.821			0.865			0.000			0.688			0.898

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Wednesday

City: Los Alamitos **Date:** 2/5/2014

TOTALS

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		316	2	6	251					1		7	583
4:15 PM		303	8	5	328					2		5	651
4:30 PM		257	4	6	285					2		8	562
4:45 PM		282	5	2	279					3		2	573
5:00 PM		308	4	2	286					3		4	607
5:15 PM		298	4	6	266					2		4	580
5:30 PM		285	2	1	258					1		4	551
5:45 PM		320	2	0	286					1		3	612
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2369	31	28	2239	0	0	0	0	15	0	37	4719
APPROACH %'s :	0.00%	98.71%	1.29%	1.24%	98.76%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	28.85%	0.00%	71.15%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	1150	21	15	1178	0	0	0	0	10	0	19	2393
PEAK HR FACTOR :		0.938			0.896			0.000			0.725		0.919

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

City: Los Alamitos | **Cars** | **Date:** 2/5/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM	1	85	0	1	109					0		0	196
6:15 AM	0	74	1	5	117					0		1	198
6:30 AM	0	122	1	4	184					0		1	312
6:45 AM	0	98	1	6	205					1		3	314
7:00 AM	0	123	1	8	186					1		4	323
7:15 AM	1	143	1	5	208					1		2	361
7:30 AM	0	161	2	5	307					2		2	479
7:45 AM	0	207	0	10	277					1		3	498
8:00 AM	0	322	3	8	216					2		5	556
8:15 AM	0	336	8	1	284					0		3	632
8:30 AM	0	248	3	2	322					2		6	583
8:45 AM	0	152	5	9	216					1		7	390
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	2071	26	64	2631	0	0	0	0	11	0	37	4842
APPROACH %'s :	0.10%	98.67%	1.24%	2.37%	97.63%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	22.92%	0.00%	77.08%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	1113	14	21	1099	0	0	0	0	5	0	17	2269
PEAK HR FACTOR :	0.819			0.864			0.000			0.688			0.898

UTURNS	NB	SB	EB	WB
TOTAL	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

City: Los Alamitos | **Cars** | **Date:** 2/5/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		311	2	6	251					1		7	578
4:15 PM		302	8	5	325					2		5	647
4:30 PM		252	4	6	285					2		8	557
4:45 PM		279	5	2	277					3		2	568
5:00 PM		306	4	2	285					3		4	604
5:15 PM		298	4	6	264					2		4	578
5:30 PM		284	2	1	258					1		4	550
5:45 PM		316	2	0	286					1		3	608
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2348	31	28	2231	0	0	0	0	15	0	37	4690
APPROACH %'s :	0.00%	98.70%	1.30%	1.24%	98.76%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	28.85%	0.00%	71.15%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	1139	21	15	1172	0	0	0	0	10	0	19	2376
PEAK HR FACTOR :		0.935			0.899			0.000			0.725		0.918

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/5/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		0			3								3
6:15 AM		0			5								5
6:30 AM		1			6								7
6:45 AM		2			2								4
7:00 AM		1			5								6
7:15 AM		1			2								3
7:30 AM		1			1								2
7:45 AM		0			0								0
8:00 AM		3			3								6
8:15 AM		2			1								3
8:30 AM		0			2								2
8:45 AM		5			4								9
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	16	0	0	34	0	0	0	0	0	0	0	50
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	5	0	0	6	0	0	0	0	0	0	0	11
PEAK HR FACTOR :	0.417			0.500			0.000			0.000			0.898

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Wednesday

City: Los Alamitos **2 Axle Trucks** **Date:** 2/5/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		1			0								1
4:15 PM		1			2								3
4:30 PM		1			0								1
4:45 PM		3			2								5
5:00 PM		1			1								2
5:15 PM		0			2								2
5:30 PM		0			0								0
5:45 PM		0			0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	7	0	0	7	0	0	0	0	0	0	0	14
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	6	0	0	5	0	0	0	0	0	0	0	11
PEAK HR FACTOR :		0.500			0.625			0.000			0.000		0.918

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/5/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		1			1								2
6:15 AM		0			0								0
6:30 AM		0			1								1
6:45 AM		0			3								3
7:00 AM		0			0								0
7:15 AM		0			0								0
7:30 AM		0			1								1
7:45 AM		0			0								0
8:00 AM		2			1								3
8:15 AM		0			1								1
8:30 AM		3			1								4
8:45 AM		0			0								0
TOTAL VOLUMES :	0	6	0	0	9	0	0	0	0	0	0	0	15
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	5	0	0	3	0	0	0	0	0	0	0	8
PEAK HR FACTOR :		0.417			0.750			0.000			0.000		0.898

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/5/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		2			0								2
4:15 PM		0			1								1
4:30 PM		2			0								2
4:45 PM		0			0								0
5:00 PM		0			0								0
5:15 PM		0			0								0
5:30 PM		0			0								0
5:45 PM		0			0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	0	1	0	0	0	0	0	0	0	S
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	2	0	0	1	0	0	0	0	0	0	0	3
PEAK HR FACTOR :		0.250			0.250			0.000			0.000		0.918

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Wednesday

City: Los Alamitos **4 Axle+ Trucks** **Date:** 2/5/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		2			0								2
6:15 AM		0			0								0
6:30 AM		0			1								1
6:45 AM		0			3								3
7:00 AM		0			1								1
7:15 AM		0			0								0
7:30 AM		0			1								1
7:45 AM		1			1								2
8:00 AM		1			2								3
8:15 AM		2			2								4
8:30 AM		2			1								3
8:45 AM		2			0								2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	10	0	0	12	0	0	0	0	0	0	0	22
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	6	0	0	6	0	0	0	0	0	0	0	12
PEAK HR FACTOR :		0.750			0.750			0.000			0.000		0.898

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

City: Los Alamitos | **4 Axle+ Trucks** | **Date:** 2/5/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		2											2
4:15 PM		0											0
4:30 PM		2											2
4:45 PM		0											0
5:00 PM		1											1
5:15 PM		0											0
5:30 PM		1											1
5:45 PM		4											4
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	10	0	0	0	0	0	0	0	0	0	0	10
APPROACH %'s :	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	3	0	0	0	0	0	0	0	0	0	0	3
PEAK HR FACTOR :		0.375			0.000			0.000			0.000		0.918

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

City: Los Alamitos | **Forklifts** | **Date:** 2/5/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.898

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Wednesday

City: Los Alamitos | **Forklifts** | **Date:** 2/5/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	2	0	0	2	0	0	0	0	0	1	0					
4:00 PM													0				
4:15 PM													0				
4:30 PM													0				
4:45 PM													0				
5:00 PM													0				
5:15 PM													0				
5:30 PM													0				
5:45 PM													0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	415 PM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.918				

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Driveway #2 and Catalina St , Los Alamitos

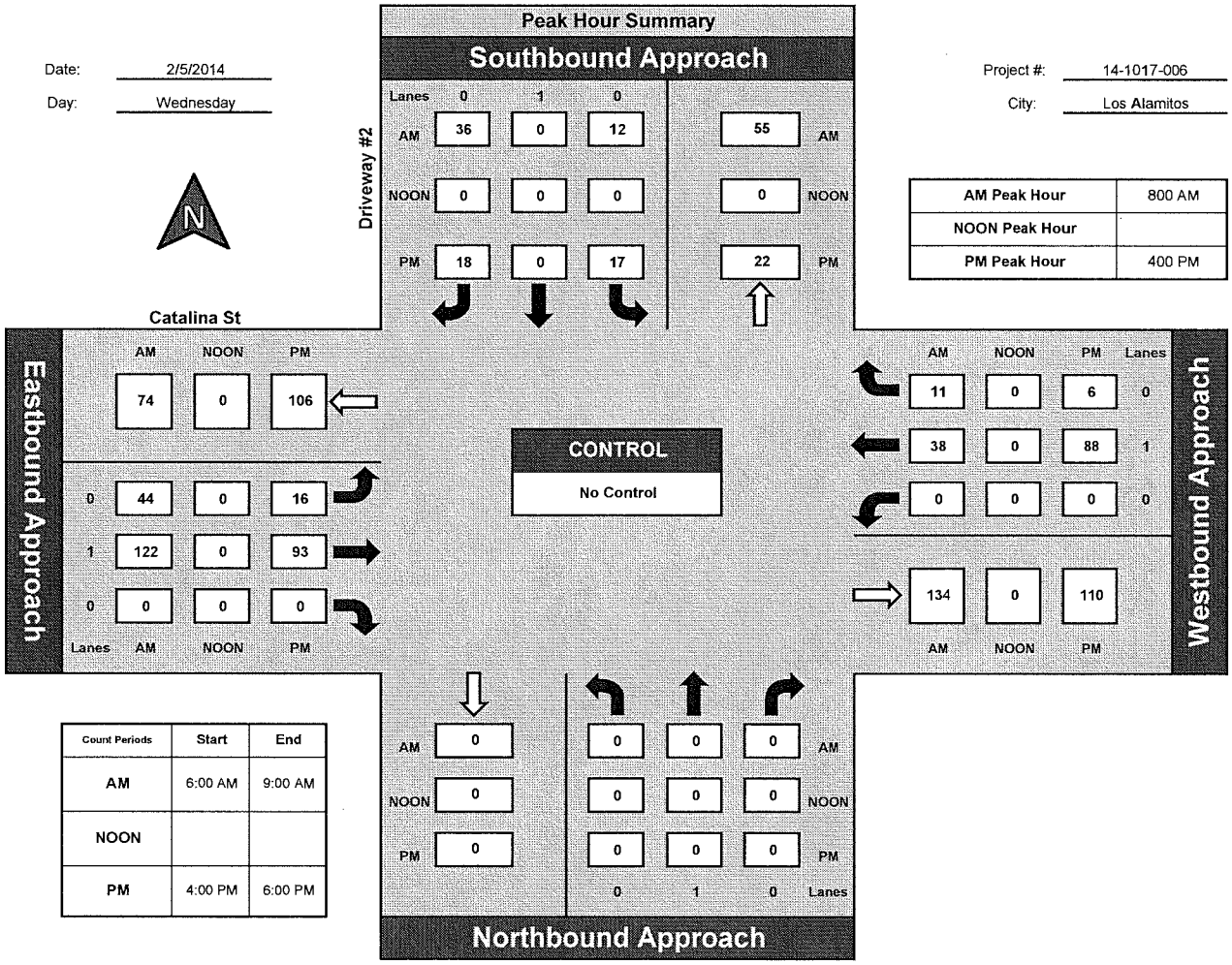
Date: 2/5/2014

Day: Wednesday

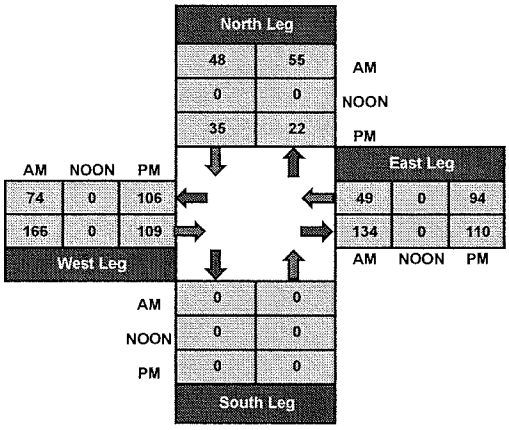
Project #: 14-1017-006

City: Los Alamitos

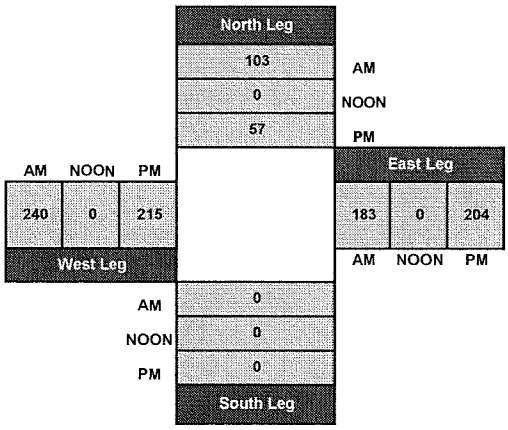
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

TOTALS

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM				0		4	5	13			30	1	53
6:15 AM				1		1	7	13			7	2	31
6:30 AM				1		3	7	16			5	0	32
6:45 AM				1		10	4	20			4	1	40
7:00 AM				2		2	8	16			8	6	42
7:15 AM				5		10	6	18			5	5	49
7:30 AM				4		12	5	29			5	2	57
7:45 AM				0		8	5	40			10	3	66
8:00 AM				0		5	4	36			12	1	58
8:15 AM				1		10	13	28			8	4	64
8:30 AM				6		10	14	29			9	4	72
8:45 AM				5		11	13	29			9	2	69
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 26	ST 0	SR 86	EL 91	ET 287	ER 0	WL 0	WT 112	WR 31	TOTAL 633
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	23.21%	0.00%	76.79%	24.07%	75.93%	0.00%	0.00%	78.32%	21.68%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	12	0	36	44	122	0	0	38	11	263
PEAK HR FACTOR :	0.000			0.750			0.965			0.942			0.913

UTURNS	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006

City: Los Alamitos

TOTALS

PM

Day: Wednesday

Date: 2/5/2014

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM				4		5	1	20			25	1	56
4:15 PM				4		3	7	17			18	3	52
4:30 PM				4		5	4	24			18	1	56
4:45 PM				5		5	4	32			27	1	74
5:00 PM				1		4	1	13			32	1	52
5:15 PM				2		6	2	16			22	2	50
5:30 PM				1		2	4	20			21	3	51
5:45 PM				3		9	1	27			13	0	53
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	24	0	39	24	169	0	0	176	12	444
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	38.10%	0.00%	61.90%	12.44%	87.56%	0.00%	0.00%	93.62%	6.38%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	17	0	18	16	93	0	0	88	6	238
PEAK HR FACTOR :	0.000			0.875			0.757			0.839			0.804

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

Cars

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM				0		4	5	13			30	1	53				
6:15 AM				1		1	7	13			7	2	31				
6:30 AM				1		3	7	16			5	0	32				
6:45 AM				1		10	4	19			4	1	39				
7:00 AM				2		2	8	15			8	6	41				
7:15 AM				5		10	6	18			5	5	49				
7:30 AM				4		12	5	29			5	2	57				
7:45 AM				0		8	5	40			10	3	66				
8:00 AM				0		5	4	36			12	1	58				
8:15 AM				1		10	11	28			8	3	61				
8:30 AM				6		10	14	29			9	4	72				
8:45 AM				5		11	12	29			9	2	68				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	26	0	86	88	285	0	0	112	30	627	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	23.21%	0.00%	76.79%	23.59%	76.41%	0.00%	0.00%	78.87%	21.13%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	0	0	12	0	36	41	122	0	0	38	10	259				
PEAK HR FACTOR :	0.000			0.750			0.948			0.923			0.899				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **Cars** | **Date:** 2/5/2014

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM				4		5	1	20			25	1	56
4:15 PM				4		3	6	17			18	3	51
4:30 PM				4		5	4	24			18	1	56
4:45 PM				5		5	4	32			27	1	74
5:00 PM				1		3	1	13			32	1	51
5:15 PM				2		6	2	16			21	2	49
5:30 PM				1		2	4	19			20	3	49
5:45 PM				3		9	1	27			13	0	53
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 24	ST 0	SR 38	EL 23	ET 168	ER 0	WL 0	WT 174	WR 12	TOTAL 439
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	38.71%	0.00%	61.29%	12.04%	87.96%	0.00%	0.00%	93.55%	6.45%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	17	0	18	15	93	0	0	88	6	237
PEAK HR FACTOR :		0.000			0.875			0.750			0.839		0.801

UTURNS	NB	SB	EB	WB

	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/5/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM							0	0				0	0
6:15 AM							0	0				0	0
6:30 AM							0	0				0	0
6:45 AM							0	0				0	0
7:00 AM							0	1				0	1
7:15 AM							0	0				0	0
7:30 AM							0	0				0	0
7:45 AM							0	0				0	0
8:00 AM							0	0				0	0
8:15 AM							2	0				1	3
8:30 AM							0	0				0	0
8:45 AM							1	0				0	1
TOTAL VOLUMES :	0	0	0	0	0	0	3	1	0	0	0	1	5
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	75.00%	25.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	3	0	0	0	0	1	4
PEAK HR FACTOR :	0.000			0.000			0.375			0.250			0.899

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

2 Axle Trucks

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM						0	0	0			0		0
4:15 PM						0	1	0			0		1
4:30 PM						0	0	0			0		0
4:45 PM						0	0	0			0		0
5:00 PM						1	0	0			0		1
5:15 PM						0	0	0			1		1
5:30 PM						0	0	1			1		2
5:45 PM						0	0	0			0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	1	1	0	0	2	0	5
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.000			0.250			0.000			0.801

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **3 Axle Trucks** | **Date:** 2/5/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM								0					0
6:15 AM								0					0
6:30 AM								0					0
6:45 AM								1					1
7:00 AM								0					0
7:15 AM								0					0
7:30 AM								0					0
7:45 AM								0					0
8:00 AM								0					0
8:15 AM								0					0
8:30 AM								0					0
8:45 AM								0					0
TOTAL VOLUMES :	0	0	0	0	0	0	0	1	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.899

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/5/2014

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.801

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM													0				
6:15 AM													0				
6:30 AM													0				
6:45 AM													0				
7:00 AM													0				
7:15 AM													0				
7:30 AM													0				
7:45 AM													0				
8:00 AM													0				
8:15 AM													0				
8:30 AM													0				
8:45 AM													0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.899				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.801

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Wednesday

City: Los Alamitos **Forklifts** **Date:** 2/5/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.899

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Wednesday

City: Los Alamitos | **Forklifts** | **Date:** 2/5/2014

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.801

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Reagan St and Driveway #3 & Driveway #5 , Los Alamitos

Date: 2/5/2014

Day: Wednesday

Project #: 14-1017-007

City: Los Alamitos

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Count Periods	Start	End
AM	6:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	70	125	AM
NOON	0	0	NOON
PM	141	228	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
12	0	5	AM	13	0	7
4	0	4	AM	13	0	8

	South Leg	
AM	64	127
NOON	0	0
PM	140	229

Total Volume Per Leg

	North Leg	
AM	195	AM
NOON	0	NOON
PM	369	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
16	0	9	26	0	15

	South Leg
AM	191
NOON	0
PM	369

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Wednesday

City: Los Alamitos **Date:** 2/5/2014

TOTALS

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM	0	4	1	1	5	0	0	2		0	2	1	16
6:15 AM	0	5	0	2	2	1	1	0		0	2	0	13
6:30 AM	0	11	0	1	5	0	0	1		0	2	0	20
6:45 AM	2	5	1	0	2	1	1	1		0	2	0	15
7:00 AM	1	1	2	1	3	0	0	0		0	1	1	10
7:15 AM	1	17	2	0	10	0	0	0		0	1	1	32
7:30 AM	0	19	0	0	9	0	1	1		0	1	0	31
7:45 AM	0	25	0	1	6	0	0	2		1	0	0	35
8:00 AM	1	32	0	2	14	0	0	0		1	2	0	52
8:15 AM	0	47	1	3	27	0	0	2		2	4	0	86
8:30 AM	0	21	0	1	10	1	0	1		0	0	0	34
8:45 AM	0	25	0	2	10	0	0	1		0	4	0	42

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	212	7	14	103	3	3	11	0	4	21	3	386
APPROACH %'s :	2.23%	94.64%	3.13%	11.67%	85.83%	2.50%	21.43%	78.57%	0.00%	14.29%	75.00%	10.71%	

PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	1	125	1	8	61	1	0	4	0	3	10	0	214
PEAK HR FACTOR :		0.661			0.583			0.500			0.542		0.622

CONTROL : No Control

UTURNS

NB	SB	EB	WB
0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Wednesday

City: Los Alamitos **Date:** 2/5/2014

TOTALS

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	47	0	0	38			0		1	0	0	86
4:15 PM	0	47	1	1	23			1		0	1	0	74
4:30 PM	0	59	0	1	37			2		0	0	2	101
4:45 PM	1	75	1	0	41			0		1	0	0	119
5:00 PM	0	45	0	0	38			1		0	3	0	87
5:15 PM	0	35	0	0	37			0		1	0	0	73
5:30 PM	1	36	0	0	12			1		0	1	0	51
5:45 PM	1	35	0	1	22			0		0	0	0	59
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	3	379	2	3	248	0	0	5	0	3	5	2	650
APPROACH %'s :	0.78%	98.70%	0.52%	1.20%	98.80%	0.00%	0.00%	100.00%	0.00%	30.00%	50.00%	20.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	1	226	2	2	139	0	0	4	0	1	4	2	381
PEAK HR FACTOR :		0.744			0.860			0.500			0.583		0.800

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007

City: Los Alamitos

Cars

AM

Day: Wednesday

Date: 2/5/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM	0	4	1	0	4			0		0	0	0	9
6:15 AM	0	4	0	0	2			0		0	0	0	6
6:30 AM	0	10	0	1	5			1		0	1	0	18
6:45 AM	2	4	0	0	2			1		0	1	0	10
7:00 AM	1	1	1	1	3			0		0	0	1	8
7:15 AM	1	17	1	0	10			0		0	1	0	30
7:30 AM	0	18	0	0	7			0		0	0	0	25
7:45 AM	0	23	0	0	6			0		1	0	0	30
8:00 AM	1	31	0	0	14			0		1	0	0	47
8:15 AM	0	44	1	1	27			1		1	1	0	76
8:30 AM	0	20	0	0	9			0		0	0	0	29
8:45 AM	0	22	0	0	10			0		0	0	0	32
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	198	4	3	99	0	0	3	0	3	4	1	320
APPROACH %'s :	2.42%	95.65%	1.93%	2.94%	97.06%	0.00%	0.00%	100.00%	0.00%	37.50%	50.00%	12.50%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	1	117	1	1	60	0	0	1	0	2	1	0	184
PEAK HR FACTOR :		0.661			0.545			0.250			0.375		0.605

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

Cars

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	46	0	0	37					1		0	84
4:15 PM	0	47	1	1	23					0		0	72
4:30 PM	0	58	0	0	36					0		2	96
4:45 PM	1	75	1	0	41					1		0	119
5:00 PM	0	43	0	0	37					0		0	80
5:15 PM	0	34	0	0	36					1		0	71
5:30 PM	0	35	0	0	12					0		0	47
5:45 PM	1	35	0	1	22					0		0	59
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	373	2	2	244	0	0	0	0	3	0	2	628
APPROACH %'s :	0.53%	98.94%	0.53%	0.81%	99.19%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	60.00%	0.00%	40.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	1	223	2	1	137	0	0	0	0	1	0	2	367
PEAK HR FACTOR :		0.734			0.841			0.000			0.375		0.771

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007

City: Los Alamitos

2 Axle Trucks

AM

Day: Wednesday

Date: 2/5/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM		0	0	0	0		0			0			0				
6:15 AM		0	0	0	0		1			0			1				
6:30 AM		0	0	0	0		0			0			0				
6:45 AM		0	0	0	0		0			0			0				
7:00 AM		0	0	0	0		0			0			0				
7:15 AM		0	1	0	0		0			0			1				
7:30 AM		0	0	0	1		0			0			1				
7:45 AM		2	0	0	0		0			0			2				
8:00 AM		0	0	1	0		0			0			1				
8:15 AM		0	0	1	0		0			1			2				
8:30 AM		1	0	0	0		0			0			1				
8:45 AM		2	0	1	0		0			0			3				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	5	1	3	1	0	1	0	0	1	0	0	12	0	0	0	0
APPROACH %'s :	0.00%	83.33%	16.67%	75.00%	25.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	3	0	3	0	0	0	0	0	1	0	0	7				
PEAK HR FACTOR :		0.375			0.750			0.000			0.250		0.605				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Wednesday

City: Los Alamitos **2 Axle Trucks** **Date:** 2/5/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	1			0			0			0		1
4:15 PM	0	0			0			0			0		0
4:30 PM	0	1			1			0			0		2
4:45 PM	0	0			0			0			0		0
5:00 PM	0	2			1			0			0		3
5:15 PM	0	1			1			0			0		2
5:30 PM	1	0			0			1			1		3
5:45 PM	0	0			0			0			0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	5	0	0	3	0	0	1	0	0	1	0	11
APPROACH %'s :	16.67%	83.33%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	3	0	0	2	0	0	0	0	0	0	0	5
PEAK HR FACTOR :		0.375			0.500			0.000			0.000		0.771

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Wednesday

City: Los Alamitos | **3 Axle Trucks** | **Date:** 2/5/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM		0	0	1							0	1	2				
6:15 AM		1	0	0							0	0	1				
6:30 AM		0	0	0							1	0	1				
6:45 AM		0	1	0							1	0	2				
7:00 AM		0	0	0							0	0	0				
7:15 AM		0	0	0							0	1	1				
7:30 AM		0	0	0							0	0	0				
7:45 AM		0	0	0							0	0	0				
8:00 AM		1	0	1							0	0	2				
8:15 AM		0	0	0							0	0	0				
8:30 AM		0	0	1							0	0	1				
8:45 AM		0	0	0							0	0	0				

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	2	1	3	0	0	0	0	0	0	2	2	10	0	0	0	0
APPROACH %'s :	0.00%	66.67%	33.33%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	50.00%	50.00%					

PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	1	0	2	0	0	0	0	0	0	0	0	3
PEAK HR FACTOR :		0.250			0.500			0.000			0.000		0.605

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Wednesday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/5/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		0											0
4:15 PM		0											0
4:30 PM		0											0
4:45 PM		0											0
5:00 PM		0											0
5:15 PM		0											0
5:30 PM		1											1
5:45 PM		0											0
TOTAL VOLUMES :	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 0	ER 0	WL 0	WT 0	WR 0	TOTAL 1
APPROACH %'s :	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.771

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		0		0	1	0	0						1
6:15 AM		0		2	0	1	0						3
6:30 AM		1		0	0	0	0						1
6:45 AM		1		0	0	1	1						3
7:00 AM		0		0	0	0	0						0
7:15 AM		0		0	0	0	0						0
7:30 AM		1		0	1	0	1						3
7:45 AM		0		1	0	0	0						1
8:00 AM		0		0	0	0	0						0
8:15 AM		3		1	0	0	0						4
8:30 AM		0		0	1	1	0						2
8:45 AM		1		1	0	0	0						2
TOTAL VOLUMES :	NL 0	NT 7	NR 0	SL 5	ST 3	SR 3	EL 2	ET 0	ER 0	WL 0	WT 0	WR 0	TOTAL 20
APPROACH %'s :	0.00%	100.00%	0.00%	45.45%	27.27%	27.27%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	4	0	2	1	1	0	0	0	0	0	0	8
PEAK HR FACTOR :		0.333			0.500			0.000			0.000		0.605

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM				0	1								1
4:15 PM				0	0								0
4:30 PM				1	0								1
4:45 PM				0	0								0
5:00 PM				0	0								0
5:15 PM				0	0								0
5:30 PM				0	0								0
5:45 PM				0	0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1	1	0	0	0	0	0	0	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	50.00%	50.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	1	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.000			0.250			0.000			0.000			0.771

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Wednesday

City: Los Alamitos **Forklifts** **Date:** 2/5/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM			0					2			2		4				
6:15 AM			0					0			2		2				
6:30 AM			0					0			0		0				
6:45 AM			0					0			0		0				
7:00 AM			1					0			1		2				
7:15 AM			0					0			0		0				
7:30 AM			0					1			1		2				
7:45 AM			0					2			0		2				
8:00 AM			0					0			2		2				
8:15 AM			0					1			3		4				
8:30 AM			0					1			0		1				
8:45 AM			0					1			4		5				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	1	0	0	0	0	8	0	0	15	0	24	0	0	0	0
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	3	0	0	9	0	12				
PEAK HR FACTOR :	0.000			0.000			0.750			0.563			0.605				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

Forklifts

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM								0			0		0
4:15 PM								1			1		2
4:30 PM								2			0		2
4:45 PM								0			0		0
5:00 PM								1			3		4
5:15 PM								0			0		0
5:30 PM								0			0		0
5:45 PM								0			0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	4	0	0	4	0	8
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	0	0	4	0	8
PEAK HR FACTOR :		0.000			0.000			0.500			0.333		0.771

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

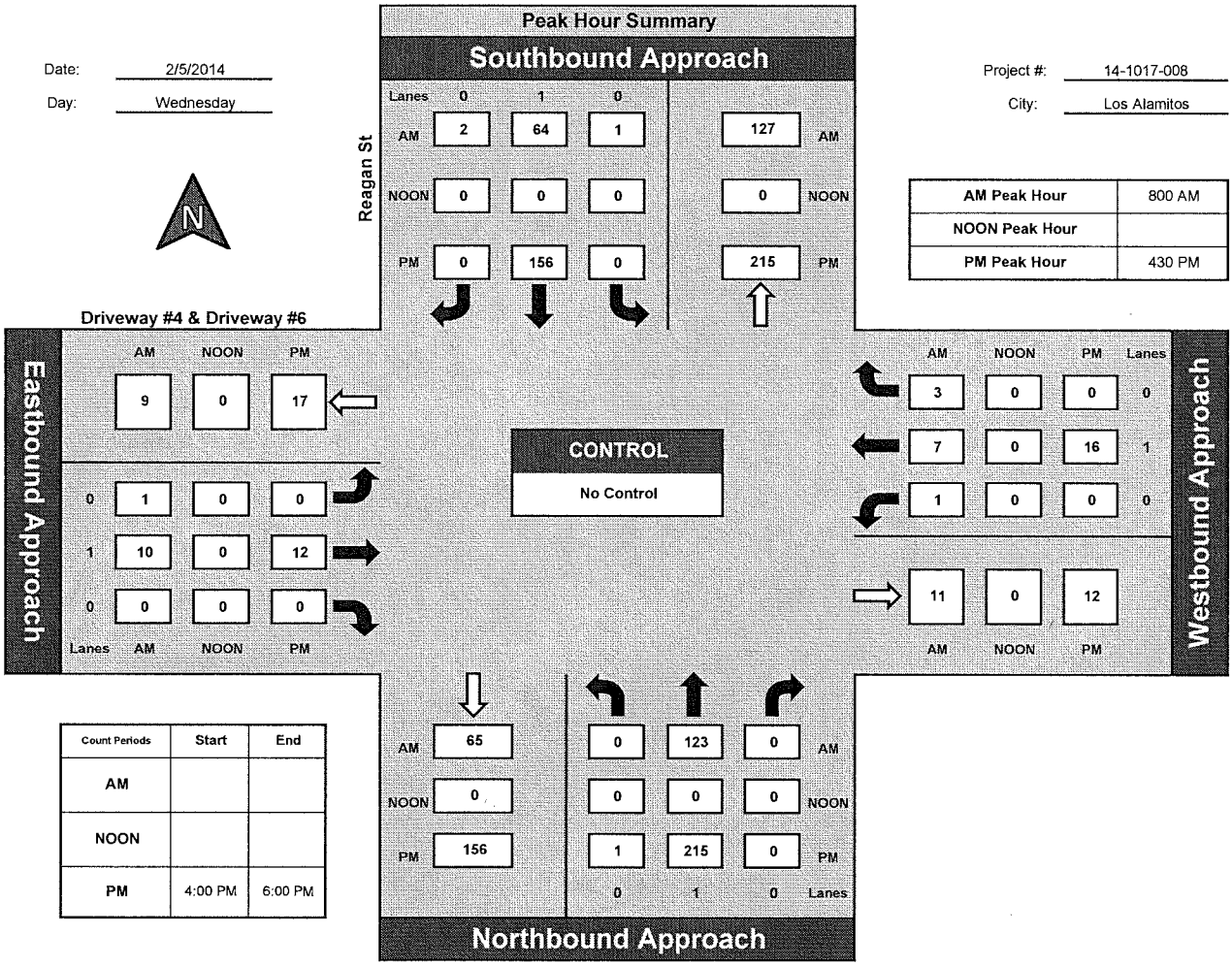
National Data & Surveying Services

Reagan St and Driveway #4 & Driveway #6 , Los Alamitos

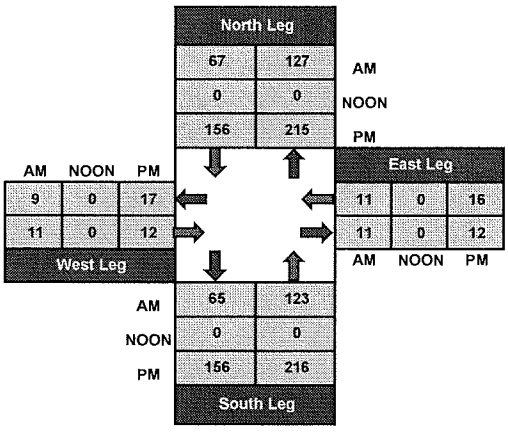
Date: 2/5/2014
Day: Wednesday
Project #: 14-1017-008
City: Los Alamitos

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

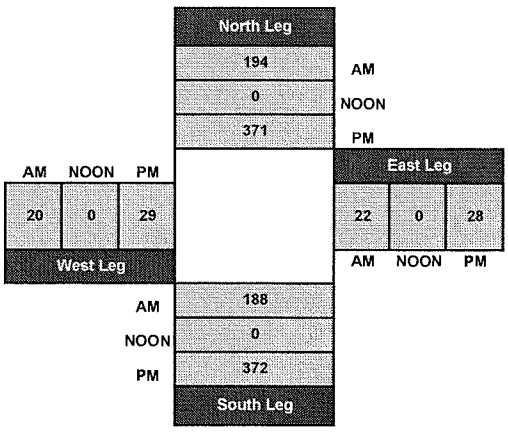
Count Periods	Start	End
AM		
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Wednesday

City: Los Alamitos **Date:** 2/5/2014

TOTALS

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		5		0	4	1	0	3		0	6	0	19
6:15 AM		4		0	2	0	0	6		0	3	1	16
6:30 AM		9		0	5	0	1	1		0	3	1	20
6:45 AM		6		0	2	0	0	2		0	2	1	13
7:00 AM		3		0	2	0	1	1		0	2	0	9
7:15 AM		19		0	11	0	1	3		0	2	0	36
7:30 AM		18		0	8	1	0	0		0	0	1	28
7:45 AM		24		0	7	0	0	0		0	1	2	34
8:00 AM		33		0	15	0	0	2		0	1	0	51
8:15 AM		45		1	30	1	1	4		1	1	2	86
8:30 AM		22		0	9	1	0	2		0	1	0	35
8:45 AM		23		0	10	0	0	2		0	4	1	40
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	211	0	1	105	4	4	26	0	1	26	9	387
APPROACH %'s :	0.00%	100.00%	0.00%	0.91%	95.45%	3.64%	13.33%	86.67%	0.00%	2.78%	72.22%	25.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	123	0	1	64	2	1	10	0	1	7	3	212
PEAK HR FACTOR :		0.683			0.523			0.550			0.550		0.616

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Wednesday

City: Los Alamitos **Date:** 2/5/2014

TOTALS

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	1	48			37	1		4			3	0	94
4:15 PM	0	48			23	0		5			4	0	80
4:30 PM	0	59			37	0		2			2	0	100
4:45 PM	0	76			44	0		1			1	0	122
5:00 PM	1	45			38	0		2			6	0	92
5:15 PM	0	35			37	0		7			7	0	86
5:30 PM	0	35			11	0		5			5	1	57
5:45 PM	0	35			24	0		5			6	0	70
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	381	0	0	251	1	0	31	0	0	34	1	701
APPROACH %'s :	0.52%	99.48%	0.00%	0.00%	99.60%	0.40%	0.00%	100.00%	0.00%	0.00%	97.14%	2.86%	
PEAK HR START TIME :	130 PM												TOTAL
PEAK HR VOL :	1	215	0	0	156	0	0	12	0	0	16	0	400
PEAK HR FACTOR :		0.711			0.886			0.429			0.571		0.820

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Wednesday

City: Los Alamitos **Cars** **Date:** 2/5/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		5			4	0				0	0	0	9
6:15 AM		4			2	0				0	0	0	6
6:30 AM		9			5	0				0	1	0	15
6:45 AM		5			2	0				0	0	0	7
7:00 AM		3			2	0				0	0	0	5
7:15 AM		19			11	0				0	0	0	30
7:30 AM		18			7	0				0	0	0	25
7:45 AM		23			7	0				0	0	1	31
8:00 AM		32			15	0				0	0	0	47
8:15 AM		45			30	1				1	0	0	77
8:30 AM		21			9	0				0	0	0	30
8:45 AM		21			10	0				0	0	0	31
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	205	0	0	104	1	0	0	0	1	1	1	313
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	99.05%	0.95%	#DIV/0!	#DIV/0!	#DIV/0!	33.33%	33.33%	33.33%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	119	0	0	64	1	0	0	0	1	0	0	185
PEAK HR FACTOR :		0.661			0.524			0.000			0.250		0.601

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

Cars

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	1	47			37			0			0		85
4:15 PM	0	48			23			0			0		71
4:30 PM	0	58			36			0			0		94
4:45 PM	0	76			44			0			0		120
5:00 PM	1	43			36			0			0		80
5:15 PM	0	34			36			1			0		71
5:30 PM	0	35			11			0			1		47
5:45 PM	0	35			24			0			0		59
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	376	0	0	247	0	0	1	0	0	1	0	627
APPROACH %'s :	0.53%	99.47%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	1	211	0	0	152	0	0	1	0	0	0	0	365
PEAK HR FACTOR :		0.697			0.864			0.250			0.000		0.760

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

2 Axle Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM		0		0	0	0	0					0	0				
6:15 AM		0		0	0	0	0					0	0				
6:30 AM		0		0	0	0	0					0	0				
6:45 AM		0		0	0	0	0					0	0				
7:00 AM		0		0	0	0	0					0	0				
7:15 AM		0		0	0	0	1					0	1				
7:30 AM		0		0	1	0	0					0	1				
7:45 AM		1		0	0	0	0					1	2				
8:00 AM		0		0	0	0	0					0	0				
8:15 AM		0		1	0	0	0					0	1				
8:30 AM		1		0	0	0	0					0	1				
8:45 AM		1		0	0	0	0					1	2				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	3	0	1	1	0	1	0	0	0	0	2	8	0	0	0	0
APPROACH %'s :	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	2	0	1	0	0	0	0	0	0	0	1	4				
PEAK HR FACTOR :		0.500			0.250			0.000			0.250		0.601				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

2 Axle Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		1			0						0		1
4:15 PM		0			0						0		0
4:30 PM		1			1						0		2
4:45 PM		0			0						0		0
5:00 PM		2			2						0		4
5:15 PM		1			1						2		4
5:30 PM		0			0						2		2
5:45 PM		0			0						0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5	0	0	4	0	0	0	0	0	4	0	13
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	4	0	0	4	0	0	0	0	0	2	0	10
PEAK HR FACTOR :		0.500			0.500			0.000			0.250		0.760

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

3 Axle Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0										0	0
6:15 AM		0										1	1
6:30 AM		0										0	0
6:45 AM		1										0	1
7:00 AM		0										0	0
7:15 AM		0										0	0
7:30 AM		0										0	0
7:45 AM		0										0	0
8:00 AM		1										0	1
8:15 AM		0										0	0
8:30 AM		0										0	0
8:45 AM		0										0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	0	0	0	0	0	0	1	3
APPROACH %'s :	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.250			0.000			0.000			0.000		0.601

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

3 Axle Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM												0	0
4:15 PM												0	0
4:30 PM												0	0
4:45 PM												0	0
5:00 PM												0	0
5:15 PM												0	0
5:30 PM												1	1
5:45 PM												0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	1	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.760

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0				1	0					0	1
6:15 AM		0				0	0					0	0
6:30 AM		0				0	1					1	2
6:45 AM		0				0	0					1	1
7:00 AM		0				0	0					0	0
7:15 AM		0				0	0					0	0
7:30 AM		0				1	0					1	2
7:45 AM		0				0	0					0	0
8:00 AM		0				0	0					0	0
8:15 AM		0				0	1					2	3
8:30 AM		0				1	0					0	1
8:45 AM		1				0	0					0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	3	2	0	0	0	0	5	11
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	1	1	0	0	0	0	2	5
PEAK HR FACTOR :		0.250			0.250			0.250			0.250		0.601

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM						1							1
4:15 PM						0							0
4:30 PM						0							0
4:45 PM						0							0
5:00 PM						0							0
5:15 PM						0							0
5:30 PM						0							0
5:45 PM						0							0
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.760

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Wednesday

City: Los Alamitos | **Date:** 2/5/2014

Forklifts

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM							0	3			6		9				
6:15 AM							0	6			3		9				
6:30 AM							0	1			2		3				
6:45 AM							0	2			2		4				
7:00 AM							1	1			2		4				
7:15 AM							0	3			2		5				
7:30 AM							0	0			0		0				
7:45 AM							0	0			1		1				
8:00 AM							0	2			1		3				
8:15 AM							0	4			1		5				
8:30 AM							0	2			1		3				
8:45 AM							0	2			4		6				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	1	26	0	0	25	0	52	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	3.70%	96.30%	0.00%	0.00%	100.00%	0.00%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	10	0	0	7	0	17				
PEAK HR FACTOR :	0.000			0.000			0.625			0.438			0.601				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Wednesday

City: Los Alamitos **Forklifts** **Date:** 2/5/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM								4			3		7
4:15 PM								5			4		9
4:30 PM								2			2		4
4:45 PM								1			1		2
5:00 PM								2			6		8
5:15 PM								6			5		11
5:30 PM								5			2		7
5:45 PM								5			6		11
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	30	0	0	29	0	59
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	11	0	0	14	0	25
PEAK HR FACTOR :	0.000			0.000			0.458			0.583			0.760

UTURNS

NB	SB	EB	WB
0	0	0	0

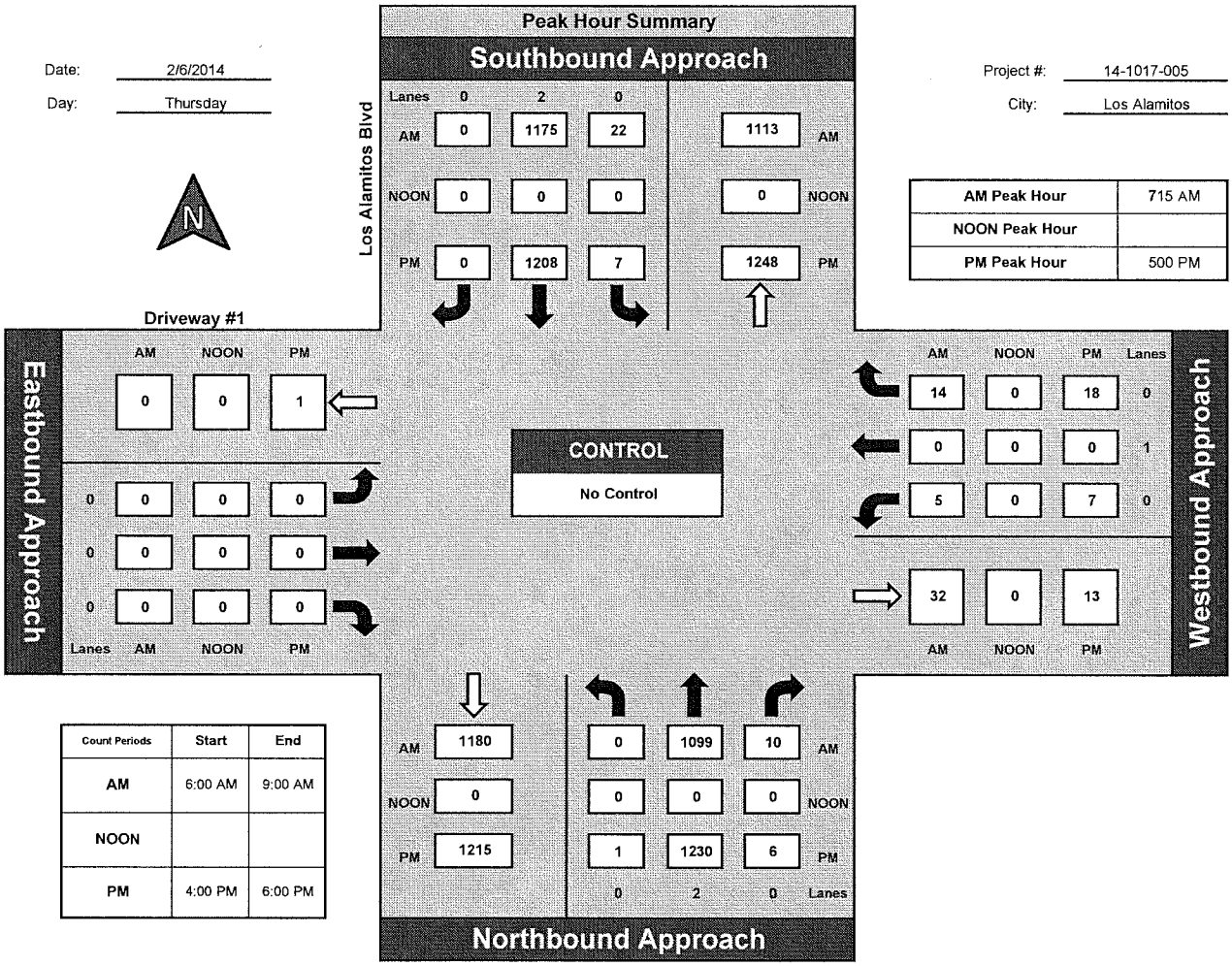
CONTROL : No Control

ITM Peak Hour Summary

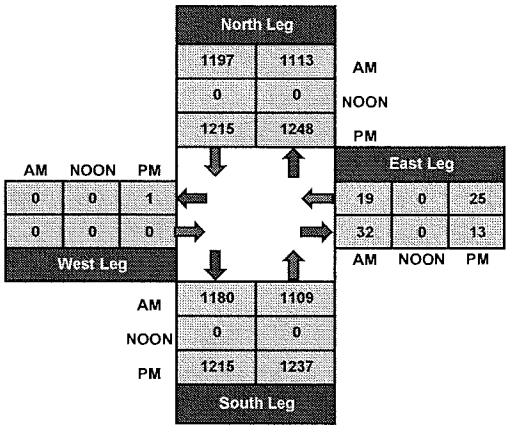
Prepared by:

National Data & Surveying Services

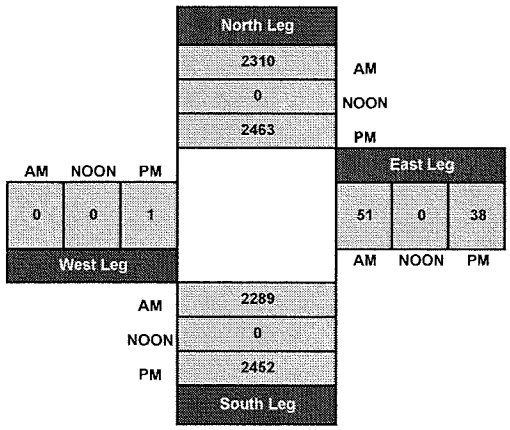
Los Alamitos Blvd and Driveway #1 , Los Alamitos



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		71	2	1	121					0		1	196
6:15 AM		69	5	2	119					0		3	198
6:30 AM		134	3	3	197					3		0	340
6:45 AM		135	3	5	246					1		2	392
7:00 AM		217	1	4	188					0		3	413
7:15 AM		335	4	4	254					0		3	600
7:30 AM		360	5	5	358					3		4	735
7:45 AM		173	0	6	339					2		4	524
8:00 AM		231	1	7	224					0		3	466
8:15 AM		182	3	8	260					1		2	456
8:30 AM		180	3	7	219					3		7	419
8:45 AM		190	4	8	220					1		3	426

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2277	34	60	2745	0	0	0	0	14	0	35	5165
APPROACH %'s :	0.00%	98.53%	1.47%	2.14%	97.86%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	28.57%	0.00%	71.43%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1099	10	22	1175	0	0	0	0	5	0	14	2325
PEAK HR FACTOR :		0.760			0.824			0.000			0.679		0.791

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM	0	319	5	2	239					2		9	576
4:15 PM	0	311	3	3	272					4		8	601
4:30 PM	1	256	3	9	280					2		4	555
4:45 PM	0	273	3	3	264					3		3	549
5:00 PM	0	335	2	1	305					3		5	651
5:15 PM	1	316	1	2	300					2		4	626
5:30 PM	0	304	2	3	286					2		3	600
5:45 PM	0	275	1	1	317					0		6	600
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	2389	20	24	2263	0	0	0	0	18	0	42	4758
APPROACH %'s :	0.08%	99.09%	0.83%	1.05%	98.95%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	30.00%	0.00%	70.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	1	1230	6	7	1208	0	0	0	0	7	0	18	2477
PEAK HR FACTOR :		0.918			0.955			0.000			0.781		0.951

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Thursday

City: Los Alamitos | **Cars** | **Date:** 2/6/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		67	2	1	117					0		1	188
6:15 AM		67	5	2	116					0		3	193
6:30 AM		131	3	3	186					2		0	325
6:45 AM		132	3	5	234					1		2	377
7:00 AM		216	1	4	185					0		3	409
7:15 AM		326	4	4	250					0		3	587
7:30 AM		358	5	5	352					3		4	727
7:45 AM		169	0	6	338					2		4	519
8:00 AM		225	1	7	221					0		3	457
8:15 AM		177	3	8	254					1		2	445
8:30 AM		176	3	7	214					3		7	410
8:45 AM		181	4	8	210					1		2	406
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2225	34	60	2677	0	0	0	0	13	0	34	5043
APPROACH %'s :	0.00%	98.49%	1.51%	2.19%	97.81%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	27.66%	0.00%	72.34%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1078	10	22	1161	0	0	0	0	5	0	14	2290
PEAK HR FACTOR :		0.749			0.828			0.000			0.679		0.787

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Thursday

City: Los Alamitos **Cars** **Date:** 2/6/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM	0	315	5	2	235					2		9	568
4:15 PM	0	308	3	3	269					4		8	595
4:30 PM	1	253	3	9	275					2		4	547
4:45 PM	0	270	3	3	263					3		3	545
5:00 PM	0	332	2	1	303					3		5	646
5:15 PM	1	314	1	2	299					2		4	623
5:30 PM	0	300	2	3	282					2		3	592
5:45 PM	0	274	1	1	316					0		6	598
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	2366	20	24	2242	0	0	0	0	18	0	42	4714
APPROACH %'s :	0.08%	99.08%	0.84%	1.06%	98.94%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	30.00%	0.00%	70.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	1	1220	6	7	1200	0	0	0	0	7	0	18	2459
PEAK HR FACTOR :		0.918			0.952			0.000			0.781		0.952

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Thursday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/6/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		2			3					0		0	5
6:15 AM		1			1					0		0	2
6:30 AM		3			7					1		0	11
6:45 AM		3			8					0		0	11
7:00 AM		1			3					0		0	4
7:15 AM		8			2					0		0	10
7:30 AM		2			3					0		0	5
7:45 AM		2			0					0		0	2
8:00 AM		5			2					0		0	7
8:15 AM		2			5					0		0	7
8:30 AM		3			3					0		0	6
8:45 AM		8			9					0		1	18
TOTAL VOLUMES :	0	40	0	0	46	0	0	0	0	1	0	1	88
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	50.00%	0.00%	50.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	17	0	0	7	0	0	0	0	0	0	0	24
PEAK HR FACTOR :		0.531			0.583			0.000			0.000		0.787

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Thursday

City: Los Alamitos **2 Axle Trucks** **Date:** 2/6/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		2			3								5
4:15 PM		3			3								6
4:30 PM		2			4								6
4:45 PM		2			0								2
5:00 PM		2			2								4
5:15 PM		2			1								3
5:30 PM		4			4								8
5:45 PM		1			1								2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	18	0	0	18	0	0	0	0	0	0	0	36
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	9	0	0	8	0	0	0	0	0	0	0	17
PEAK HR FACTOR :		0.563			0.500			0.000			0.000		0.952

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Thursday

City: Los Alamitos | **3 Axle Trucks** | **Date:** 2/6/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		2			1								3
6:15 AM		1			2								3
6:30 AM		0			2								2
6:45 AM		0			4								4
7:00 AM		0			0								0
7:15 AM		1			1								2
7:30 AM		0			2								2
7:45 AM		0			0								0
8:00 AM		1			0								1
8:15 AM		2			0								2
8:30 AM		0			0								0
8:45 AM		1			0								1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	8	0	0	12	0	0	0	0	0	0	0	20
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	2	0	0	3	0	0	0	0	0	0	0	5
PEAK HR FACTOR :		0.500			0.375			0.000			0.000		0.787

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

3 Axle Trucks

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		1											1
4:15 PM		0											0
4:30 PM		1											1
4:45 PM		1											1
5:00 PM		1											1
5:15 PM		0											0
5:30 PM		0											0
5:45 PM		0											0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	0	0	0	0	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.250			0.000			0.000			0.000		0.952

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Thursday

City: Los Alamitos | **4 Axle+ Trucks** | **Date:** 2/6/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM		0			0								0
6:15 AM		0			0								0
6:30 AM		0			2								2
6:45 AM		0			0								0
7:00 AM		0			0								0
7:15 AM		0			1								1
7:30 AM		0			1								1
7:45 AM		2			1								3
8:00 AM		0			1								1
8:15 AM		1			1								2
8:30 AM		1			2								3
8:45 AM		0			1								1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4	0	0	10	0	0	0	0	0	0	0	14
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	2	0	0	4	0	0	0	0	0	0	0	6
PEAK HR FACTOR :		0.250			1.000			0.000			0.000		0.787

UTURNS				
NB	SB	EB	WB	
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Thursday

City: Los Alamitos | **4 Axle+ Trucks** | **Date:** 2/6/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM		1			1								2
4:15 PM		0			0								0
4:30 PM		0			1								1
4:45 PM		0			1								1
5:00 PM		0			0								0
5:15 PM		0			0								0
5:30 PM		0			0								0
5:45 PM		0			0								0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1	0	0	3	0	0	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.952

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 | **Day:** Thursday

City: Los Alamitos | **Forklifts** | **Date:** 2/6/2014

AM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.787

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-005 **Day:** Thursday

City: Los Alamitos **Forklifts** **Date:** 2/6/2014

PM

NS/EW Streets:	Los Alamitos Blvd			Los Alamitos Blvd			Driveway #1			Driveway #1			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.952

UTURNS			
NB	SB	EB	WB
0	0	0	0

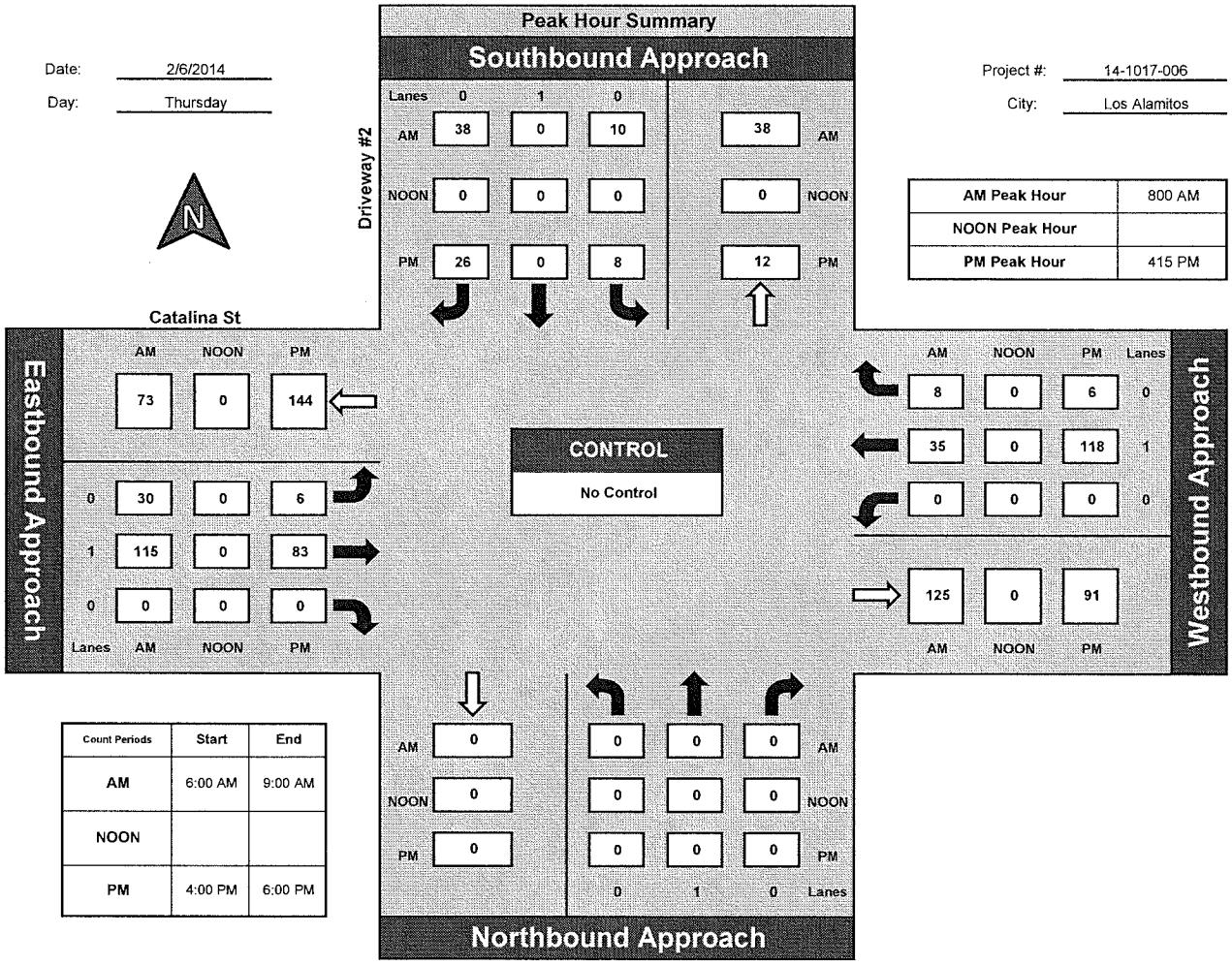
CONTROL : No Control

ITM Peak Hour Summary

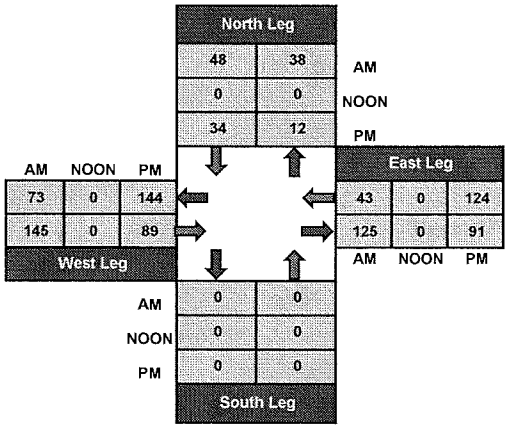
Prepared by:

National Data & Surveying Services

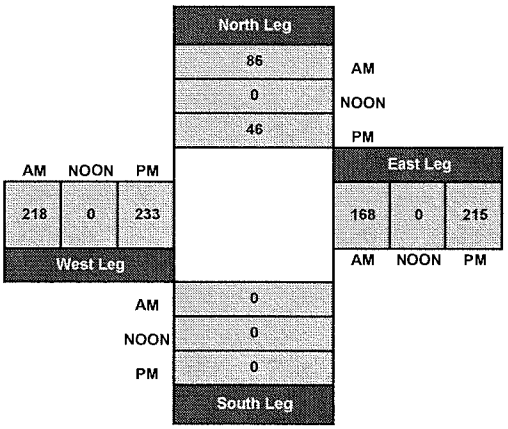
Driveway #2 and Catalina St , Los Alamitos



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM				0		0	2	18			19	3	42
6:15 AM				1		1	6	8			6	2	24
6:30 AM				2		7	7	13			6	0	35
6:45 AM				0		7	5	22			6	2	42
7:00 AM				0		6	6	27			5	2	46
7:15 AM				3		7	15	20			7	2	54
7:30 AM				2		6	6	24			15	3	56
7:45 AM				4		9	5	34			10	2	64
8:00 AM				2		8	6	32			11	2	61
8:15 AM				2		5	9	26			7	4	53
8:30 AM				1		10	8	25			9	2	55
8:45 AM				5		15	7	32			8	0	67
TOTAL VOLUMES :	0	0	0	22	0	81	82	281	0	0	109	24	599
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	21.36%	0.00%	78.64%	22.59%	77.41%	0.00%	0.00%	81.95%	18.05%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	10	0	38	30	115	0	0	35	8	236
PEAK HR FACTOR :	0.000			0.600			0.929			0.827			0.881

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM				4		2	8	19		0	25	5	63
4:15 PM				2		12	4	22		0	16	3	59
4:30 PM				4		5	1	22		0	26	1	59
4:45 PM				2		7	1	15		0	21	2	48
5:00 PM				0		2	0	24		0	55	0	81
5:15 PM				0		1	3	16		1	20	1	42
5:30 PM				1		1	2	23		0	24	2	53
5:45 PM				0		4	1	20		0	16	2	43
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	13	0	34	20	161	0	1	203	16	448
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	27.66%	0.00%	72.34%	11.05%	88.95%	0.00%	0.45%	92.27%	7.27%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	8	0	26	6	83	0	0	118	6	247
PEAK HR FACTOR :	0.000			0.607			0.856			0.564			0.762

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Thursday

City: Los Alamitos | **Cars** | **Date:** 2/6/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM				0		0	2	18		0	19	3	42
6:15 AM				1		1	5	8		0	6	2	23
6:30 AM				2		7	7	13		0	6	0	35
6:45 AM				0		7	5	20		0	6	2	40
7:00 AM				0		6	6	27		0	4	2	45
7:15 AM				3		6	14	20		0	6	2	51
7:30 AM				2		6	5	24		0	15	3	55
7:45 AM				4		9	5	34		0	10	2	64
8:00 AM				2		8	6	32		1	11	2	62
8:15 AM				2		5	8	25		0	7	4	51
8:30 AM				1		10	8	25		0	9	2	55
8:45 AM				5		14	6	31		0	8	0	64
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	22	0	79	77	277	0	1	107	24	587
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	21.78%	0.00%	78.22%	21.75%	78.25%	0.00%	0.76%	81.06%	18.18%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	10	0	37	28	113	0	1	35	8	232
PEAK HR FACTOR :		0.000			0.618			0.928			0.786		0.906

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

Cars

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM				4		2	8	19		0	25	5	63
4:15 PM				2		12	4	22		0	16	3	59
4:30 PM				4		5	1	21		0	26	1	58
4:45 PM				2		7	1	15		0	20	2	47
5:00 PM				0		2	0	24		0	55	0	81
5:15 PM				0		1	3	16		1	20	1	42
5:30 PM				1		1	2	22		0	24	2	52
5:45 PM				0		4	1	20		0	16	2	43
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	13	0	34	20	159	0	1	202	16	445
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	27.66%	0.00%	72.34%	11.17%	88.83%	0.00%	0.46%	92.24%	7.31%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	8	0	26	6	82	0	0	117	6	245
PEAK HR FACTOR :		0.000			0.607			0.846			0.559		0.756

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Thursday

City: Los Alamitos **2 Axle Trucks** **Date:** 2/6/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM						0	0	0			0		0
6:15 AM						0	1	0			0		1
6:30 AM						0	0	0			0		0
6:45 AM						0	0	1			0		1
7:00 AM						0	0	0			1		1
7:15 AM						0	1	0			0		1
7:30 AM						0	1	0			0		1
7:45 AM						0	0	0			0		0
8:00 AM						0	0	0			0		0
8:15 AM						0	1	1			0		2
8:30 AM						0	0	0			0		0
8:45 AM						1	1	1			0		3

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	5	3	0	0	1	0	10
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	62.50%	37.50%	0.00%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	2	2	0	0	0	0	5
PEAK HR FACTOR :	0.000			0.250			0.500			0.000			0.906

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Thursday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/6/2014

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM								0			0		0
4:15 PM								0			0		0
4:30 PM								1			0		1
4:45 PM								0			1		1
5:00 PM								0			0		0
5:15 PM								0			0		0
5:30 PM								1			0		1
5:45 PM								0			0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	2	0	0	1	0	3
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	1	0	0	1	0	2
PEAK HR FACTOR :		0.000			0.000			0.250			0.250		0.756

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Thursday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/6/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM								0			0		0
6:15 AM								0			0		0
6:30 AM								0			0		0
6:45 AM								1			0		1
7:00 AM								0			0		0
7:15 AM								0			1		1
7:30 AM								0			0		0
7:45 AM								0			0		0
8:00 AM								0			0		0
8:15 AM								0			0		0
8:30 AM								0			0		0
8:45 AM								0			0		0
TOTAL VOLUMES :	0	0	0	0	0	0	0	1	0	0	1	0	2
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.906

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

3 Axle Trucks

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.756

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM						0							0				
6:15 AM						0							0				
6:30 AM						0							0				
6:45 AM						0							0				
7:00 AM						0							0				
7:15 AM						1							1				
7:30 AM						0							0				
7:45 AM						0							0				
8:00 AM						0							0				
8:15 AM						0							0				
8:30 AM						0							0				
8:45 AM						0							0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.906				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Thursday

City: Los Alamitos | **4 Axle+ Trucks** | **Date:** 2/6/2014

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
4:00 PM													0				
4:15 PM													0				
4:30 PM													0				
4:45 PM													0				
5:00 PM													0				
5:15 PM													0				
5:30 PM													0				
5:45 PM													0				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	415 PM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0				
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.756				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 **Day:** Thursday

City: Los Alamitos **Forklifts** **Date:** 2/6/2014

AM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM													0
6:15 AM													0
6:30 AM													0
6:45 AM													0
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.906

UTURNS				
NB	SB	EB	WB	
0	0	0	0	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-006 | **Day:** Thursday

City: Los Alamitos | **Forklifts** | **Date:** 2/6/2014

PM

NS/EW Streets:	Driveway #2			Driveway #2			Catalina St			Catalina St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.756

UTURNS			
NB	SB	EB	WB
0	0	0	0

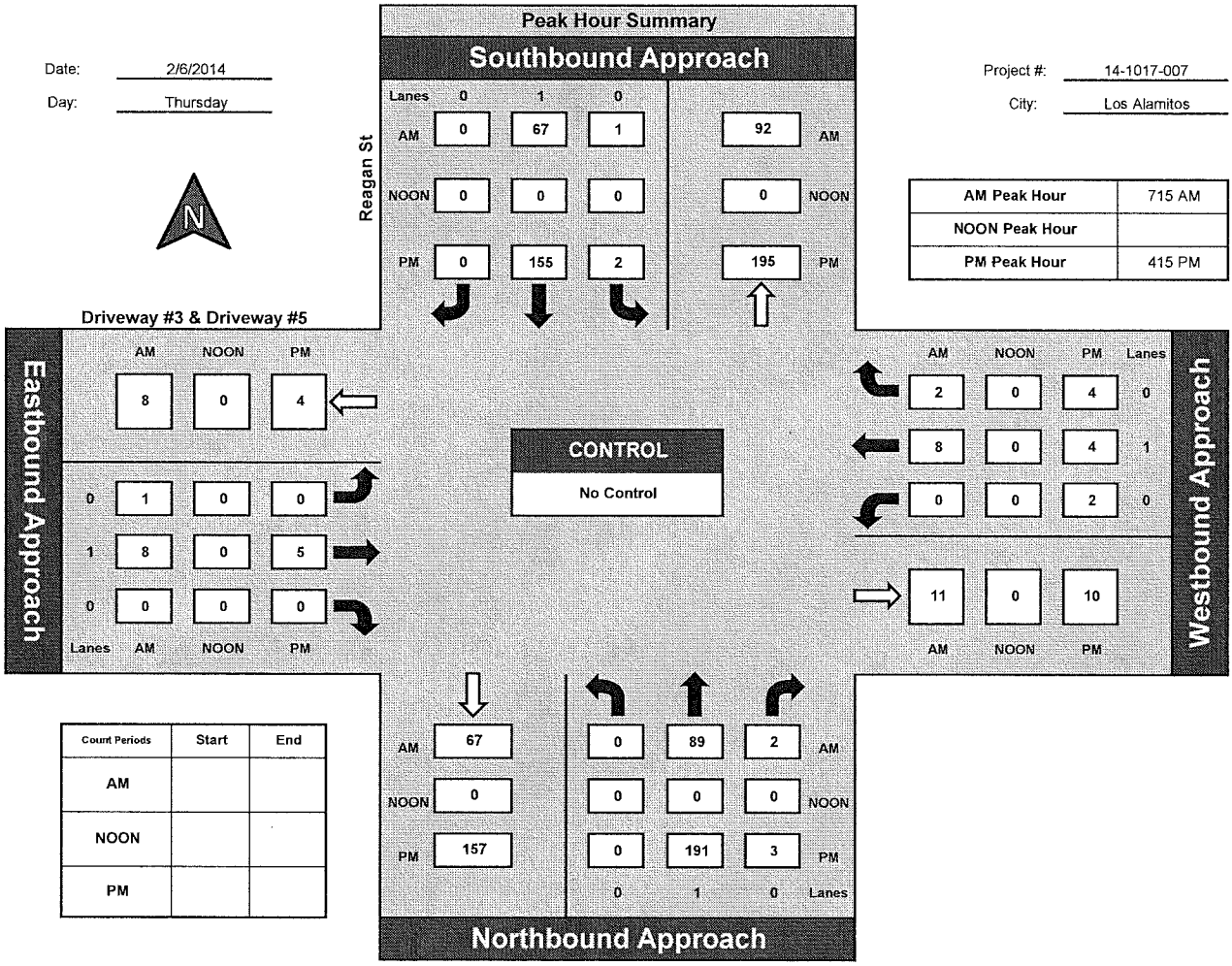
CONTROL : No Control

ITM Peak Hour Summary

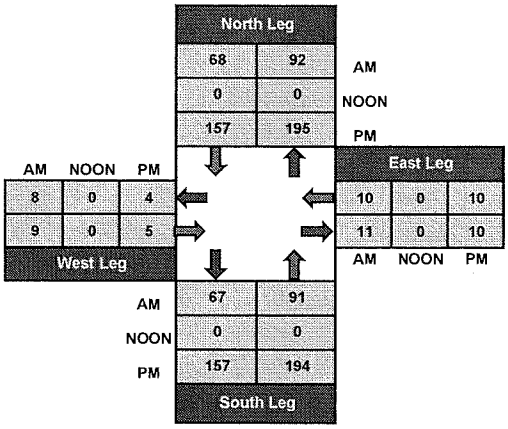
Prepared by:

National Data & Surveying Services

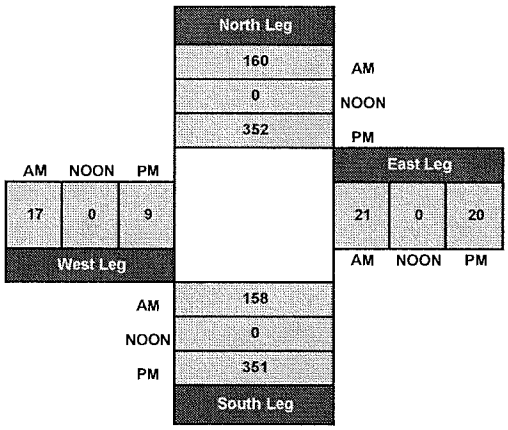
Reagan St and Driveway #3 & Driveway #5 , Los Alamitos



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM		6	2	0	5	0	1	1			1	0					
6:15 AM		9	1	0	3	0	0	1			2	0					
6:30 AM		5	0	1	4	1	1	0			0	0					
6:45 AM		10	0	2	3	0	0	3			1	0					
7:00 AM		14	0	2	4	1	1	2			0	0					
7:15 AM		31	1	0	15	0	0	2			1	1					
7:30 AM		33	0	0	34	0	1	2			4	1					
7:45 AM		14	1	0	7	0	0	1			0	0					
8:00 AM		11	0	1	11	0	0	3			3	0					
8:15 AM		20	2	0	9	0	0	3			2	0					
8:30 AM		19	0	0	18	0	0	0			0	0					
8:45 AM		18	0	0	8	0	0	0			0	0					
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	190	7	6	121	2	4	18	0	0	14	2	364	0	0	0	0
APPROACH %'s :	0.00%	96.45%	3.55%	4.65%	93.80%	1.55%	18.18%	81.82%	0.00%	0.00%	87.50%	12.50%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	89	2	1	67	0	1	8	0	0	8	2	178				
PEAK HR FACTOR :		0.689			0.500			0.750			0.500		0.593				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		37	1	1	23		1	0		1	0	2	
4:15 PM		39	0	2	25		0	2		0	2	1	
4:30 PM		31	0	0	33		0	2		2	1	2	
4:45 PM		62	2	0	31		0	1		0	1	1	
5:00 PM		59	1	0	66		0	0		0	0	0	
5:15 PM		24	1	2	17		0	0		1	0	0	
5:30 PM		37	0	1	23		0	0		1	0	0	
5:45 PM		40	2	2	16		0	0		1	0	3	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	329	7	8	234	0	1	5	0	6	4	9	603
APPROACH %'s :	0.00%	97.92%	2.08%	3.31%	96.69%	0.00%	16.67%	83.33%	0.00%	31.58%	21.05%	47.37%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	191	3	2	155	0	0	5	0	2	4	4	366
PEAK HR FACTOR :		0.758			0.595			0.625			0.500		0.726

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007

City: Los Alamitos

Cars

AM

Day: Thursday

Date: 2/6/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		4	1	0	4		0	0			0		
6:15 AM		9	1	0	3		0	0			0		
6:30 AM		4	0	1	3		0	0			0		
6:45 AM		10	0	0	3		0	0			0		
7:00 AM		14	0	2	3		0	0			0		
7:15 AM		30	0	0	14		0	0			0		
7:30 AM		32	0	0	34		1	0			0		
7:45 AM		11	1	0	6		0	0			0		
8:00 AM		11	0	0	11		0	0			0		
8:15 AM		20	0	0	6		0	1			1		
8:30 AM		19	0	0	18		0	0			0		
8:45 AM		18	0	0	7		0	0			0		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	182	3	3	112	0	1	1	0	0	1	0	303
APPROACH %'s :	0.00%	98.38%	1.62%	2.61%	97.39%	0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	84	1	0	65	0	1	0	0	0	0	0	151
PEAK HR FACTOR :		0.664			0.478			0.250			0.000		0.563

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Thursday

City: Los Alamitos | **Cars** | **Date:** 2/6/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		35	1	0	23					1		2	
4:15 PM		39	0	2	25					0		1	
4:30 PM		31	0	0	33					2		2	
4:45 PM		61	2	0	30					0		1	
5:00 PM		59	1	0	65					0		0	
5:15 PM		24	1	2	17					1		0	
5:30 PM		37	0	1	23					1		0	
5:45 PM		40	2	2	16					1		3	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	326	7	7	232	0	0	0	0	6	0	9	587
APPROACH %'s :	0.00%	97.90%	2.10%	2.93%	97.07%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	40.00%	0.00%	60.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	190	3	2	153	0	0	0	0	2	0	4	354
PEAK HR FACTOR :		0.766			0.596			0.000			0.375		0.708

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Thursday

City: Los Alamitos | 2 Axle Trucks | **Date:** 2/6/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		1	0	0	0		0						
6:15 AM		0	0	0	0		0						
6:30 AM		0	0	0	0		1						
6:45 AM		0	0	1	0		0						
7:00 AM		0	0	0	1		0						
7:15 AM		0	0	0	0		0						
7:30 AM		0	0	0	0		0						
7:45 AM		1	0	0	0		0						
8:00 AM		0	0	1	0		0						
8:15 AM		0	2	0	2		0						
8:30 AM		0	0	0	0		0						
8:45 AM		0	0	0	0		0						

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	2	2	3	0	1	0	0	0	0	0	10
APPROACH %'s :	0.00%	50.00%	50.00%	40.00%	60.00%	0.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	

UTURNS			
NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	1	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :		0.250			0.250			0.000			0.000		0.563

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Thursday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/6/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		2		1	0								
4:15 PM		0		0	0								
4:30 PM		0		0	0								
4:45 PM		1		0	1								
5:00 PM		0		0	1								
5:15 PM		0		0	0								
5:30 PM		0		0	0								
5:45 PM		0		0	0								
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	3	0	1	2	0	0	0	0	0	0	0	6
APPROACH %'s :	0.00%	100.00%	0.00%	33.33%	66.67%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	1	0	0	2	0	0	0	0	0	0	0	3
PEAK HR FACTOR :		0.250			0.500			0.000			0.000		0.708

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

3 Axle Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		1	1	0	0	0	1						
6:15 AM		0	0	0	0	0	0						
6:30 AM		0	0	0	0	1	0						
6:45 AM		0	0	1	0	0	0						
7:00 AM		0	0	0	0	0	0						
7:15 AM		0	1	0	0	0	0						
7:30 AM		0	0	0	0	0	0						
7:45 AM		1	0	0	1	0	0						
8:00 AM		0	0	0	0	0	0						
8:15 AM		0	0	0	0	0	0						
8:30 AM		0	0	0	0	0	0						
8:45 AM		0	0	0	1	0	0						
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	2	1	2	1	1	0	0	0	0	0	9
APPROACH %'s :	0.00%	50.00%	50.00%	25.00%	50.00%	25.00%	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	1	0	1	0	0	0	0	0	0	0	3
PEAK HR FACTOR :		0.500			0.250			0.000			0.000		0.563

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Thursday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/6/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													
4:15 PM													
4:30 PM													
4:45 PM													
5:00 PM													
5:15 PM													
5:30 PM													
5:45 PM													
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.708

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007

City: Los Alamitos

4 Axle+ Trucks

AM

Day: Thursday

Date: 2/6/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM		0			1	0	0					0					
6:15 AM		0			0	0	0					0					
6:30 AM		1			1	0	0					0					
6:45 AM		0			0	0	0					0					
7:00 AM		0			0	1	1					0					
7:15 AM		1			1	0	0					1					
7:30 AM		1			0	0	0					1					
7:45 AM		1			0	0	0					0					
8:00 AM		0			0	0	0					0					
8:15 AM		0			1	0	0					0					
8:30 AM		0			0	0	0					0					
8:45 AM		0			0	0	0					0					
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	4	0	0	4	1	1	0	0	0	0	2	12	0	0	0	0
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	80.00%	20.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	3	0	0	1	0	0	0	0	0	0	2	6				
PEAK HR FACTOR :		0.750			0.250			0.000			0.500		0.563				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

4 Axle+ Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM							1						
4:15 PM							0						
4:30 PM							0						
4:45 PM							0						
5:00 PM							0						
5:15 PM							0						
5:30 PM							0						
5:45 PM							0						
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.708

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 **Day:** Thursday

City: Los Alamitos **Forklifts** **Date:** 2/6/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM								1			1		
6:15 AM								1			2		
6:30 AM								0			0		
6:45 AM								3			1		
7:00 AM								2			0		
7:15 AM								2			1		
7:30 AM								2			4		
7:45 AM								1			0		
8:00 AM								3			3		
8:15 AM								2			1		
8:30 AM								0			0		
8:45 AM								0			0		
TOTAL VOLUMES :	0	0	0	0	0	0	0	17	0	0	13	0	30
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	8	0	16
PEAK HR FACTOR :		0.000			0.000			0.667			0.500		0.563

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-007 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

Forklifts

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #3 & Driveway #5			Driveway #3 & Driveway #5			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM								0			0		
4:15 PM								2			2		
4:30 PM								2			1		
4:45 PM								1			1		
5:00 PM								0			0		
5:15 PM								0			0		
5:30 PM								0			0		
5:45 PM								0			0		
TOTAL VOLUMES :	0	0	0	0	0	0	0	5	0	0	4	0	9
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	5	0	0	4	0	9
PEAK HR FACTOR :		0.000			0.000			0.625			0.500		0.708

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Reagan St and Driveway #4 & Driveway #6 , Los Alamitos

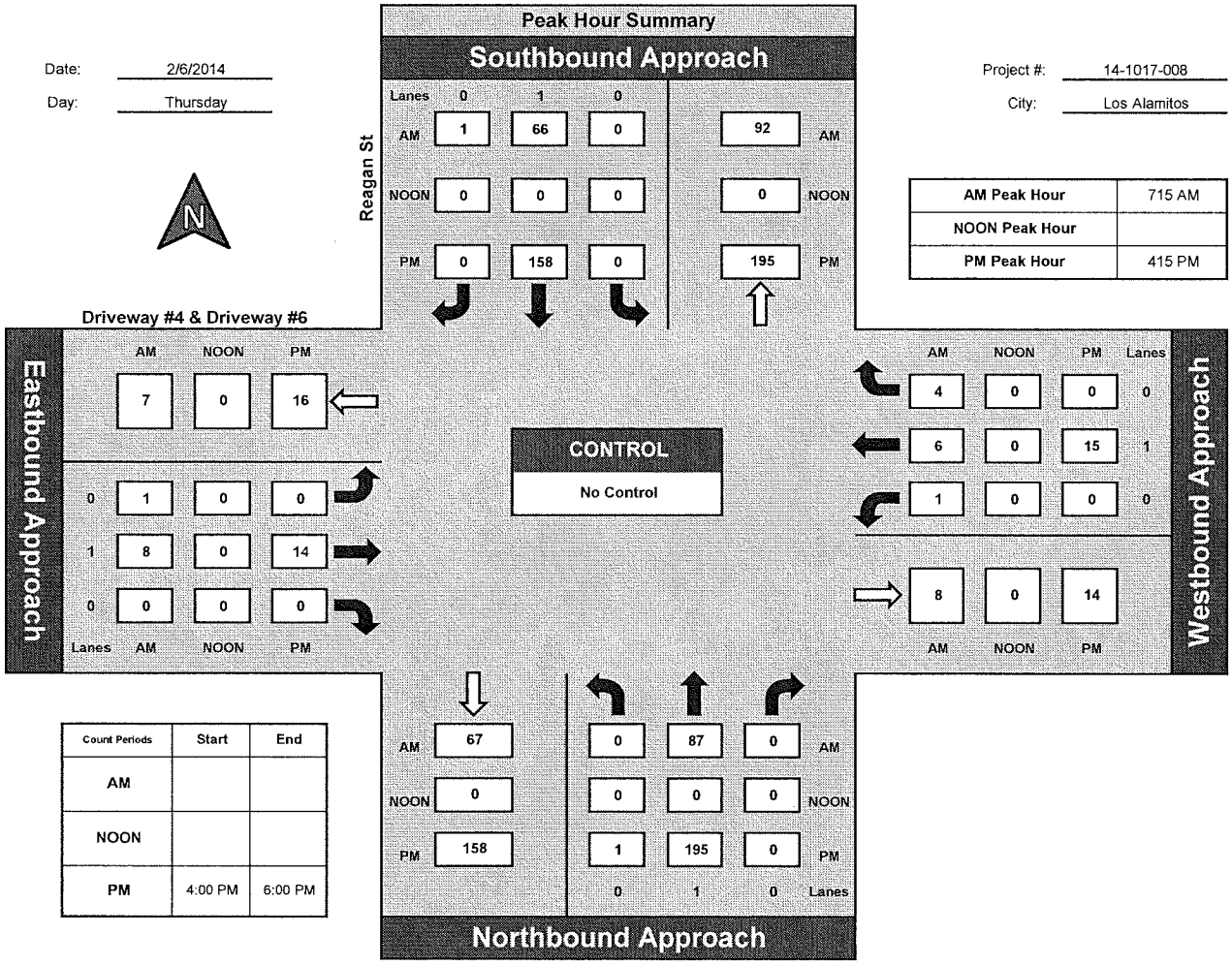
Date: 2/6/2014

Day: Thursday

Project #: 14-1017-008

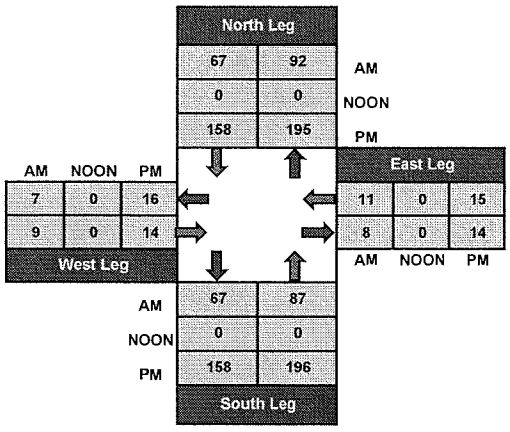
City: Los Alamitos

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	415 PM

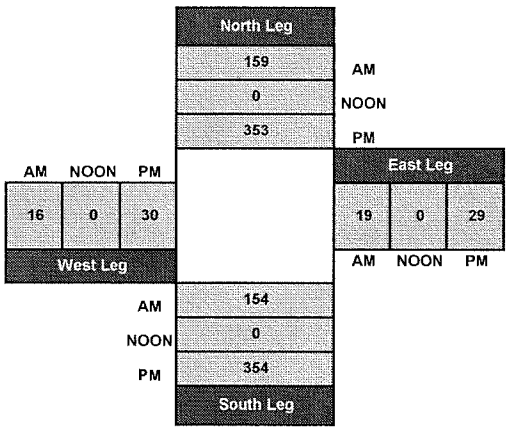


Count Periods	Start	End
AM		
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		5		0	4	1	0	1		0	1	3	15
6:15 AM		10		0	3	0	0	1		0	2	0	16
6:30 AM		3		0	3	1	1	1		0	3	0	12
6:45 AM		10		0	2	0	0	3		0	6	0	21
7:00 AM		14		0	4	0	0	2		1	2	0	23
7:15 AM		30		0	14	1	0	0		0	0	1	46
7:30 AM		32		0	34	0	1	2		0	1	2	72
7:45 AM		13		0	7	0	0	5		0	5	1	31
8:00 AM		12		0	11	0	0	1		1	0	0	25
8:15 AM		22		0	8	1	0	4		0	4	2	41
8:30 AM		16		0	16	0	2	0		0	1	2	37
8:45 AM		16		1	8	0	0	2		2	0	1	30
TOTAL VOLUMES :	NL 0	NT 183	NR 0	SL 1	ST 114	SR 4	EL 4	ET 22	ER 0	WL 4	WT 25	WR 12	TOTAL 369
APPROACH %'s :	0.00%	100.00%	0.00%	0.84%	95.80%	3.36%	15.38%	84.62%	0.00%	9.76%	60.98%	29.27%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	87	0	0	66	1	1	8	0	1	6	4	174
PEAK HR FACTOR :		0.680			0.493			0.450			0.458		0.604

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Thursday

City: Los Alamitos **Date:** 2/6/2014

TOTALS

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	37			24			4			2		67
4:15 PM	0	39			25			5			8		77
4:30 PM	0	34			35			2			0		71
4:45 PM	1	63			32			0			0		96
5:00 PM	0	59			66			7			7		139
5:15 PM	0	25			18			7			8		58
5:30 PM	0	37			25			5			5		72
5:45 PM	0	42			17			7			6		72
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	336	0	0	242	0	0	37	0	0	36	0	652
APPROACH %'s :	0.30%	99.70%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	1	195	0	0	158	0	0	14	0	0	15	0	383
PEAK HR FACTOR :		0.766			0.598			0.500			0.469		0.689

UTURNS			
NB	5B	EB	WB

NB	5B	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

Cars

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		5			4		0			0	1	1	11
6:15 AM		10			3		0			0	0	0	13
6:30 AM		3			3		0			0	0	0	6
6:45 AM		10			2		0			0	0	0	12
7:00 AM		14			3		0			0	0	0	17
7:15 AM		30			14		0			0	0	0	44
7:30 AM		32			34		1			0	0	1	68
7:45 AM		11			6		0			0	0	0	17
8:00 AM		12			11		0			1	0	0	24
8:15 AM		21			6		0			0	0	1	28
8:30 AM		16			16		1			0	0	2	35
8:45 AM		16			8		0			2	0	0	26
TOTAL VOLUMES :	0	180	0	0	110	0	2	0	0	3	1	5	301
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	33.33%	11.11%	55.56%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	85	0	0	65	0	1	0	0	1	0	1	153
PEAK HR FACTOR :		0.664			0.478			0.250			0.500		0.563

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Thursday

City: Los Alamitos | **Cars** | **Date:** 2/6/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	35			24			1			1		61
4:15 PM	0	39			25			3			4		71
4:30 PM	0	34			35			1			0		70
4:45 PM	1	62			31			0			0		94
5:00 PM	0	59			65			2			2		128
5:15 PM	0	25			18			5			3		51
5:30 PM	0	37			25			0			1		63
5:45 PM	0	42			17			1			2		62
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	333	0	0	240	0	0	13	0	0	13	0	600
APPROACH %'s :	0.30%	99.70%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	1	194	0	0	156	0	0	6	0	0	6	0	363
PEAK HR FACTOR :	0.774			0.600			0.500			0.375			0.709

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Thursday

City: Los Alamitos | **2 Axle Trucks** | **Date:** 2/6/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM		0			0					0		0	0
6:15 AM		0			0					0		0	0
6:30 AM		0			0					0		0	0
6:45 AM		0			0					0		0	0
7:00 AM		0			1					1		0	2
7:15 AM		0			0					0		0	0
7:30 AM		0			0					0		0	0
7:45 AM		1			0					0		0	1
8:00 AM		0			0					0		0	0
8:15 AM		1			2					0		1	4
8:30 AM		0			0					0		0	0
8:45 AM		0			0					0		0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2	0	0	3	0	0	0	0	1	0	1	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	50.00%	0.00%	50.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :		0.250			0.000			0.000			0.000		0.563

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

2 Axle Trucks

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM		2			0						0		2
4:15 PM		0			0						0		0
4:30 PM		0			0						0		0
4:45 PM		1			1						0		2
5:00 PM		0			1						1		2
5:15 PM		0			0						1		1
5:30 PM		0			0						0		0
5:45 PM		0			0						0		0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	3	0	0	2	0	0	0	0	0	2	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	1	0	0	2	0	0	0	0	0	1	0	4
PEAK HR FACTOR :		0.250			0.500			0.000			0.250		0.709

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

3 Axle Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM		0		0	0							2	2
6:15 AM		0		0	0							0	0
6:30 AM		0		0	0							0	0
6:45 AM		0		0	0							0	0
7:00 AM		0		0	0							0	0
7:15 AM		0		0	0							1	1
7:30 AM		0		0	0							0	0
7:45 AM		1		0	1							0	2
8:00 AM		0		0	0							0	0
8:15 AM		0		0	0							0	0
8:30 AM		0		0	0							0	0
8:45 AM		0		1	0							0	1
TOTAL VOLUMES :	NL 0	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0	ET 0	ER 0	WL 0	WT 0	WR 3	TOTAL 6
APPROACH %'s :	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	0	0	0	0	1	3
PEAK HR FACTOR :		0.250			0.250			0.000			0.250		0.563

UTURNS	NB	SB	EB	WB
	0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Thursday

3 Axle Trucks

City: Los Alamitos | **Date:** 2/6/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.709

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 | **Day:** Thursday

City: Los Alamitos | **Date:** 2/6/2014

4 Axle+ Trucks

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	0	1	0	0	1	0					
6:00 AM						1	0					0	1				
6:15 AM						0	0					0	0				
6:30 AM						1	1					0	2				
6:45 AM						0	0					0	0				
7:00 AM						0	0					0	0				
7:15 AM						1	0					0	1				
7:30 AM						0	0					1	1				
7:45 AM						0	0					1	1				
8:00 AM						0	0					0	0				
8:15 AM						1	0					0	1				
8:30 AM						0	1					0	1				
8:45 AM						0	0					1	1				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0	0	4	2	0	0	0	0	3	9	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	2	3				
PEAK HR FACTOR :	0.000			0.250			0.000			0.500			0.563				

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Thursday

City: Los Alamitos **4 Axle+ Trucks** **Date:** 2/6/2014

PM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.709

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008 **Day:** Thursday

Forklifts

City: Los Alamitos **Date:** 2/6/2014

AM

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
6:00 AM								1			0		1
6:15 AM								1			2		3
6:30 AM								1			3		4
6:45 AM								3			6		9
7:00 AM								2			2		4
7:15 AM								0			0		0
7:30 AM								2			1		3
7:45 AM								5			5		10
8:00 AM								1			0		1
8:15 AM								4			4		8
8:30 AM								0			1		1
8:45 AM								2			0		2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	22	0	0	24	0	46
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	6	0	14
PEAK HR FACTOR :	0.000			0.000			0.400			0.300			0.563

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1017-008

City: Los Alamitos

Forklifts

PM

Day: Thursday

Date: 2/6/2014

NS/EW Streets:	Reagan St			Reagan St			Driveway #4 & Driveway #6			Driveway #4 & Driveway #6			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM								3			1		4
4:15 PM								2			4		6
4:30 PM								1			0		1
4:45 PM								0			0		0
5:00 PM								5			4		9
5:15 PM								2			4		6
5:30 PM								5			4		9
5:45 PM								6			4		10
TOTAL VOLUMES :	NL 0	NT 0	NR 0	SL 0	ST 0	SR 0	EL 0	ET 24	ER 0	WL 0	WT 21	WR 0	TOTAL 45
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	8	0	0	8	0	16
PEAK HR FACTOR :		0.000			0.000			0.400			0.500		0.709

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

APPENDIX C

INTERSECTIONS LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-I

EXISTING TRAFFIC CONDITIONS

AM Existing Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.233
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	24	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	1	0	4	0	696	243	111	561	4
Growth 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
Initial Bse:	0	0	0	1	0	4	0	696	243	111	561	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	4	0	696	243	111	561	4
User 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
PHF 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
PHF Volume:	0	0	0	1	0	4	0	696	243	111	561	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1	0	4	0	696	243	111	561	4
PCE 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
MLF 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
FinalVolume:	0	0	0	1	0	4	0	696	243	111	561	4
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.20	0.00	0.80	0.00	2.22	0.78	2.00	2.98	0.02
Final Sat.:	0	0	0	320	0	1280	0	3558	1242	3200	4766	34
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.03	0.12	0.12
Crit Moves:				****				****		****		

AM Existing Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.276
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Newport Blvd (NB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	1	0 0	0 0	0	0 0	3 0	0	0 0	3 0	0
Volume Module:												
Base Vol:	230	0	401	0	0	0	0	692	0	0	447	0
Growth 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
Initial Bse:	230	0	401	0	0	0	0	692	0	0	447	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	230	0	401	0	0	0	0	692	0	0	447	0
User 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
PHF 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
PHF Volume:	230	0	401	0	0	0	0	692	0	0	447	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	230	0	401	0	0	0	0	692	0	0	447	0
PCE 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
MLF 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
FinalVolume:	230	0	401	0	0	0	0	692	0	0	447	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.09	0.01	1.90	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00
Final Sat.:	1750	0	3050	0	0	0	0	4800	0	0	4800	0
Capacity Analysis Module:												
Vol/Sat:	0.13	0.00	0.13	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.09	0.00
Crit Moves:	****							****		****		

AM Existing Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.409
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1	2 0	2	1	2 0	3	1	2 0	2	1 1
Volume Module:												
Base Vol:	99	383	167	142	697	92	100	707	90	42	94	49
Growth 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
Initial Bse:	99	383	167	142	697	92	100	707	90	42	94	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	99	383	167	142	697	92	100	707	90	42	94	49
User 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
PHF 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
PHF Volume:	99	383	167	142	697	92	100	707	90	42	94	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	383	167	142	697	92	100	707	90	42	94	49
PCE 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
MLF 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
FinalVolume:	99	383	167	142	697	92	100	707	90	42	94	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.63	1.37
Final Sat.:	3200	3200	1600	3200	3200	1600	3200	4800	1600	3200	4207	2193
Capacity Analysis Module:												
Vol/Sat:	0.03	0.12	0.10	0.04	0.22	0.06	0.03	0.15	0.06	0.01	0.02	0.02
Crit Moves:	****				****			****			****	

PM Existing Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.492
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 0	1! 0	0	0 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	2	0	10	0	530	495	559	1247	7
Growth 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
Initial Bse:	0	0	0	2	0	10	0	530	495	559	1247	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	10	0	530	495	559	1247	7
User 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
PHF 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
PHF Volume:	0	0	0	2	0	10	0	530	495	559	1247	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	10	0	530	495	559	1247	7
PCE 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
MLF 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
FinalVolume:	0	0	0	2	0	10	0	530	495	559	1247	7
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.17	0.00	0.83	0.00	2.00	1.00	2.00	2.98	0.02
Final Sat.:	0	0	0	267	0	1333	0	3200	1600	3200	4773	27
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.17	0.31	0.17	0.26	0.26
Crit Moves:						****			****	****		

PM Existing Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.415
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Newport Blvd (NB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	1	0 0	0 0	0	0 0	3 0	0	0 0	3 0	0
Volume Module:												
Base Vol:	347	0	176	0	0	0	0	537	0	0	1467	0
Growth 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
Initial Bse:	347	0	176	0	0	0	0	537	0	0	1467	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	347	0	176	0	0	0	0	537	0	0	1467	0
User 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
PHF 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
PHF Volume:	347	0	176	0	0	0	0	537	0	0	1467	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	347	0	176	0	0	0	0	537	0	0	1467	0
PCE 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
MLF 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
FinalVolume:	347	0	176	0	0	0	0	537	0	0	1467	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.99	0.01	1.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00
Final Sat.:	3185	0	1615	0	0	0	0	4800	0	0	4800	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.31	0.00
Crit Moves:	****						****				****	

PM Existing Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.287
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1	2 0	2	0 1	2 0	3	0 1	2 0	2	1 1
Volume Module:												
Base Vol:	87	145	82	366	405	128	83	425	144	83	356	282
Growth 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
Initial Bse:	87	145	82	366	405	128	83	425	144	83	356	282
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	87	145	82	366	405	128	83	425	144	83	356	282
User 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
PHF 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
PHF Volume:	87	145	82	366	405	128	83	425	144	83	356	282
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	145	82	366	405	128	83	425	144	83	356	282
PCE 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
MLF 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
FinalVolume:	87	145	82	366	405	128	83	425	144	83	356	282
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.92	1.08	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.23	1.77
Final Sat.:	3200	3066	1734	3200	3200	1600	3200	4800	1600	3200	3571	2829
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.11	0.13	0.08	0.03	0.09	0.09	0.03	0.10	0.10
Crit Moves:		****		****			****				****	

APPENDIX C-II

EXISTING WITH PROJECT TRAFFIC CONDITIONS

AM Existing Plus Project Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.233
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	24	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0	0	1! 0	0	0	2 1	0	2 0	2 1 0
Volume Module:												
Base Vol:	0	0	0	1	0	4	0	696	243	111	561	4
Growth 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
Initial Bse:	0	0	0	1	0	4	0	696	243	111	561	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	4	0	696	243	111	561	4
User 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
PHF 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
PHF Volume:	0	0	0	1	0	4	0	696	243	111	561	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1	0	4	0	696	243	111	561	4
PCE 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
MLF 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
FinalVolume:	0	0	0	1	0	4	0	696	243	111	561	4
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.20	0.00	0.80	0.00	2.22	0.78	2.00	2.98	0.02
Final Sat.:	0	0	0	320	0	1280	0	3558	1242	3200	4766	34
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.03	0.12	0.12
Crit Moves:				****				****		****		

AM Existing Plus Project Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB)/Driveway 1 at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.426
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Newport Blvd (NB)/Driveway 1						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 0 1	1	0	3 0 0	0	0	2 1 0
Volume Module:												
Base Vol:	230	19	382	81	0	67	35	657	0	0	380	66
Growth 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
Initial Bse:	230	19	382	81	0	67	35	657	0	0	380	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	230	19	382	81	0	67	35	657	0	0	380	66
User 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
PHF 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
PHF Volume:	230	19	382	81	0	67	35	657	0	0	380	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	230	19	382	81	0	67	35	657	0	0	380	66
PCE 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
MLF 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
FinalVolume:	230	19	382	81	0	67	35	657	0	0	380	66
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.85	0.15	1.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.56	0.44
Final Sat.:	2956	244	1600	1600	0	1600	1600	4800	0	0	4090	710
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.24	0.05	0.00	0.04	0.02	0.14	0.00	0.00	0.09	0.09
Crit Moves:			****	****				****				

AM Existing Plus Project Traffic Conditions
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.409
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1 1	2 0	2	0 1	2 0	3	0 1	2 0	2	1 1
Volume Module:												
Base Vol:	99	383	167	142	697	92	100	707	90	42	94	49
Growth 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
Initial Bse:	99	383	167	142	697	92	100	707	90	42	94	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	99	383	167	142	697	92	100	707	90	42	94	49
User 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
PHF 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
PHF Volume:	99	383	167	142	697	92	100	707	90	42	94	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	383	167	142	697	92	100	707	90	42	94	49
PCE 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
MLF 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
FinalVolume:	99	383	167	142	697	92	100	707	90	42	94	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.63	1.37
Final Sat.:	3200	3200	1600	3200	3200	1600	3200	4800	1600	3200	4207	2193
Capacity Analysis Module:												
Vol/Sat:	0.03	0.12	0.10	0.04	0.22	0.06	0.03	0.15	0.06	0.01	0.02	0.02
Crit Moves:	****				****			****			****	

AM Existing Plus Project Traffic Conditions
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Driveway 2 at Bristol Street

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[8.3]

Street Name:	Driveway 2						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	1 0	3	0 0	0 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	3	1118	0	0	446	4
Growth 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
Initial Bse:	0	0	0	0	0	0	3	1118	0	0	446	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	3	1118	0	0	446	4
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	0	3	1177	0	0	469	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	3	1177	0	0	469	4
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	870	1655	159	474	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	295	99	865	1099	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	294	99	865	1099	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	241	237	xxxxx	487	238	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

PM Existing Plus Project Traffic Conditions
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.492
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0	0 1!	0 0	0	0 2	1 0	2	0 2	1 0
Volume Module:												
Base Vol:	0	0	0	2	0	10	0	530	495	559	1247	7
Growth 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
Initial Bse:	0	0	0	2	0	10	0	530	495	559	1247	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	10	0	530	495	559	1247	7
User 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
PHF 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
PHF Volume:	0	0	0	2	0	10	0	530	495	559	1247	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	10	0	530	495	559	1247	7
PCE 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
MLF 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
FinalVolume:	0	0	0	2	0	10	0	530	495	559	1247	7
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.17	0.00	0.83	0.00	2.00	1.00	2.00	2.98	0.02
Final Sat.:	0	0	0	267	0	1333	0	3200	1600	3200	4773	27
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.17	0.31	0.17	0.26	0.26
Crit Moves:						****			****	****		

PM Existing Plus Project Traffic Conditions
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB)/Driveway 1 at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.445
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Newport Blvd (NB)/Driveway 1						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0 0	0 1	1	0 3	0 0	0	0 2	1 0
Volume Module:												
Base Vol:	347	7	169	34	0	28	13	524	0	0	1440	24
Growth 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
Initial Bse:	347	7	169	34	0	28	13	524	0	0	1440	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	347	7	169	34	0	28	13	524	0	0	1440	24
User 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
PHF 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
PHF Volume:	347	7	169	34	0	28	13	524	0	0	1440	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	347	7	169	34	0	28	13	524	0	0	1440	24
PCE 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
MLF 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
FinalVolume:	347	7	169	34	0	28	13	524	0	0	1440	24
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.96	0.04	1.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.95	0.05
Final Sat.:	3137	63	1600	1600	0	1600	1600	4800	0	0	4721	79
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.02	0.00	0.02	0.01	0.11	0.00	0.00	0.30	0.31
Crit Moves:	****			****			****					****

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.287
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1	2 0	2	1	2 0	3	1	2 0	2	1
Volume Module:												
Base Vol:	87	145	82	366	405	128	83	425	144	83	356	282
Growth 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
Initial Bse:	87	145	82	366	405	128	83	425	144	83	356	282
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	87	145	82	366	405	128	83	425	144	83	356	282
User 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
PHF 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
PHF Volume:	87	145	82	366	405	128	83	425	144	83	356	282
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	145	82	366	405	128	83	425	144	83	356	282
PCE 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
MLF 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
FinalVolume:	87	145	82	366	405	128	83	425	144	83	356	282
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.92	1.08	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.23	1.77
Final Sat.:	3200	3066	1734	3200	3200	1600	3200	4800	1600	3200	3571	2829
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.11	0.13	0.08	0.03	0.09	0.09	0.03	0.10	0.10
Crit Moves:		****		****			****				****	

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Driveway 2 at Bristol Street

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[13.3]

Street Name:	Driveway 2						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0	0	0 0 1!	0	0	1 0 3	0	0	0 0 2	1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	1	726	0	0	1464	1
Growth 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
Initial Bse:	0	0	0	0	0	0	1	726	0	0	1464	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	1	726	0	0	1464	1
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	0	1	764	0	0	1541	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	1	764	0	0	1541	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1798	2308	514	1542	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	73	39	511	436	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	73	39	511	436	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	352	156	xxxxx	156	157	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

APPENDIX C-III

YEAR 2016 WITHOUT PROJECT CUMULATIVE TRAFFIC CONDITIONS

AM Cumulative Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.246
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 0	1! 0	0	0 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	1	0	4	0	734	248	124	593	4
Growth 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
Initial Bse:	0	0	0	1	0	4	0	734	248	124	593	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	4	0	734	248	124	593	4
User 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
PHF 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
PHF Volume:	0	0	0	1	0	4	0	734	248	124	593	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1	0	4	0	734	248	124	593	4
PCE 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
MLF 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
FinalVolume:	0	0	0	1	0	4	0	734	248	124	593	4
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.20	0.00	0.80	0.00	2.24	0.76	2.00	2.98	0.02
Final Sat.:	0	0	0	320	0	1280	0	3588	1212	3200	4768	32
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.04	0.12	0.12
Crit Moves:				****				****		****		

AM Cumulative Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.289
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Street Name:	Newport Blvd (NB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	1	0 0	0	0 0	0 0	3	0 0	0 0	3	0 0
Volume Module:												
Base Vol:	235	0	421	0	0	0	0	730	0	0	487	0
Growth 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
Initial Bse:	235	0	421	0	0	0	0	730	0	0	487	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	235	0	421	0	0	0	0	730	0	0	487	0
User 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
PHF 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
PHF Volume:	235	0	421	0	0	0	0	730	0	0	487	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	235	0	421	0	0	0	0	730	0	0	487	0
PCE 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
MLF 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
FinalVolume:	235	0	421	0	0	0	0	730	0	0	487	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.07	xxxx	1.93	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00
Final Sat.:	1720	0	3080	0	0	0	0	4800	0	0	4800	0
Capacity Analysis Module:												
Vol/Sat:	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.10	0.00
Crit Moves:			****					****		****		

AM Cumulative Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.426
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1	2 0	2	0 1	2 0	3	0 1	2 0	2	1 1
Volume Module:												
Base Vol:	113	391	170	145	711	102	109	742	103	43	120	50
Growth 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
Initial Bse:	113	391	170	145	711	102	109	742	103	43	120	50
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	113	391	170	145	711	102	109	742	103	43	120	50
User 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
PHF 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
PHF Volume:	113	391	170	145	711	102	109	742	103	43	120	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	391	170	145	711	102	109	742	103	43	120	50
PCE 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
MLF 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
FinalVolume:	113	391	170	145	711	102	109	742	103	43	120	50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.82	1.18
Final Sat.:	3200	3200	1600	3200	3200	1600	3200	4800	1600	3200	4518	1882
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.11	0.05	0.22	0.06	0.03	0.15	0.06	0.01	0.03	0.03
Crit Moves:	****				****			****			****	

PM Cumulative Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.506
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 0	1! 0	0	0 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	2	0	10	0	571	505	585	1303	7
Growth 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
Initial Bse:	0	0	0	2	0	10	0	571	505	585	1303	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	10	0	571	505	585	1303	7
User 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
PHF 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
PHF Volume:	0	0	0	2	0	10	0	571	505	585	1303	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	10	0	571	505	585	1303	7
PCE 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
MLF 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
FinalVolume:	0	0	0	2	0	10	0	571	505	585	1303	7
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.17	0.00	0.83	0.00	2.00	1.00	2.00	2.98	0.02
Final Sat.:	0	0	0	267	0	1333	0	3200	1600	3200	4774	26
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.18	0.32	0.18	0.27	0.27
Crit Moves:						****			****	****		

PM Cumulative Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.436
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Newport Blvd (NB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1! 0	1	0 0	0 0	0	0 0	3 0	0	0 0	3 0	0
Volume Module:												
Base Vol:	354	0	196	0	0	0	0	578	0	0	1542	0
Growth 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
Initial Bse:	354	0	196	0	0	0	0	578	0	0	1542	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	354	0	196	0	0	0	0	578	0	0	1542	0
User 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
PHF 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
PHF Volume:	354	0	196	0	0	0	0	578	0	0	1542	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	354	0	196	0	0	0	0	578	0	0	1542	0
PCE 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
MLF 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
FinalVolume:	354	0	196	0	0	0	0	578	0	0	1542	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.93	0.01	1.06	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00
Final Sat.:	3089	0	1711	0	0	0	0	4800	0	0	4800	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.32	0.00
Crit Moves:			****				****				****	

PM Cumulative Traffic Conditions
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.301
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1	2 0	2	1	2 0	3	1	2 0	2	1
Volume Module:												
Base Vol:	105	148	84	373	413	141	95	465	162	85	393	288
Growth 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
Initial Bse:	105	148	84	373	413	141	95	465	162	85	393	288
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	105	148	84	373	413	141	95	465	162	85	393	288
User 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
PHF 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
PHF Volume:	105	148	84	373	413	141	95	465	162	85	393	288
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	148	84	373	413	141	95	465	162	85	393	288
PCE 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
MLF 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
FinalVolume:	105	148	84	373	413	141	95	465	162	85	393	288
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.91	1.09	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.31	1.69
Final Sat.:	3200	3062	1738	3200	3200	1600	3200	4800	1600	3200	3693	2707
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.12	0.13	0.09	0.03	0.10	0.10	0.03	0.11	0.11
Crit Moves:		****		****			****				****	

APPENDIX C-IV

YEAR 2016 WITH PROJECT CUMULATIVE TRAFFIC CONDITIONS

AM Cumulative Plus Project Traffic Condition
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.246
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	1	0	4	0	734	248	124	593	4
Growth 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
Initial Bse:	0	0	0	1	0	4	0	734	248	124	593	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	4	0	734	248	124	593	4
User 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
PHF 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
PHF Volume:	0	0	0	1	0	4	0	734	248	124	593	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1	0	4	0	734	248	124	593	4
PCE 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
MLF 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
FinalVolume:	0	0	0	1	0	4	0	734	248	124	593	4
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.20	0.00	0.80	0.00	2.24	0.76	2.00	2.98	0.02
Final Sat.:	0	0	0	320	0	1280	0	3588	1212	3200	4768	32
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.04	0.12	0.12
Crit Moves:				****				****		****		

AM Cumulative Plus Project Traffic Condition
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB)/Driveway 1 at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	A

Street Name:	Newport Blvd (NB)/Driveway 1						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0 0	0 1	1	0 3	0 0	0	0 2	1 0
Volume Module:												
Base Vol:	235	19	402	81	0	67	35	695	0	0	420	66
Growth 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
Initial Bse:	235	19	402	81	0	67	35	695	0	0	420	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	235	19	402	81	0	67	35	695	0	0	420	66
User 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
PHF 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
PHF Volume:	235	19	402	81	0	67	35	695	0	0	420	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	235	19	402	81	0	67	35	695	0	0	420	66
PCE 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
MLF 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
FinalVolume:	235	19	402	81	0	67	35	695	0	0	420	66
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.85	0.15	1.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.59	0.41
Final Sat.:	2961	239	1600	1600	0	1600	1600	4800	0	0	4148	652
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.25	0.05	0.00	0.04	0.02	0.14	0.00	0.00	0.10	0.10
Crit Moves:			****	****				****				

AM Cumulative Plus Project Traffic Condition
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.426
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1	2 0	2	0 1	2 0	3	0 1	2 0	2	1 1
Volume Module:												
Base Vol:	113	391	170	145	711	102	109	742	103	43	120	50
Growth 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
Initial Bse:	113	391	170	145	711	102	109	742	103	43	120	50
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	113	391	170	145	711	102	109	742	103	43	120	50
User 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
PHF 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
PHF Volume:	113	391	170	145	711	102	109	742	103	43	120	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	391	170	145	711	102	109	742	103	43	120	50
PCE 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
MLF 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
FinalVolume:	113	391	170	145	711	102	109	742	103	43	120	50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.82	1.18
Final Sat.:	3200	3200	1600	3200	3200	1600	3200	4800	1600	3200	4518	1882
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.11	0.05	0.22	0.06	0.03	0.15	0.06	0.01	0.03	0.03
Crit Moves:	****				****			****			****	

AM Cumulative Plus Project Traffic Condition
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Driveway 2 at Bristol Street

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[8.4]

Street Name:	Driveway 2						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	1 0	3 0	0	0 0	2 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	3	1176	0	0	486	4
Growth 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
Initial Bse:	0	0	0	0	0	0	3	1176	0	0	486	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	3	1176	0	0	486	4
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	0	3	1238	0	0	512	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	3	1238	0	0	512	4
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	933	1758	173	516	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	269	86	847	1060	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	268	85	847	1060	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	224	221	xxxxx	464	222	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

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PM Cumulative Plus Project Traffic Condition
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Newport Blvd (SB) at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.506
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Street Name:	Newport Blvd. (SB)						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	0	0	0	2	0	10	0	571	505	585	1303	7
Growth 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
Initial Bse:	0	0	0	2	0	10	0	571	505	585	1303	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	10	0	571	505	585	1303	7
User 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
PHF 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
PHF Volume:	0	0	0	2	0	10	0	571	505	585	1303	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	10	0	571	505	585	1303	7
PCE 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
MLF 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
FinalVolume:	0	0	0	2	0	10	0	571	505	585	1303	7
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.17	0.00	0.83	0.00	2.00	1.00	2.00	2.98	0.02
Final Sat.:	0	0	0	267	0	1333	0	3200	1600	3200	4774	26
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.18	0.32	0.18	0.27	0.27
Crit Moves:						****			****	****		

PM Cumulative Plus Project Traffic Condition
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB)/Driveway 1 at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.468
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Newport Blvd (NB)/Driveway 1						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0 0	0 1	1	0 3	0 0	0	0 2	1 0
Volume Module:												
Base Vol:	354	7	189	34	0	28	13	565	0	0	1515	24
Growth 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	
Initial Bse:	354	7	189	34	0	28	13	565	0	0	1515	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	354	7	189	34	0	28	13	565	0	0	1515	24
User 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	
PHF 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	
PHF Volume:	354	7	189	34	0	28	13	565	0	0	1515	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	354	7	189	34	0	28	13	565	0	0	1515	24
PCE 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	
MLF 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	
FinalVolume:	354	7	189	34	0	28	13	565	0	0	1515	24
Saturation Flow Module:												
Sat/Lane:	1600 1600	1600		1600 1600	1600		1600 1600	1600		1600 1600	1600	
Adjustment:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
Lanes:	1.96 0.04	1.00		1.00 0.00	1.00		1.00 3.00	0.00		0.00 2.95	0.05	
Final Sat.:	3138	62	1600	1600	0	1600	1600	4800	0	0	4725	75
Capacity Analysis Module:												
Vol/Sat:	0.11 0.11	0.12		0.02 0.00	0.02		0.01	0.12	0.00	0.00	0.32	0.32
Crit Moves:		****		****			****				****	

PM Cumulative Plus Project Traffic Condition
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Red Hill Avenue at Bristol Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.301
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Street Name:	Red Hill Avenue						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1	2 0	2	0 1	2 0	3	0 1	2 0	2	1 1
Volume Module:												
Base Vol:	105	148	84	373	413	141	95	465	162	85	393	288
Growth 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
Initial Bse:	105	148	84	373	413	141	95	465	162	85	393	288
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	105	148	84	373	413	141	95	465	162	85	393	288
User 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
PHF 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
PHF Volume:	105	148	84	373	413	141	95	465	162	85	393	288
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	148	84	373	413	141	95	465	162	85	393	288
PCE 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
MLF 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
FinalVolume:	105	148	84	373	413	141	95	465	162	85	393	288
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.91	1.09	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.31	1.69
Final Sat.:	3200	3062	1738	3200	3200	1600	3200	4800	1600	3200	3693	2707
Capacity Analysis Module:												
Vol/Sat:	0.03	0.05	0.05	0.12	0.13	0.09	0.03	0.10	0.10	0.03	0.11	0.11
Crit Moves:		****		****			****				****	

PM Cumulative Plus Project Traffic Condition
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Driveway 2 at Bristol Street

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[13.9]

Street Name:	Driveway 2						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	1 0	3 0	0	0 0	2 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	1	786	0	0	1539	1
Growth 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
Initial Bse:	0	0	0	0	0	0	1	786	0	0	1539	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	1	786	0	0	1539	1
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	0	1	827	0	0	1620	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	1	827	0	0	1620	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1898	2450	541	1621	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	62	31	491	407	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	62	31	491	407	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	327	143	xxxxx	141	144	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

APPENDIX D

HCM QUEUING ANALYSIS
YEAR 2016 WITH PROJECT
CUMULATIVE TRAFFIC CONDITIONS

[HCM] AM Cumulative Plus Project Traffic Condition
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB)/Driveway 1 at Bristol Street

Cycle (sec):	90	Critical Vol./Cap.(X):	0.265
Loss Time (sec):	12	Average Delay (sec/veh):	20.0
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Newport Blvd (NB)/Driveway 1						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	28	28	28	26	0	6	6	18	18	18	18	18
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0 0	0 1	1	0 3	0 0	0	0 2	1 0
Volume Module:												
Base Vol:	235	19	402	81	0	67	35	695	0	0	420	66
Growth 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
Initial Bse:	235	19	402	81	0	67	35	695	0	0	420	66
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	235	19	402	81	0	67	35	695	0	0	420	66
User 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
PHF 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
PHF Volume:	235	19	402	81	0	67	35	695	0	0	420	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	235	19	402	81	0	67	35	695	0	0	420	66
PCE 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
MLF 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
FinalVolume:	235	19	402	81	0	67	35	695	0	0	420	66
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.95	1.00	0.85	0.95	0.91	1.00	1.00	0.89	0.89
Lanes:	1.85	0.15	1.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.59	0.41
Final Sat.:	3361	272	1615	1805	0	1615	1805	5187	0	0	4393	690
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.25	0.04	0.00	0.04	0.02	0.13	0.00	0.00	0.10	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.94	0.94	0.94	0.29	0.00	0.29	0.07	0.27	0.00	0.00	0.20	0.20
Volume/Cap:	0.07	0.07	0.27	0.16	0.00	0.14	0.29	0.50	0.00	0.00	0.48	0.48
Delay/Veh:	0.2	0.2	0.3	24.0	0.0	23.9	41.3	28.2	0.0	0.0	32.2	32.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.2	0.2	0.3	24.0	0.0	23.9	41.3	28.2	0.0	0.0	32.2	32.2
LOS by Move:	A	A	A	C	A	C	D	C	A	A	C	C
HCM2k95thQ:	1	1	2	3	0	3	3	12	0	0	9	9

Note: Queue reported is the number of cars per lane.

[HCM] PM Cumulative Plus Project Traffic Condition
2-14-3455-1 Ganahl Lumber, Costa Mesa

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Newport Blvd (NB)/Driveway 1 at Bristol Street

Cycle (sec):	110	Critical Vol./Cap.(X):	0.474
Loss Time (sec):	12	Average Delay (sec/veh):	20.6
Optimal Cycle:	70	Level Of Service:	C

Street Name:	Newport Blvd (NB)/Driveway 1						Bristol Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	28	28	28	6	0	6	6	18	18	18	18	18
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0 0	0 1	1	0 3	0 0	0	0 2	1 0
Volume Module:												
Base Vol:	354	7	189	33	0	27	13	565	0	0	1515	24
Growth 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
Initial Bse:	354	7	189	33	0	27	13	565	0	0	1515	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	354	7	189	33	0	27	13	565	0	0	1515	24
User 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
PHF 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
PHF Volume:	354	7	189	33	0	27	13	565	0	0	1515	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	354	7	189	33	0	27	13	565	0	0	1515	24
PCE 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
MLF 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
FinalVolume:	354	7	189	33	0	27	13	565	0	0	1515	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.91	1.00	1.00	0.91	0.91
Lanes:	1.96	0.04	1.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.95	0.05
Final Sat.:	3551	70	1615	1805	0	1615	1805	5187	0	0	5096	81
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.12	0.02	0.00	0.02	0.01	0.11	0.00	0.00	0.30	0.30
Crit Moves:		****		****			****				****	
Green/Cycle:	0.25	0.25	0.25	0.05	0.00	0.05	0.05	0.58	0.00	0.00	0.53	0.53
Volume/Cap:	0.39	0.39	0.46	0.34	0.00	0.31	0.13	0.19	0.00	0.00	0.56	0.56
Delay/Veh:	34.2	34.2	35.4	52.1	0.0	52.0	50.1	10.8	0.0	0.0	17.8	17.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.2	34.2	35.4	52.1	0.0	52.0	50.1	10.8	0.0	0.0	17.8	17.8
LOS by Move:	C	C	D	D	A	D	D	B	A	A	B	B
HCM2k95thQ:	10	10	11	3	0	2	1	6	0	0	23	23

Note: Queue reported is the number of cars per lane.

MEMORANDUM

To:	Robert Carpenter/Dale Brown Onyx Architects, Inc.	Date:	December 18, 2014
From:	Richard E. Barretto, P.E., Principal Linscott, Law & Greenspan, Engineers	LLG Ref:	2.14.3455.1
Cc:	Patrick Ganahl, Ganahl Construction Corporation Jacob Deveau, Onyx Architects, Inc.		
Subject:	***Parking Assessment for the Ganahl Lumber Costa Mesa Relocation Project Costa Mesa, California***		

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Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the findings of a Parking Demand Assessment for the proposed Ganahl Lumber Relocation Project (hereinafter referred to as Project) in the City of Costa Mesa. This parking study has been prepared in response to the following City of Costa Mesa comments on the *Focused Traffic Impact Study for Ganahl Lumber Costa Mesa Relocation Project* as summarized in a City prepared memo dated November 5, 2014.

Table 12-1, Page 29: obtain from LL&G the parking rate assigned to the other Ganahl Lumber sites evaluated as part of this study and apply that parking rate to this project.

LLG Response: In response to the City's comments, LLG has prepared as parking assessment for the proposed Project based on an evaluation of the trip generation studies conducted at the existing Ganahl Lumber facility located at 1275 Bristol Street. As indicated in the *Focused Traffic Impact Study for Ganahl Lumber Costa Mesa Relocation Project,* traffic counts were collected at the two existing driveways that provide access to the existing site on Tuesday, February 11, 2014, Wednesday, February 12, 2014 and Thursday, February 13, 2014. From the results of the trip generation studies, LLG calculated the existing parking accumulation of the Ganahl Lumber facility by comparing inbound vehicles vs. outbound vehicles at the two driveways that now serve the site.

Table 1 presents a conservative estimate of the parking demand results for the existing Ganahl Lumber facility. As indicated, the peak demand occurred on Wednesday, February 12, 2014 at 10:45 AM, and totaled 114 vehicles consisting of the following:

- 108 cars (includes light-trucks, pick-ups, vans and SUV's) ;
- 3 mediums trucks (includes moving trucks, courier trucks, traffic trucks, transport trucks with small trailers, flatbed trucks, or similar size); and
- 3 heavy/large trucks (includes large tractor trailers with full length or multiple trailers, etc.).

Based on an existing parking supply of 153 spaces, a surplus of 39 spaces (or 25% contingency) is calculated for the existing Ganahl Lumber facility.

LINSCOTT LAW & GREENSPAN engineers

Further, with an existing building materials store floor area (Building A) and a material storage structure (Building B) totaling 52,614 SF (see below updated tabular information) and a peak parking demand of 114 spaces, a peak parking demand ratio of 2.17 spaces per 1000 SF is calculated for the existing Ganahl Lumber facility.

With a 15% factor of safety included to develop a "design parking ratio" specific to the Ganahl Costa Mesa site, a ratio of 2.50 spaces per 1000 SF is recommended to forecast the peak parking demand of the proposed Project.

Given the above, based on a proposed building materials store (Building A) and material storage building (Building B) totaling 95,525 SF (see below tabular information), a peak parking demand of 239 spaces is forecast. With a proposed supply of 286 spaces, a surplus of 47 spaces (or a 16% contingency) is projected. Hence it is concluded that the proposed parking supply of 286 spaces will adequately support the peak parking demand of the proposed Project.

EXISTING AND PROPOSED PROJECT DEVELOPMENT SUMMARY
FOR REFERENCE IN CALCULATING PROJECT PARKING REQUIREMENTS[1]

Project Description	Existing Development	Proposed Project
▪ Ganahl Lumber		
❖ Building "A" - Materials Retail Store, including Mezzanine Level, plus Will Call Storage/Warehouse	36,709 SF	65,263 SF
▪ Ganahl Lumber Storage Building		
❖ Building "B" Material Storage Structure	15,905 SF	30,262 SF
Total	52,614 SF	95,525 SF
▪ Parking Supply	153 spaces	286 spaces

Notes:

- SF = Square Footage

* * * * * * * * * * *

Please let me know if you have any comments or questions regarding this response memorandum.

Attachments

[1] Source: *Onyx Architects*. Per the City of Costa Mesa, the floor area information summarized in this table is to be used to calculate the parking requirements of the Ganahl Lumber Costa Mesa facility.

Table 1
Existing Parking Accumulation Summary [1]
Ganahl Lumber, Costa Mesa

Time Period	East Driveway (Driveway #1) and West Driveway (Driveway #2)																																			
	Date: 02/11/2014												Date: 02/12/2014												Date: 02/13/2014											
	Cars			Medium Trucks			Heavy Trucks			Combined			Cars			Medium Trucks			Heavy Trucks			Combined			Cars			Medium Trucks			Heavy Trucks			Combined		
	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	*NB (In)*	*Pk'd*	*SB (Out)*	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	*NB (In)*	*Pk'd*	*SB (Out)*	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	*NB (In)*	*Pk'd*	*SB (Out)*
5:00 AM	3	0	0	0	4	0	0	0	0	*3*	*4*	*0*	1	8	0	0	8	0	0	0	0	*1*	*16*	*0*	2	1	0	0	7	0	0	0	0	*2*	*8*	*0*
5:15 AM	2	2	0	0	4	0	0	0	0	*2*	*6*	*0*	4	12	0	0	8	0	0	0	0	*4*	*20*	*0*	3	4	0	0	7	0	0	0	0	*3*	*11*	*0*
5:30 AM	3	5	0	0	4	0	0	0	0	*3*	*9*	*0*	5	17	0	0	8	0	0	0	0	*5*	*25*	*0*	6	10	0	0	7	0	0	0	0	*6*	*17*	*0*
5:45 AM	16	20	1	0	4	0	2	2	0	*18*	*26*	*1*	20	37	0	0	8	0	0	0	0	*20*	*45*	*0*	19	27	2	0	7	0	0	0	0	*19*	*34*	*2*
6:00 AM	10	26	4	1	5	0	0	2	0	*11*	*33*	*4*	11	42	6	1	9	0	0	0	0	*12*	*51*	*6*	14	38	3	1	7	1	0	0	0	*15*	*45*	*4*
6:15 AM	19	41	4	0	3	2	1	2	1	*20*	*46*	*7*	17	49	10	0	6	3	1	1	0	*18*	*56*	*13*	18	44	12	0	5	2	1	1	0	*19*	*50*	*14*
6:30 AM	12	40	13	0	2	1	0	1	1	*12*	*43*	*15*	25	63	11	0	5	1	0	1	0	*25*	*69*	*12*	18	48	14	1	3	3	1	2	0	*20*	*53*	*17*
6:45 AM	22	52	10	0	0	2	0	0	1	*22*	*52*	*13*	19	60	22	0	5	0	0	1	0	*19*	*66*	*22*	29	57	20	0	3	0	0	1	1	*29*	*61*	*21*
7:00 AM	23	53	22	1	1	0	0	0	0	*24*	*54*	*22*	15	58	17	0	5	0	0	0	1	*15*	*63*	*18*	21	65	13	2	5	0	2	2	1	*25*	*72*	*14*
7:15 AM	37	63	27	2	3	0	0	0	0	*39*	*66*	*27*	23	62	19	0	5	0	1	1	0	*24*	*68*	*19*	26	68	23	0	4	1	0	1	1	*26*	*73*	*25*
7:30 AM	20	60	23	1	4	0	0	0	0	*21*	*64*	*23*	27	71	18	1	6	0	1	2	0	*29*	*79*	*18*	23	67	24	0	1	3	1	1	1	*24*	*69*	*28*
7:45 AM	12	48	24	0	2	2	0	0	0	*12*	*50*	*26*	31	77	25	1	7	0	1	3	0	*33*	*87*	*25*	17	59	25	0	1	0	0	1	0	*17*	*61*	*25*
8:00 AM	25	58	15	0	2	0	1	1	0	*26*	*61*	*15*	27	79	25	5	11	1	0	1	2	*32*	*91*	*28*	31	72	18	0	1	0	0	0	1	*31*	*73*	*19*
8:15 AM	15	59	14	1	3	0	0	0	1	*16*	*62*	*15*	24	78	25	3	10	4	1	2	0	*28*	*90*	*29*	22	66	28	1	2	0	1	1	0	*24*	*69*	*28*
8:30 AM	20	61	18	2	5	0	0	0	0	*22*	*66*	*18*	17	71	24	2	10	2	0	1	1	*19*	*82*	*27*	18	68	16	0	2	0	1	2	0	*19*	*72*	*16*
8:45 AM	34	71	24	2	5	2	1	1	0	*37*	*77*	*26*	33	81	23	0	6	4	0	1	0	*33*	*88*	*27*	32	78	22	3	3	2	1	3	0	*36*	*84*	*24*
9:00 AM	31	73	29	1	4	2	1	2	0	*33*	*79*	*31*	35	89	27	0	5	1	0	1	0	*35*	*95*	*28*	20	74	24	3	6	0	1	2	2	*24*	*82*	*26*
9:15 AM	28	73	28	1	3	2	1	2	1	*30*	*78*	*31*	30	93	26	2	3	4	1	2	0	*33*	*98*	*30*	31	86	19	0	5	1	0	2	0	*31*	*93*	*20*
9:30 AM	29	80	22	4	6	1	1	2	1	*34*	*88*	*24*	34	97	30	0	2	1	1	3	0	*35*	*102*	*31*	17	79	24	0	3	2	0	1	1	*17*	*83*	*27*
9:45 AM	26	75	31	2	6	2	1	2	1	*29*	*83*	*34*	28	94	31	0	1	1	2	4	1	*30*	*99*	*33*	32	84	27	1	3	1	0	1	0	*33*	*88*	*28*
10:00 AM	24	73	26	1	5	2	0	0	2	*25*	*78*	*30*	23	89	28	4	5	0	1	4	1	*28*	*98*	*29*	24	82	26	0	0	3	0	0	1	*24*	*82*	*30*
10:15 AM	26	74	25	1	6	0	1	1	0	*28*	*81*	*25*	27	96	20	1	3	3	1	4	1	*29*	*103*	*24*	19	72	29	3	2	1	1	1	0	*23*	*75*	*30*
10:30 AM	24	69	29	2	7	1	1	1	1	*27*	*77*	*31*	30	106	20	1	3	1	1	2	3	*32*	*111*	*24*	26	79	19	1	1	2	0	1	0	*27*	*81*	*21*
10:45 AM	17	60	26	0	4	3	0	0	1	*17*	*64*	*30*	34	108	32	2	3	2	1	3	0	*37*	*114*	*34*	23	79	23	2	0	3	2	2	1	*27*	*81*	*27*
11:00 AM	22	64	18	5	8	1	2	2	0	*29*	*74*	*19*	28	97	39	2	4	1	0	2	1	*30*	*103*	*41*	25	83	21	2	1	1	0	2	0	*27*	*86*	*22*
11:15 AM	30	67	27	1	5	4	0	1	1	*31*	*73*	*32*	18	87	28	0	1	3	1	3	0	*19*	*91*	*31*	29	84	28	1	2	0	0	1	1	*30*	*87*	*29*
11:30 AM	28	70	25	1	5	1	0	1	0	*29*	*76*	*26*	26	83	30	1	2	0	0	3	0	*27*	*88*	*30*	26	81	29	1	2	1	1	1	1	*28*	*84*	*31*
11:45 AM	17	64	23	2	7	0	0	0	1	*19*	*71*	*24*	25	86	22	2	2	2	0	2	1	*27*	*90*	*25*	19	74	26	1	0	3	0	0	1	*20*	*74*	*30*
12:00 PM	30	77	17	3	10	0	1	1	0	*34*	*88*	*17*	14	77	23	0	2	0	0	2	0	*14*	*81*	*23*	21	73	22	1	1	0	0	0	0	*22*	*74*	*22*
12:15 PM	22	72	27	0	6	4	2	2	1	*24*	*80*	*32*	34	84	27	0	2	0	0	2	0	*34*	*88*	*27*	33	80	26	3	4	0	0	0	0	*36*	*84*	*26*
12:30 PM	24	70	26	2	7	1	0	1	1	*26*	*78*	*28*	26	90	20	0	2	0	0	2	0	*26*	*94*	*20*	23	77	26	1	3	2	0	0	0	*24*	*80*	*28*
12:45 PM	20	67	23	0	7	0	0	1	0	*20*	*75*	*23*	30	88	32	2	3	1	0	2	0	*32*	*93*	*33*	29	86	20	3	4	2	0	0	0	*32*	*90*	*22*
1:00 PM	26	75	18	1	7	1	1	1	1	*28*	*83*	*20*	33	95	26	0	2	1	1	3	0	*34*	*100*	*27*	21	77	30	1	4	1	0	0	0	*22*	*81*	*31*
1:15 PM	27	74	28	0	5	2	1	2	0	*28*	*81*	*30*	34	99	30	1	2	1	0	3	0	*35*	*104*	*31*	20	78	19	2	5	1	0	0	0	*22*	*83*	*20*
1:30 PM	23	72	25	4	8	1	0	0	2	*27*	*80*	*28*	24	96	27	1	3	0	1	4	0	*26*	*103*	*27*	24	86	16	1	5	1	0	0	0	*25*	*91*	*17*
1:45 PM	21	66	27	2	8	2	1	1	0	*24*	*75*	*29*	23	99	20	1	3	1	0	4	0	*24*	*106*	*21*	18	76	28	2	5	2	0	0	0	*20*	*81*	*30*
2:00 PM	27	72	21	1	8	1	0	1	0	*28*	*81*	*22*	19	86	32	1	3	1	1	3	2	*21*	*92*	*35*	28	75	29	0	3	2	0	0	0	*28*	*78*	*31*
2:15 PM	18	69	21	0	7	1	1	1	1	*19*	*77*	*23*	23	88	21	0	0	3	0	3	0	*23*	*91*	*24*	22	70	27	0	3	0	0	0	0	*22*	*73*	*27*
2:30 PM	23	62	30	1	6	2	0	1	0	*24*	*69*	*32*	14	71	31	1	0	1	0	2	1	*15*	*73*	*33*	19	67	22	0	3	0	0	0	0	*19*	*70*	*22*
2:45 PM	15	50	27	0	5	1	0	0	1	*15*	*55*	*29*	19	66	24	0	0	0	1	3	0	*20*	*69*	*24*	16	57	26	0	1	2	0	0	0	*16*	*58*	*28*
3:00 PM	17	43	24	0	5	0	0	0	0	*17*	*48*	*24*	15	58	23	1	1	0	0	3	0	*16*	*62*	*23*	14	52	19	0	1	0	0	0	0	*14*	*53*	*19*
3:15 PM	15	44	14	0	5	0	0	0	0	*15*	*49*	*14*	17	59	16	1	2	0	0	2	1	*18*	*63*	*17*	18	51	19	1	2	0	0	0	0	*19*	*53*	*19*
3:30 PM	15	39	20	1	6	0	0	0	0	*16*	*45*	*20*	16	61	14	1	3	0	0	2	0	*17*	*66*	*14*	20	56	15	0	2	0	0	0	0	*20*	*58*	*15*
3:45 PM	19	39	19	0	6	0	0	0	0	*19*	*45*	*19*	15	57	19	1	4	0	0	2	0	*16*	*63*	*19*	20	54	22	0	2	0	0	0	0	*20*	*56*	*22*
4:00 PM	15	34	20	0	6	0	0	0	0	*15*	*40*	*20*	8	46	19	0	4	0	0	2	0	*8*	*52*	*19*	14	46	22	4	6	0	0	0	0	*18*	*52*	*22*
4:15 PM	8	26	16	1	7	0	0	0	0	*9*	*33*	*16*	13	44	15	0	3	1	0	2	0	*13*	*49*	*16*	18	43	21	0	6	0	0	0	0	*18*	*49*	*21*
4:30 PM	11	26	11	0	6	1	0	0	0	*11*	*32*	*12*	11	44	11	0	3	0	0	2	0	*11*	*49*	*11*	17	36	24	1	7	0	0	0	0	*18*	*43*	*24*
4:45 PM	10	23	13	1	7	0	0	0	0	*11*	*30*	*13*	11	44	11	0	3	0	0	2	0	*11*	*49*	*11*	11	34	13	0	7	0	0	0	0	*11*	*41*	*13*
5:00 PM	8	18	13	1	7	1	0	0	0	*9*	*25*	*14*	11	34	21	0	3	0	0	2	0	*11*	*39*	*21*	5	26	13	0	7	0	0	0	0	*5*	*33*	*13*
5:15 PM	7	15	10	0	7	0	0	0	0	*7*	*22*	*10*	10	28	16	0	3	0	0	2	0	*10*	*33*	*16*	12	28	10	0	7	0	0	0	0	*12*	*35*	*10*
5:30 PM	12	15	12	0	7	0	0	0	0	*12*	*22*	*12*	7	24	11	0	3	0	0	2	0	*7*	*29*	*11*	14	25	17	0	7	0	0	0	0	*14*	*32*	*17*
5:45 PM	2	10	7	0	7	0	0	0	0	*2*	*17*	*7*	3	20	7	0	3	0	0	2	0	*3*	*25*	*7*	4	20	9	0	7	0	0	0	0	*4*	*27*	*9*
6:00 PM	6	6	10	0	7	0	0	0	0	*6*	*13*	*10*	5	6	19	0	3	0	0	2	0	*5*	*11*	*19*	3	10	13	0	7	0	0	0	0	*3*	*17*	*13*
6:15 PM	3	2	7	0	7	0	0	0	0	*3*	*9*	*7*	3	0	9	0	3	0	0	2	0	*3*	*5*	*9*	7	3	14	0	7	0	0	0	0	*7*	*10*	*14*
6:30 PM	6	1	7	0	7	0	0	0	0	*6*	*8*	*7*	5	2	3	0	3	0	0	2	0	*5*	*7*	*3*	2	1	4	0	7	0	0	0	0	*2*	*8*	*4*
6:45 PM	2	0	3	0	7	0	0	0	0	*2*	*7*	*3*	2	1	3	0	3	0	0	2	0	*2*	*6*	*3*	0	0	1	0	7	0	0	0	0	*0*	*7*	*1*
Total	**1,007**	**--**	**1,004**	**49**	**--**	**46**	**20**	**--**	**20**	***1,076***	***--***	***1,070***	**1,082**	**--**	**1,088**	**39**	**--**	**44**	**18**	**--**	**16**	***1,139***	***--***	***1,148***	**1,043**	**--**	**1,042**	**43**	**--**	**43**	**13**	**--**	**13**	***1,099***	***--***	***1,098***
Max	**37**	**80**	**31**	**5**	**10**	**4**	**2**	**2**	**2**	***39***	***88***	***34***	**35**	**108**	**39**	**5**	**11**	**4**	**2**	**4**	**3**	***37***	***114***	***41***	**33**	**86**	**30**	**4**	**7**	**3**	**2**	**3**	**2**	***36***	***93***	***31***

Time Period	3-Day Average											
	Cars			Medium Trucks			Heavy Trucks			Combined		
	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	NB (In)	Pk'd	SB (Out)	*NB (In)*	*Pk'd*	*SB (Out)*
5:00 AM	2	3	0	0	6	0	0	0	0	*2*	*9*	*0*
5:15 AM	3	6	0	0	6	0	0	0	0	*3*	*12*	*0*
5:30 AM	5	11	0	0	6	0	0	0	0	*5*	*17*	*0*
5:45 AM	18	28	1	0	6	0	1	1	0	*19*	*35*	*1*
6:00 AM	12	35	4	1	7	0	0	1	0	*13*	*43*	*4*
6:15 AM	18	45	9	0	5	2	1	1	0	*19*	*51*	*11*
6:30 AM	18	50	13	0	3	2	0	1	0	*18*	*54*	*15*
6:45 AM	23	56	17	0	3	1	0	1	1	*23*	*60*	*19*
7:00 AM	20	59	17	1	4	0	1	1	1	*22*	*64*	*18*
7:15 AM	29	64	23	1	4	0	0	1	0	*30*	*69*	*23*
7:30 AM	23	66	22	1	4	1	1	1	0	*25*	*71*	*23*
7:45 AM	20	61	25	0	3	1	0	1	0	*20*	*65*	*26*
8:00 AM	28	70	19	2	5	0	0	1	1	*30*	*76*	*20*
8:15 AM	20	68	22	2	5	1	1	1	0	*23*	*74*	*23*
8:30 AM	18	67	19	1	6	1	0	1	0	*19*	*74*	*20*
8:45 AM	33	77	23	2	5	3	1	2	0	*36*	*84*	*26*
9:00 AM	29	79	27	1	5	1	1	2	1	*31*	*86*	*29*
9:15 AM	30	84	24	1	4	2	1	2	0	*32*	*90*	*26*
9:30 AM	27	85	25	1	4	1	1	2	1	*29*	*91*	*27*
9:45 AM	29	84	30	1	3	1	1	2	1	*31*	*89*	*32*
10:00 AM	24	81	27	2	3	2	0	1	1	*26*	*85*	*30*
10:15 AM	24	81	25	2	4	1	1	2	0	*27*	*87*	*26*
10:30 AM	27	85	23	1	4	1	1	1	1	*29*	*90*	*25*
10:45 AM	25	82	27	1	2	3	1	2	1	*27*	*86*	*31*
11:00 AM	25	81	26	3	4	1	1	2	0	*29*	*87*	*27*
11:15 AM	26	79	28	1	3	2	0	2	1	*27*	*84*	*31*
11:30 AM	27	78	28	1	3	1	0	2	0	*28*	*83*	*29*
11:45 AM	20	75	24	2	3	2	0	1	1	*22*	*79*	*27*
12:00 PM	22	76	21	1	4	0	0	1	0	*23*	*81*	*21*
12:15 PM	30	79	27	1	4	1	1	1	0	*32*	*84*	*28*
12:30 PM	24	79	24	1	4	1	0	1	0	*25*	*84*	*25*
12:45 PM	26	80	25	2	5	1	0	1	0	*28*	*86*	*26*
1:00 PM	27	82	25	1	4	1	1	1	0	*29*	*87*	*26*
1:15 PM	27	84	26	1	4	1	0	2	0	*28*	*90*	*27*
1:30 PM	24	85	23	2	5	1	0	1	1	*26*	*91*	*25*
1:45 PM	21	80	25	2	5	2	0	2	0	*23*	*87*	*27*
2:00 PM	25	78	27	1	5	1	0	1	1	*26*	*84*	*29*
2:15 PM	21	76	23	0	3	1	0	1	0	*21*	*80*	*24*
2:30 PM	19	67	28	1	3	1	0	1	0	*20*	*71*	*29*
2:45 PM	17	58	26	0	2	1	0	1	0	*17*	*61*	*27*
3:00 PM	15	51	22	0	2	0	0	1	0	*15*	*54*	*22*
3:15 PM	17	51	16	1	3	0	0	1	0	*18*	*55*	*16*
3:30 PM	17	52	16	1	4	0	0	1	0	*18*	*57*	*16*
3:45 PM	18	50	20	0	4	0	0	1	0	*18*	*55*	*20*
4:00 PM	12	42	20	1	5	0	0	1	0	*13*	*48*	*20*
4:15 PM	13	38	17	0	5	0	0	1	0	*13*	*44*	*17*
4:30 PM	13	35	15	0	5	0	0	1	0	*13*	*41*	*15*
4:45 PM	11	34	12	0	6	0	0	1	0	*11*	*41*	*12*
5:00 PM	8	26	16	0	6	0	0	1	0	*8*	*33*	*16*
5:15 PM	10	24	12	0	6	0	0	1	0	*10*	*31*	*12*
5:30 PM	11	21	13	0	6	0	0	1	0	*11*	*28*	*13*
5:45 PM	3	17	8	0	6	0	0	1	0	*3*	*24*	*8*
6:00 PM	5	7	14	0	6	0	0	1	0	*5*	*14*	*14*
6:15 PM	4	2	10	0	6	0	0	1	0	*4*	*9*	*10*
6:30 PM	4	1	5	0	6	0	0	1	0	*4*	*8*	*5*
6:45 PM	1	0	2	0	6	0	0	1	0	*1*	*7*	*2*
Total	**1,044**	**--**	**1,045**	**44**	**--**	**44**	**17**	**--**	**16**	***1,105***	***--***	***1,105***
Max	**33**	**85**	**30**	**3**	**7**	**3**	**1**	**2**	**1**	***36***	***91***	***32***

[1] Source: Parking accumuation based on 24-hour traffic count data collected at the two existing driveways of the Ganahl Lumber Costa Mesa site on Tuesday (2/1/2014), Wednesday (2/12/2014) and Thursday (2/13/2014).

APPENDIX B-II

EXISTING TRIP GENERATION COUNTS

(COSTA MESA)

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	1	0
5:45 AM	7	1
6:00 AM	6	4
6:15 AM	17	4
6:30 AM	10	12
6:45 AM	19	9
7:00 AM	21	22
7:15 AM	34	25
7:30 AM	18	22
7:45 AM	12	23
8:00 AM	22	14
8:15 AM	12	13
8:30 AM	17	16
8:45 AM	29	22
9:00 AM	27	26
9:15 AM	23	23
9:30 AM	26	20
9:45 AM	22	31
10:00 AM	24	25
10:15 AM	24	22
10:30 AM	23	27
10:45 AM	17	22
11:00 AM	20	14
11:15 AM	24	25
11:30 AM	26	22
11:45 AM	14	20
12:00 PM	29	14
12:15 PM	22	22
12:30 PM	24	23

12:45 PM	18	22
1:00 PM	22	14
1:15 PM	21	24
1:30 PM	21	24
1:45 PM	17	23
2:00 PM	24	17
2:15 PM	14	17
2:30 PM	22	20
2:45 PM	15	21
3:00 PM	15	16
3:15 PM	14	12
3:30 PM	13	16
3:45 PM	16	16
4:00 PM	13	15
4:15 PM	6	14
4:30 PM	11	6
4:45 PM	8	10
5:00 PM	6	8
5:15 PM	7	6
5:30 PM	10	9
5:45 PM	2	7
6:00 PM	6	5
6:15 PM	3	4
6:30 PM	5	6
6:45 PM	2	2

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	1	0
6:15 AM	0	0
6:30 AM	0	1
6:45 AM	0	1
7:00 AM	1	0
7:15 AM	2	0
7:30 AM	1	0
7:45 AM	0	2
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	2	0
8:45 AM	2	1
9:00 AM	1	1
9:15 AM	1	0
9:30 AM	4	0
9:45 AM	2	2
10:00 AM	1	0
10:15 AM	1	0
10:30 AM	1	1
10:45 AM	0	2
11:00 AM	5	1
11:15 AM	1	1
11:30 AM	1	1
11:45 AM	1	0
12:00 PM	3	0
12:15 PM	0	2
12:30 PM	2	1

12:45 PM	0	0
1:00 PM	1	0
1:15 PM	0	0
1:30 PM	4	0
1:45 PM	2	1
2:00 PM	1	1
2:15 PM	0	0
2:30 PM	1	0
2:45 PM	0	1
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	1	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	1	0
4:30 PM	0	1
4:45 PM	1	0
5:00 PM	1	1
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	2	0
6:00 AM	0	0
6:15 AM	1	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	1	0
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	1	0
9:00 AM	1	0
9:15 AM	1	0
9:30 AM	1	0
9:45 AM	1	0
10:00 AM	0	0
10:15 AM	1	0
10:30 AM	1	0
10:45 AM	0	0
11:00 AM	2	0
11:15 AM	0	0
11:30 AM	0	0
11:45 AM	0	0
12:00 PM	1	0
12:15 PM	2	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	1	0
1:15 PM	1	0
1:30 PM	0	1
1:45 PM	1	0
2:00 PM	0	0
2:15 PM	1	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	1	0
5:30 AM	4	0
5:45 AM	9	0
6:00 AM	8	5
6:15 AM	13	10
6:30 AM	23	10
6:45 AM	16	20
7:00 AM	13	16
7:15 AM	23	19
7:30 AM	26	17
7:45 AM	29	23
8:00 AM	23	22
8:15 AM	23	22
8:30 AM	15	21
8:45 AM	32	21
9:00 AM	34	25
9:15 AM	27	24
9:30 AM	30	26
9:45 AM	26	29
10:00 AM	22	27
10:15 AM	21	19
10:30 AM	29	16
10:45 AM	32	31
11:00 AM	25	33
11:15 AM	17	26
11:30 AM	20	29
11:45 AM	22	18
12:00 PM	11	18
12:15 PM	29	25
12:30 PM	22	18

12:45 PM	26	27
1:00 PM	27	21
1:15 PM	30	26
1:30 PM	20	25
1:45 PM	22	17
2:00 PM	18	23
2:15 PM	17	17
2:30 PM	13	19
2:45 PM	17	14
3:00 PM	15	16
3:15 PM	15	13
3:30 PM	15	8
3:45 PM	13	16
4:00 PM	7	9
4:15 PM	12	9
4:30 PM	10	6
4:45 PM	10	6
5:00 PM	9	16
5:15 PM	7	8
5:30 PM	7	8
5:45 PM	3	6
6:00 PM	4	11
6:15 PM	3	5
6:30 PM	4	1
6:45 PM	2	3

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	1	0
6:15 AM	0	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	1	0
7:45 AM	1	0
8:00 AM	5	1
8:15 AM	3	2
8:30 AM	2	1
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	2	1
9:30 AM	0	0
9:45 AM	0	1
10:00 AM	4	0
10:15 AM	1	1
10:30 AM	1	0
10:45 AM	2	2
11:00 AM	1	0
11:15 AM	0	1
11:30 AM	1	0
11:45 AM	1	0
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	2	0
1:00 PM	0	1
1:15 PM	1	0
1:30 PM	1	0
1:45 PM	1	1
2:00 PM	1	0
2:15 PM	0	0
2:30 PM	1	1
2:45 PM	0	0
3:00 PM	1	0
3:15 PM	1	0
3:30 PM	1	0
3:45 PM	1	0
4:00 PM	0	0
4:15 PM	0	1
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER EAST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	1	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	1	0
7:30 AM	1	0
7:45 AM	1	0
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	0	0
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	1	0
9:30 AM	1	0
9:45 AM	2	0
10:00 AM	1	0
10:15 AM	1	0
10:30 AM	1	0
10:45 AM	1	0
11:00 AM	0	0
11:15 AM	1	0
11:30 AM	0	0
11:45 AM	0	0
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	1	0
1:15 PM	0	0
1:30 PM	1	0
1:45 PM	0	0
2:00 PM	1	0
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	1	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHAL LUMBER EAST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	4	0
5:45 AM	7	2
6:00 AM	10	3
6:15 AM	14	12
6:30 AM	16	13
6:45 AM	26	19
7:00 AM	19	13
7:15 AM	26	23
7:30 AM	20	23
7:45 AM	14	23
8:00 AM	27	17
8:15 AM	19	27
8:30 AM	17	14
8:45 AM	26	18
9:00 AM	20	21
9:15 AM	23	19
9:30 AM	12	22
9:45 AM	29	25
10:00 AM	21	20
10:15 AM	15	27
10:30 AM	24	14
10:45 AM	21	21
11:00 AM	24	18
11:15 AM	25	23
11:30 AM	26	22
11:45 AM	17	19
12:00 PM	19	20
12:15 PM	33	20
12:30 PM	19	23

12:45 PM	24	19
1:00 PM	20	28
1:15 PM	20	18
1:30 PM	16	15
1:45 PM	17	24
2:00 PM	25	25
2:15 PM	20	22
2:30 PM	18	14
2:45 PM	13	20
3:00 PM	14	16
3:15 PM	16	14
3:30 PM	16	11
3:45 PM	16	17
4:00 PM	12	16
4:15 PM	18	18
4:30 PM	15	13
4:45 PM	10	10
5:00 PM	4	10
5:15 PM	10	6
5:30 PM	12	12
5:45 PM	4	7
6:00 PM	3	9
6:15 PM	4	7
6:30 PM	2	2
6:45 PM	0	1

Study Name GANAHAL LUMBER EAST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	1	0
6:15 AM	0	0
6:30 AM	1	2
6:45 AM	0	0
7:00 AM	2	0
7:15 AM	0	1
7:30 AM	0	2
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	0	0
8:45 AM	2	1
9:00 AM	3	0
9:15 AM	0	0
9:30 AM	0	0
9:45 AM	0	0
10:00 AM	0	2
10:15 AM	3	0
10:30 AM	1	0
10:45 AM	2	3
11:00 AM	2	0
11:15 AM	1	0
11:30 AM	1	0
11:45 AM	0	0
12:00 PM	1	0
12:15 PM	3	0
12:30 PM	1	1

12:45 PM	2	0
1:00 PM	1	1
1:15 PM	2	1
1:30 PM	1	1
1:45 PM	2	1
2:00 PM	0	1
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	1	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	4	0
4:15 PM	0	0
4:30 PM	1	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHAL LUMBER EAST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	1	0
6:30 AM	1	0
6:45 AM	0	0
7:00 AM	2	0
7:15 AM	0	0
7:30 AM	1	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	1	0
8:30 AM	1	0
8:45 AM	1	0
9:00 AM	1	0
9:15 AM	0	0
9:30 AM	0	0
9:45 AM	0	0
10:00 AM	0	0
10:15 AM	1	0
10:30 AM	0	0
10:45 AM	2	0
11:00 AM	0	0
11:15 AM	0	0
11:30 AM	1	0
11:45 AM	0	0
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	0
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	3	0
5:15 AM	2	0
5:30 AM	2	0
5:45 AM	9	0
6:00 AM	4	0
6:15 AM	2	0
6:30 AM	2	1
6:45 AM	3	1
7:00 AM	2	0
7:15 AM	3	2
7:30 AM	2	1
7:45 AM	0	1
8:00 AM	3	1
8:15 AM	3	1
8:30 AM	3	2
8:45 AM	5	2
9:00 AM	4	3
9:15 AM	5	5
9:30 AM	3	2
9:45 AM	4	0
10:00 AM	0	1
10:15 AM	2	3
10:30 AM	1	2
10:45 AM	0	4
11:00 AM	2	4
11:15 AM	6	2
11:30 AM	2	3
11:45 AM	3	3
12:00 PM	1	3
12:15 PM	0	5
12:30 PM	0	3

12:45 PM	2	1
1:00 PM	4	4
1:15 PM	6	4
1:30 PM	2	1
1:45 PM	4	4
2:00 PM	3	4
2:15 PM	4	4
2:30 PM	1	10
2:45 PM	0	6
3:00 PM	2	8
3:15 PM	1	2
3:30 PM	2	4
3:45 PM	3	3
4:00 PM	2	5
4:15 PM	2	2
4:30 PM	0	5
4:45 PM	2	3
5:00 PM	2	5
5:15 PM	0	4
5:30 PM	2	3
5:45 PM	0	0
6:00 PM	0	5
6:15 PM	0	3
6:30 PM	1	1
6:45 PM	0	1

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	2
6:30 AM	0	0
6:45 AM	0	1
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	0	1
9:00 AM	0	1
9:15 AM	0	2
9:30 AM	0	1
9:45 AM	0	0
10:00 AM	0	2
10:15 AM	0	0
10:30 AM	1	0
10:45 AM	0	1
11:00 AM	0	0
11:15 AM	0	3
11:30 AM	0	0
11:45 AM	1	0
12:00 PM	0	0
12:15 PM	0	2
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	1
1:15 PM	0	2
1:30 PM	0	1
1:45 PM	0	1
2:00 PM	0	0
2:15 PM	0	1
2:30 PM	0	2
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/11/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	1
6:30 AM	0	1
6:45 AM	0	1
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	1
8:30 AM	0	0
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	0	1
9:30 AM	0	1
9:45 AM	0	1
10:00 AM	0	2
10:15 AM	0	0
10:30 AM	0	1
10:45 AM	0	1
11:00 AM	0	0
11:15 AM	0	1
11:30 AM	0	0
11:45 AM	0	1
12:00 PM	0	0
12:15 PM	0	1
12:30 PM	0	1

12:45 PM	0	0
1:00 PM	0	1
1:15 PM	0	0
1:30 PM	0	1
1:45 PM	0	0
2:00 PM	0	0
2:15 PM	0	1
2:30 PM	0	0
2:45 PM	0	1
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	1	0
5:15 AM	3	0
5:30 AM	1	0
5:45 AM	11	0
6:00 AM	3	1
6:15 AM	4	0
6:30 AM	2	1
6:45 AM	3	2
7:00 AM	2	1
7:15 AM	0	0
7:30 AM	1	1
7:45 AM	2	2
8:00 AM	4	3
8:15 AM	1	3
8:30 AM	2	3
8:45 AM	1	2
9:00 AM	1	2
9:15 AM	3	2
9:30 AM	4	4
9:45 AM	2	2
10:00 AM	1	1
10:15 AM	6	1
10:30 AM	1	4
10:45 AM	2	1
11:00 AM	3	6
11:15 AM	1	2
11:30 AM	6	1
11:45 AM	3	4
12:00 PM	3	5
12:15 PM	5	2
12:30 PM	4	2

12:45 PM	4	5
1:00 PM	6	5
1:15 PM	4	4
1:30 PM	4	2
1:45 PM	1	3
2:00 PM	1	9
2:15 PM	6	4
2:30 PM	1	12
2:45 PM	2	10
3:00 PM	0	7
3:15 PM	2	3
3:30 PM	1	6
3:45 PM	2	3
4:00 PM	1	10
4:15 PM	1	6
4:30 PM	1	5
4:45 PM	1	5
5:00 PM	2	5
5:15 PM	3	8
5:30 PM	0	3
5:45 PM	0	1
6:00 PM	1	8
6:15 PM	0	4
6:30 PM	1	2
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	3
6:30 AM	0	1
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	2
8:30 AM	0	1
8:45 AM	0	4
9:00 AM	0	1
9:15 AM	0	3
9:30 AM	0	1
9:45 AM	0	0
10:00 AM	0	0
10:15 AM	0	2
10:30 AM	0	1
10:45 AM	0	0
11:00 AM	1	1
11:15 AM	0	2
11:30 AM	0	0
11:45 AM	1	2
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	1
1:00 PM	0	0
1:15 PM	0	1
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	1
2:15 PM	0	3
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/12/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	0
6:30 AM	0	0
6:45 AM	0	0
7:00 AM	0	1
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	2
8:15 AM	0	0
8:30 AM	0	1
8:45 AM	0	0
9:00 AM	0	0
9:15 AM	0	0
9:30 AM	0	0
9:45 AM	0	1
10:00 AM	0	1
10:15 AM	0	1
10:30 AM	0	3
10:45 AM	0	0
11:00 AM	0	1
11:15 AM	0	0
11:30 AM	0	0
11:45 AM	0	1
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	2
2:15 PM	0	0
2:30 PM	0	1
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	1
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

CARS

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	2	0
5:15 AM	3	0
5:30 AM	2	0
5:45 AM	12	0
6:00 AM	4	0
6:15 AM	4	0
6:30 AM	2	1
6:45 AM	3	1
7:00 AM	2	0
7:15 AM	0	0
7:30 AM	3	1
7:45 AM	3	2
8:00 AM	4	1
8:15 AM	3	1
8:30 AM	1	2
8:45 AM	6	4
9:00 AM	0	3
9:15 AM	8	0
9:30 AM	5	2
9:45 AM	3	2
10:00 AM	3	6
10:15 AM	4	2
10:30 AM	2	5
10:45 AM	2	2
11:00 AM	1	3
11:15 AM	4	5
11:30 AM	0	7
11:45 AM	2	7
12:00 PM	2	2
12:15 PM	0	6
12:30 PM	4	3

12:45 PM	5	1
1:00 PM	1	2
1:15 PM	0	1
1:30 PM	8	1
1:45 PM	1	4
2:00 PM	3	4
2:15 PM	2	5
2:30 PM	1	8
2:45 PM	3	6
3:00 PM	0	3
3:15 PM	2	5
3:30 PM	4	4
3:45 PM	4	5
4:00 PM	2	6
4:15 PM	0	3
4:30 PM	2	11
4:45 PM	1	3
5:00 PM	1	3
5:15 PM	2	4
5:30 PM	2	5
5:45 PM	0	2
6:00 PM	0	4
6:15 PM	3	7
6:30 PM	0	2
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

MEDIUM

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	1
6:15 AM	0	2
6:30 AM	0	1
6:45 AM	0	0
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	1
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	1	1
9:00 AM	0	0
9:15 AM	0	1
9:30 AM	0	2
9:45 AM	1	1
10:00 AM	0	1
10:15 AM	0	1
10:30 AM	0	2
10:45 AM	0	0
11:00 AM	0	1
11:15 AM	0	0
11:30 AM	0	1
11:45 AM	1	3
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	1

12:45 PM	1	2
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	1
2:00 PM	0	1
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	2
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0

Study Name GANAHL LUMBER WEST DRIVEWAY
Start Date 02/13/2014
Start Time 5:00 AM
Site Code COSTA MESA

HEAVY

Channel Direction	Direction Southbound	Direction Northbound
5:00 AM	0	0
5:15 AM	0	0
5:30 AM	0	0
5:45 AM	0	0
6:00 AM	0	0
6:15 AM	0	0
6:30 AM	0	0
6:45 AM	0	1
7:00 AM	0	1
7:15 AM	0	1
7:30 AM	0	1
7:45 AM	0	0
8:00 AM	0	1
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	0	0
9:00 AM	0	2
9:15 AM	0	0
9:30 AM	0	1
9:45 AM	0	0
10:00 AM	0	1
10:15 AM	0	0
10:30 AM	0	0
10:45 AM	0	1
11:00 AM	0	0
11:15 AM	0	1
11:30 AM	0	1
11:45 AM	0	1
12:00 PM	0	0
12:15 PM	0	0
12:30 PM	0	0

12:45 PM	0	0
1:00 PM	0	0
1:15 PM	0	0
1:30 PM	0	0
1:45 PM	0	0
2:00 PM	0	0
2:15 PM	0	0
2:30 PM	0	0
2:45 PM	0	0
3:00 PM	0	0
3:15 PM	0	0
3:30 PM	0	0
3:45 PM	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
6:00 PM	0	0
6:15 PM	0	0
6:30 PM	0	0
6:45 PM	0	0