

490 Pacific Coast Highway Project

Initial Study/Mitigated Negative Declaration

March 2020 | ASE-06

Prepared for:

A & S Engineering
28405 Sand Canyon Road, Suite "B"
Canyon Country, CA 91387

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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1.0 INTRODUCTION

The following Initial Study addresses the environmental impacts associated with the construction and operation of the 490 Pacific Coast Highway Project (project). This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code 21000-21189) and the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387).

1.1 INITIAL STUDY INFORMATION SHEET

1. Project title:

490 Pacific Coast Highway Project

2. Lead agency name and address:

City of Seal Beach, 211 8th Street, Seal Beach, CA 90740

3. Contact person and phone number:

Contact: Steven Fowler, Assistant Planner

Phone: 562-431-2527

4. Project Location

The 490 Pacific Coast Highway Project (project) is located at the northwest corner of Pacific Coast Highway and 5th Street in the city of Seal Beach (see Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*). The project site is 26,793 square feet in area and is located at Assessor's Parcel Number (APN) 043-301-02.

5. Project sponsor's name and address:

A & S Engineering, 28405 Sand Canyon Road, Suite "B", Canyon Country, CA 91387

6. General Plan designation:

General Commercial Zone (CG)

7. Zoning designation:

General Commercial

8. Description of project:

The project proposes to develop a vacant lot with a 16-pump gas station with a 2,400 square-foot convenience store (see Figure 3, *Site Plan*). The gas station would be in operation 24 hours a day. The site was previously a gas station that was demolished in 2011, and gravel was placed over the vacant lot. The site has been an active environmental remediation area (with operating groundwater and soil vapor recovery systems) since 1986 to remove leaked gasoline (hydrocarbons) from the previous gas station.

The environmental remediation area would remain on site with one monitoring well relocated. A 4,052-square foot steel canopy would be installed above the gas pumps. The project would have 19,797 square feet of paved areas with 16 parking spaces. Ingress and egress to the site would be provided via four unsignalized driveways: two driveways along Pacific Coast Highway and two driveways along 5th Street. In addition, underground storage fuel tanks would be installed in the southern portion of the project site. Additional improvements would include a monument sign; trash enclosure; and air and water units for vehicles.

The project site is in a General Commercial Zone (CG) per the City of Seal Beach (City) Zoning Maps (City 2010). Per Section 11.2.10.010 of the Municipal Code, automobile service stations are allowed in CG zones subject to the approval of a conditional use permit (City 2018a). The project would also require approval of a variance as the project site does not meet minimum street frontage requirements per the City's Municipal Code. The variance would also allow the proposed improvements to be efficiently configured on the project site.

Site drainage is shown on Figure 4, *Grading and Drainage*, and Figure 5, *Water Quality Management Plan*. The site would contain two bioretention basins, with one at the western edge of the project site, behind the convenience store, and one at the eastern edge of the site, adjacent to the sidewalk along Pacific Coast Highway. Perforated storm drain pipes would lead to the basins, and from the basins through a biofiltration unit to a catch basin in the southwestern corner of the project site. The catch basin would lead into a culvert that would connect with the existing storm drain system on 5th Street.

Landscaping would include various plants and shrubs, with low precipitation drip irrigation (see Figure 6, *Landscape Plan*). Trees would be placed to provide shielding between the convenience store and the adjacent residences to the west.

Construction is anticipated to begin in June 2020 and last approximately six months. Site preparation activities would begin in June to be followed by grading in July. Cut and fill materials would be balanced on site. Building construction would begin in August 2020.

9. Surrounding land uses and setting:

Adjacent to the project site are single-family residences to the west and southwest, a commercial development (strip mall) to the north, commercial developments across 5th Street to the south, and single-family residences across Pacific Coast Highway to the east.

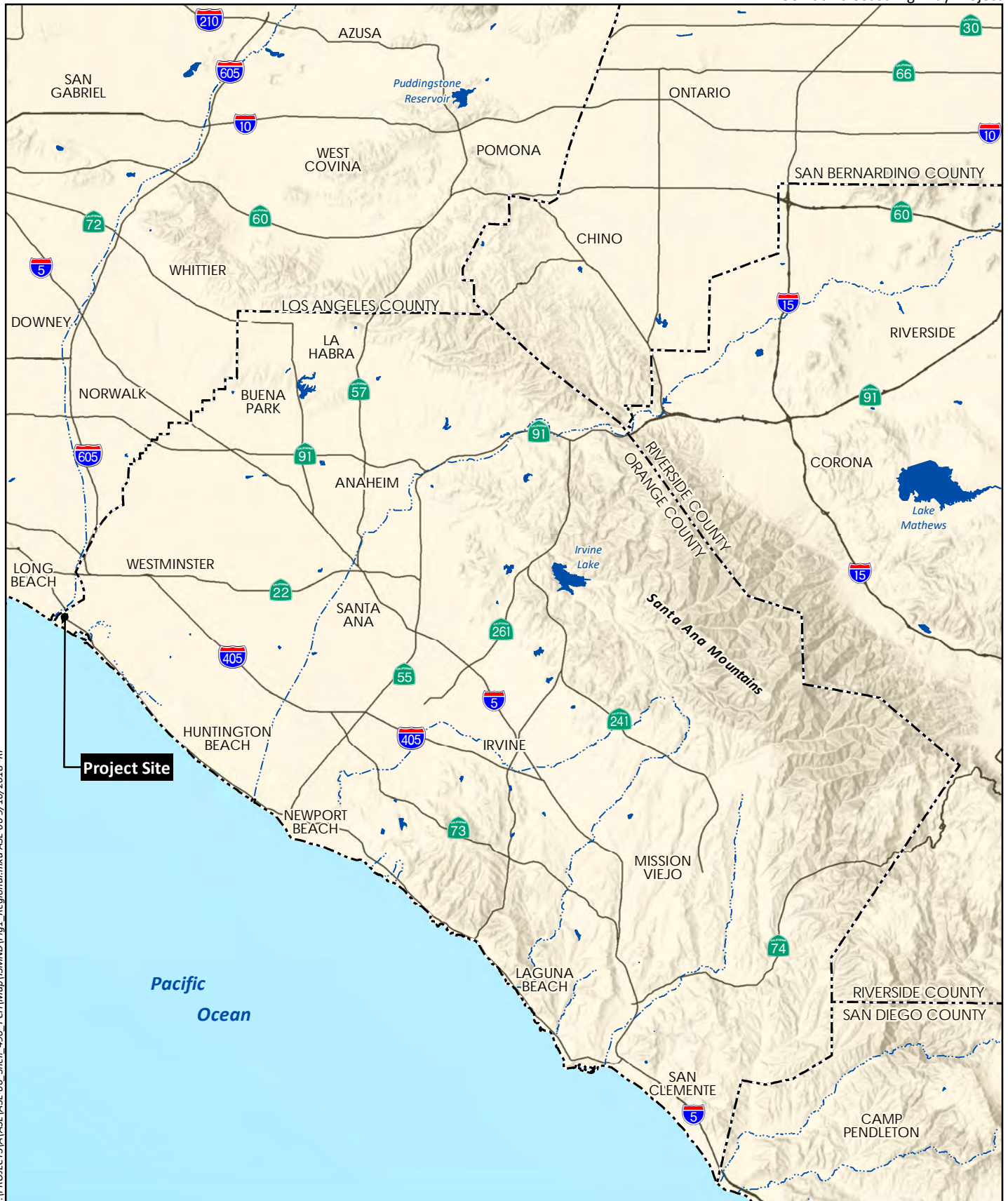
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

State Water Resources Control Board (SWRCB)

- National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit).

California Department of Industrial Relations

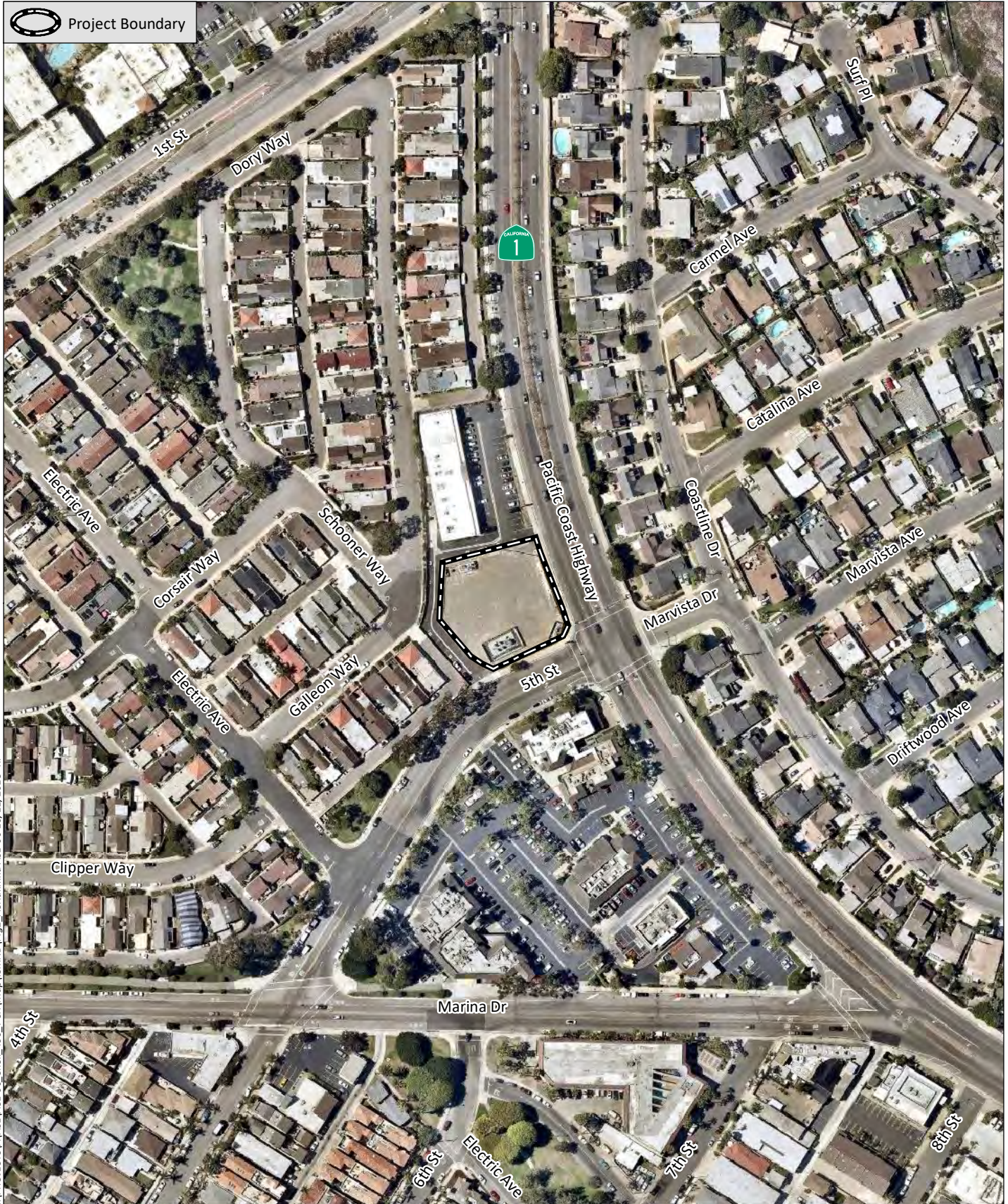
- Construction Activity Permit



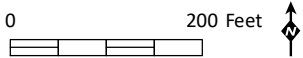
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Source: Base Map Layers (Esri, 2013)

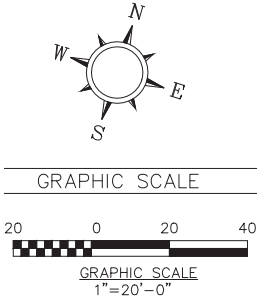
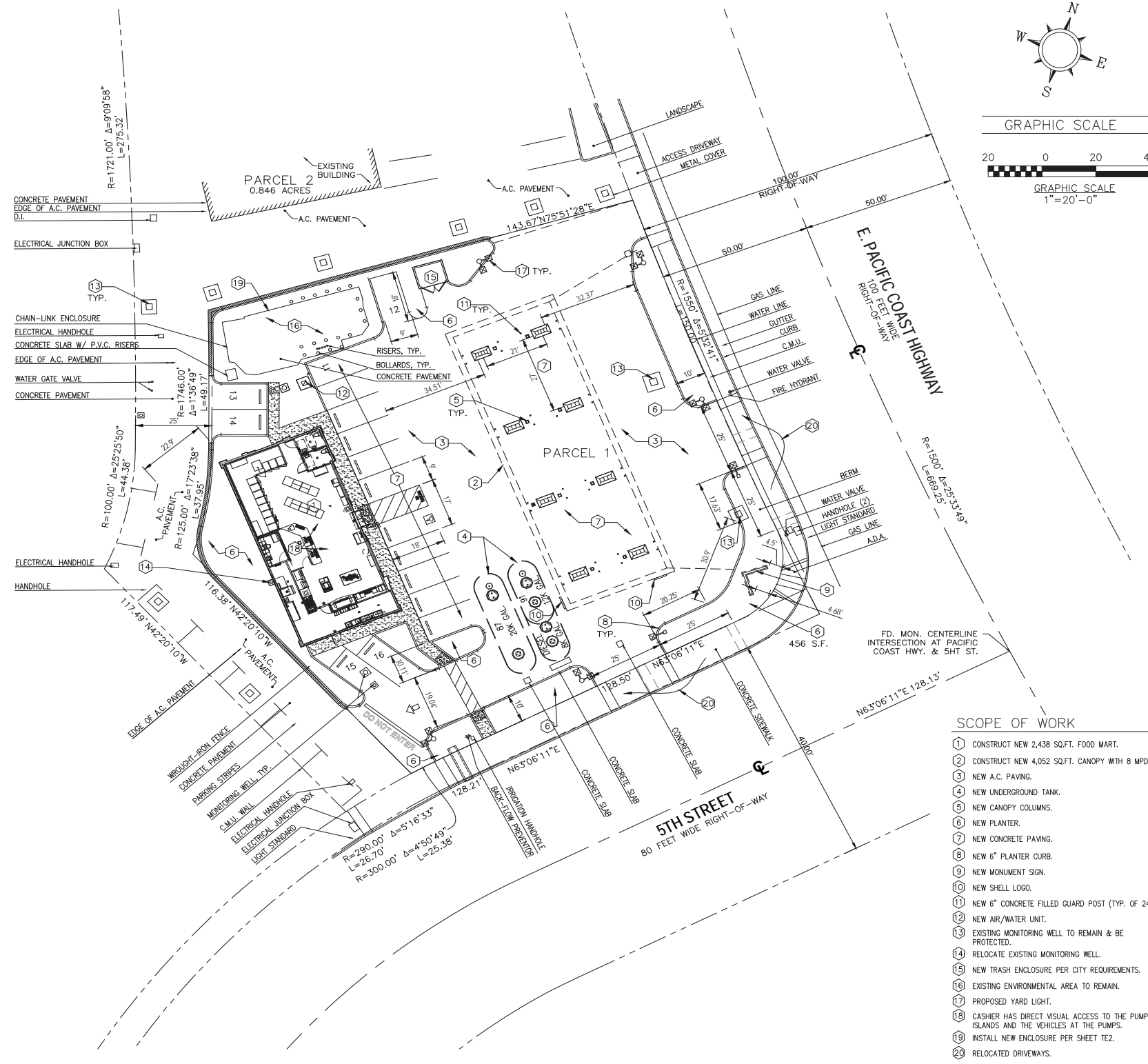
 Project Boundary



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Source: Aerial (Nearmap, 2018)

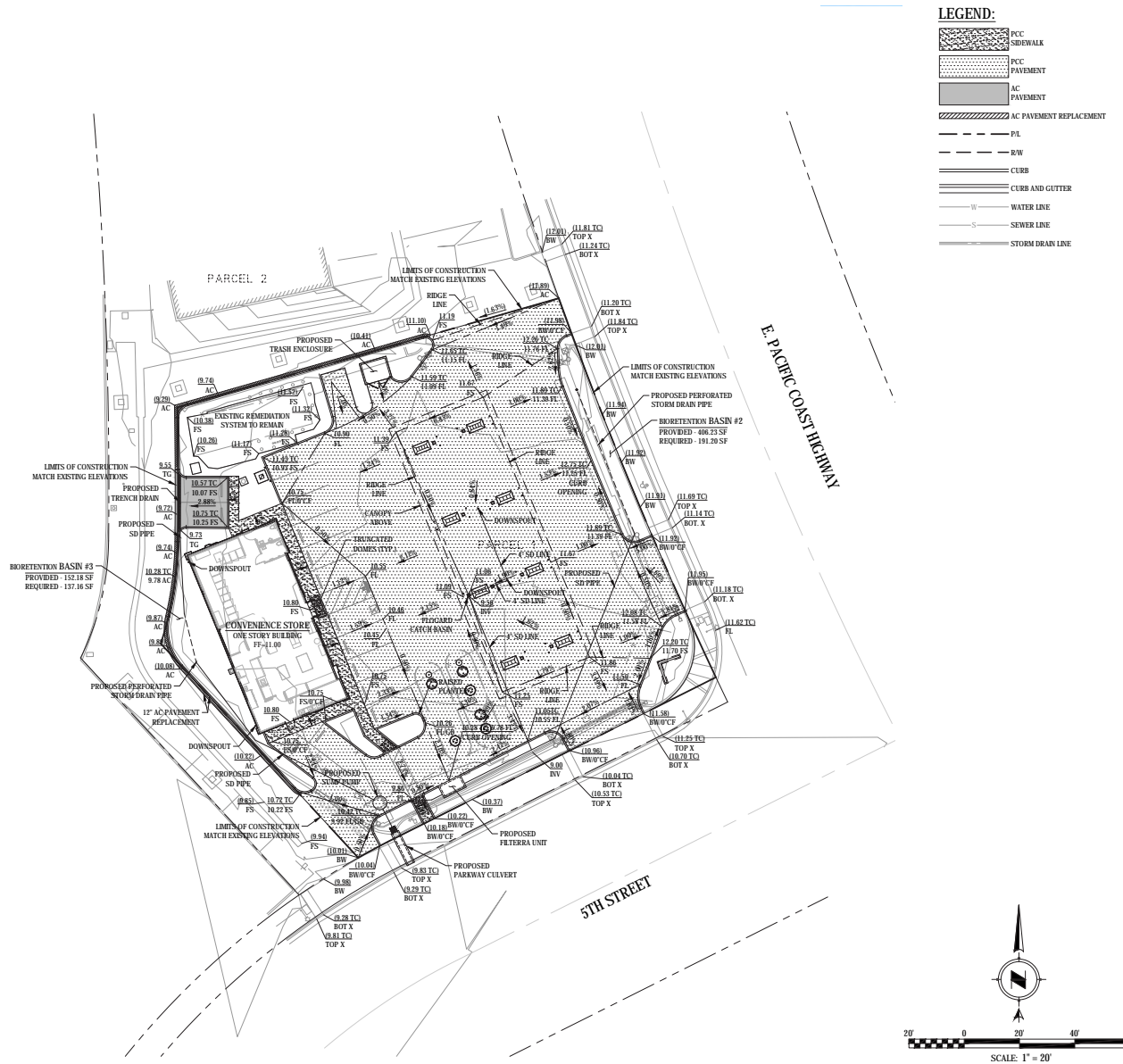


- SCOPE OF WORK**
- ① CONSTRUCT NEW 2,438 SQ.FT. FOOD MART.
 - ② CONSTRUCT NEW 4,052 SQ.FT. CANOPY WITH 8 MPDS.
 - ③ NEW A.C. PAVING.
 - ④ NEW UNDERGROUND TANK.
 - ⑤ NEW CANOPY COLUMNS.
 - ⑥ NEW PLANTER.
 - ⑦ NEW CONCRETE PAVING.
 - ⑧ NEW 6" PLANTER CURB.
 - ⑨ NEW MONUMENT SIGN.
 - ⑩ NEW SHELL LOGO.
 - ⑪ NEW 6" CONCRETE FILLED GUARD POST (TYP. OF 24).
 - ⑫ NEW AIR/WATER UNIT.
 - ⑬ EXISTING MONITORING WELL TO REMAIN & BE PROTECTED.
 - ⑭ RELOCATE EXISTING MONITORING WELL.
 - ⑮ NEW TRASH ENCLOSURE PER CITY REQUIREMENTS.
 - ⑯ EXISTING ENVIRONMENTAL AREA TO REMAIN.
 - ⑰ PROPOSED YARD LIGHT.
 - ⑱ CASHIER HAS DIRECT VISUAL ACCESS TO THE PUMP ISLANDS AND THE VEHICLES AT THE PUMPS.
 - ⑲ INSTALL NEW ENCLOSURE PER SHEET TE2.
 - ⑳ RELOCATED DRIVEWAYS.

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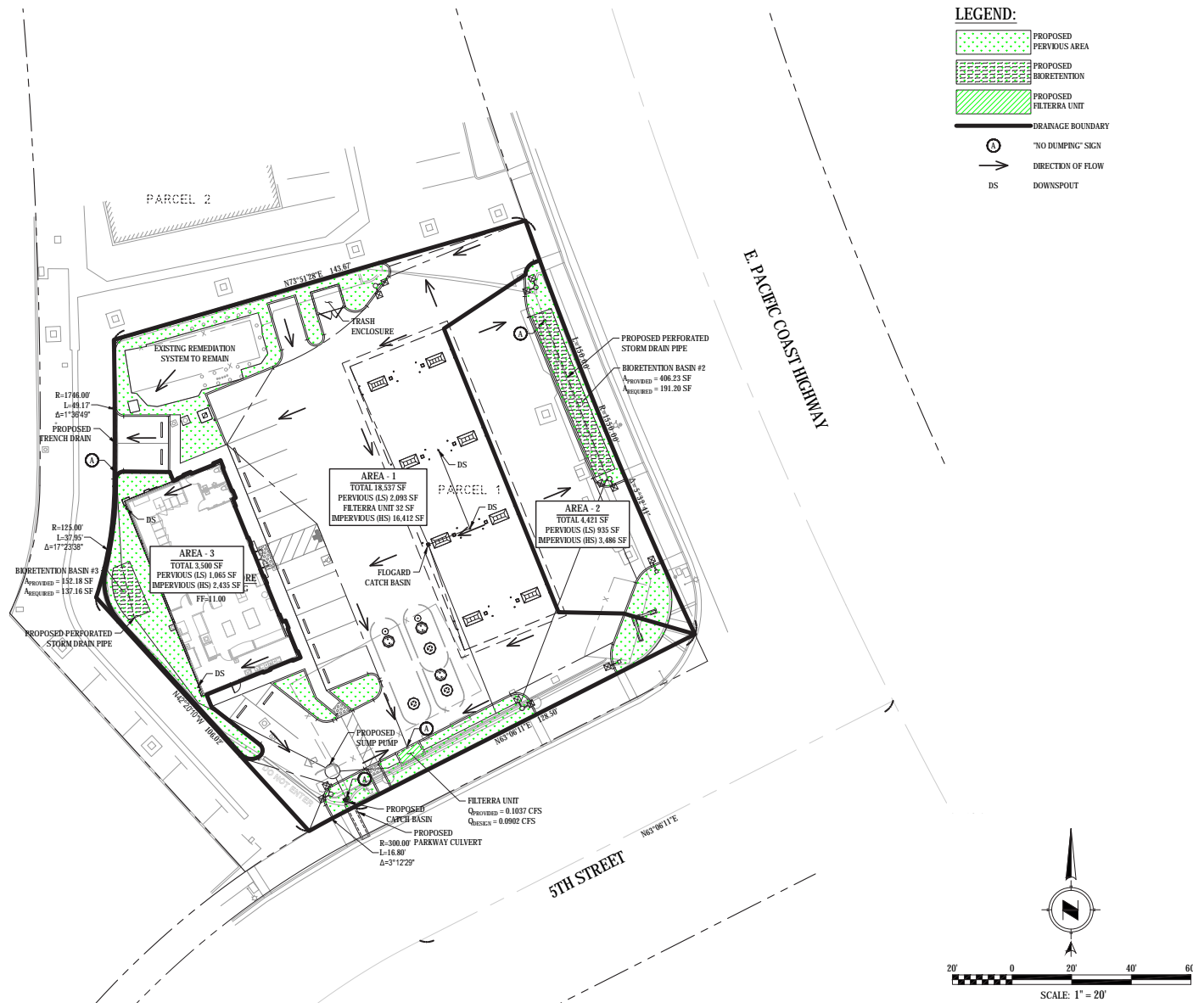
Source: A & S Engineering, 2018

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Source: Waber Consultants, 2018

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Source: Waber Consultants, 2018

I:\PROJECTS\ASE\ASE-06_Shell_490_PCH\Map\ISM\ND\Fig6_LandscapePlan.indd ASE-06_10/10/18-PP



TREE LEGEND

NAME	SIZE	QTY
Arbutus 'Marina' / Marina Strawberry Tree	24" box	4
Brahea edulis / Guadalupe Fan Palm	8' BTN	6
Callistemon viminalis / Weeping Bottlebrush	24" box	4
Cassia leptophylla / Gold Medallion Tree	24" box	3
Angiozanthos 'Big Red' / Red Kangaroo Paw	1 Gal	47
Nandina domestica 'Gulfstream' / Heavenly Bamboo	5 Gal	65
Rhamnus californica 'Eye Case' / Coffeeferry	5 Gal	6
Existing Environmental Area	1 Gal	24" O.C.
Dianella 'Cassa Blue' / Cassa Blue Flax Lily	1 Gal	48" O.C.
Lantana 'Gold Rush' / Yellow Trailing Lantana	1 Gal	48" O.C.

NOTES:
 1. Irrigation will be provided to all areas.
 2. All irrigation will be low precipitation drip.

Water Efficient Landscape Worksheet

Site Information:
 Project Name: 490 Pacific Coast Highway
 Project Location: 490 Pacific Coast Highway, San Diego, CA 92102
 Site Type: Commercial Allowed ETAP: 0.35
 Annual City Requirement: 0.25

Planting	Plant Factor (PF)	Irrigation Method	Efficiency	ETAP (PF) x (Efficiency)	Water Use (Gals/Day)	ETAP Allowance (Gals/Day)	Excess/Deficit (Gals/Day)
1	0.5	Other	0.81	0.2	1,011	300	12,000
2	0.5	Other	0.81	0.2	891	300	4,111
3	0.5	Other	0.81	0.2	1,500	300	1,200
4	0.5	Other	0.81	0.2	320	60	1,200
5	0.5	Other	0.81	0.2	1,000	300	700
6	0.5	Other	0.81	0.2	1,000	300	700
7	0.5	Other	0.81	0.2	1,000	300	700
8	0.5	Other	0.81	0.2	1,000	300	700
9	0.5	Other	0.81	0.2	1,000	300	700
10	0.5	Other	0.81	0.2	1,000	300	700
11	0.5	Other	0.81	0.2	1,000	300	700
TOTAL					3,380	1,800	1,580

Soil Landscape Area

12	1	0	0	0	0	0	0
13	1	0	0	0	0	0	0
14	1	0	0	0	0	0	0
TOTAL	4	0	0	0	0	0	0

Minimum Allowed Water Allowance (MAW) = 12,000
Minimum Allowed Water Allowance (MAWA) = 12,000

ETAP Calculations

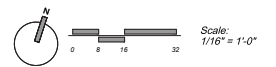
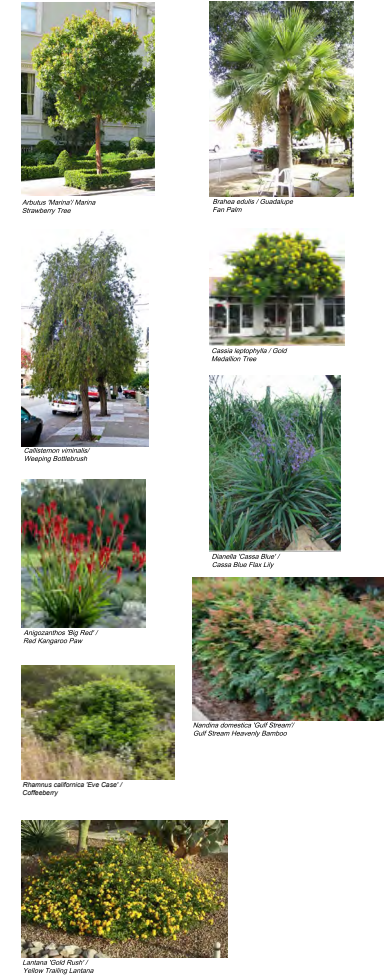
Regular Landscape Area	1,830
Total ETAP Allowance	1,800
Average ETAP	0.31

Soil Landscape Area

Total Area	1,830
Soil Area	1,800
Soil Factor	0.31

Notes:
 * Adjusted from California Code of Regulations Title 25, Part 2, Chapter 2.2. Insert three (3) zeros after the decimal.

CONCEPTUAL PLANT PALETTE



Source: Waber Consultants, 2018

California Board of Equalization

- Underground Storage Tank Registration

Orange County Health Care Agency (OCHCA) Environmental Health Department

- Permit to Operate
- Underground Storage Tank Monitoring Plan
- Underground Storage Tank Leak Response Plan
- California Environmental Reporting System

South Coast Air Quality Management District (SCAQMD)

- Authority to Construct
- Permit to Operate

11. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The City is currently in the process of tribal outreach efforts, and formal consultation will be conducted with any tribes requesting it pursuant to Public Resources Code section 21080.3.1. As such, any tribal input regarding the Project and associated impacts to cultural and Tribal Cultural Resources will be incorporated in the Final CEQA document, as applicable.

1.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that may require mitigation to reduce the impact from “Potentially Significant Impact” to “Less than Significant” as indicated by the checklist on the following pages.

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

1.3 DETERMINATION

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a “potential 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.
<input type="checkbox"/>	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 ENVIRONMENTAL IMPACT REPORT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

For

1.4 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 will 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. “Less Than Significant with Mitigation” 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,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program environmental impact report (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 identify 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,” 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. 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.

2.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

I. AESTHETICS

AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

No Impact. The City General Plan does not designate any locations within the city as a scenic vista. The General Plan does identify “view parks” as smaller passive parks designed to take advantage of a significant view, such as those located on coastal bluffs that focus upon ocean or bay views. The General Plan does not identify what specific parks these might be. The nearest parks to the project are Marina Community Park (approximately 0.2 mile to the east) and Zoeter Field (approximately 0.3 mile to the south). These parks are closer to the ocean than the project, and development of the project would not affect views from these parks. In addition, due to the relatively level terrain around the project site, the project site and surrounding area (see Figure 7, *Site Photographs*, for general views of the project site) does not have views of the ocean, San Gabriel River, or Alamitos Bay, and development of the project site would not shield views from users of Pacific Coast Highway or other nearby roadways of the ocean. Therefore, no impacts to a scenic vista would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. The project site is located along State Route 1, also known as the Pacific Coast Highway, which is designated as an eligible state scenic highway by Caltrans (Caltrans 2011). No portion of the Pacific Coast Highway is officially designated as a state scenic highway by Caltrans in Orange County (Caltrans 2011). However, the County of Orange General Plan Transportation Element contains a Scenic Highway Plan (County of Orange 2012), which identifies the Pacific Coast Highway as a “Viewscape Corridor.” A Viewscape Corridor, as defined by the County, is a route that traverses a corridor within which unique or unusual scenic resources and aesthetic values are found. This designation is intended to minimize the impact of development upon the scenic resources along the



Looking South from Western Project Edge



Looking East from Western Project Edge



Looking North from Western Project Edge

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Source: HELIX, 2018

route; however, the County of Orange General Plan encourages new development to be consistent with surrounding land uses. The proposed project is located on the site of a former gas station and would be consistent with the surrounding commercial land uses (see Figure 7). Therefore, a less than significant impact to a scenic highway would occur.

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

Less Than Significant Impact. The proposed project involves the development of a gas station on an existing lot, covered with gravel and environmental remediation equipment, in an urban area (see Figure 7). The previous use on site was also a gas station, which had been in operation for decades until May 2011. The stretch of Pacific Coast Highway that the project is on is highly developed, with a mixture of commercial uses to the north and south and residences across Pacific Coast Highway to the east. The area does not contain parks or other aesthetic resources, as the area is a developed commercial and residential district based around a major thoroughfare (Pacific Coast Highway), and the project is located inland from both the ocean and San Gabriel River (see Figure 2 for an aerial perspective). In addition, trees would be placed to provide shielding between the convenience store and the adjacent residences to the west (see Figure 6). Given the urbanized, developed nature of the area, the lack of visual quality of the current site and area, and the previous use of the site as a gas station, the project would be consistent with the surrounding land uses and visual character. In addition, the project would be consistent with the applicable development standards (with approval of the requested variance) and as such the project would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, implementation of the proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings.

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

Less Than Significant Impact. The proposed project would include exterior lighting for the fuel canopy station, parking lot, and convenience store. Due to the use of the site as a gas station, it is anticipated lighting would be used 24 hours a day. Per Section 11.4.05.055 of the City Municipal Code, for extended hour businesses, on-site screening would be installed and maintained to minimize light and glare on adjoining residential properties and dwelling units (City 2018a). In addition, per Section 11.4.10.020.A, where the light source is visible from outside the property boundary, shielding would be required to reduce glare to the greatest degree practicable to prevent light trespass onto an adjacent private property (City 2018a). In addition, the nearby lighting environment would have lighting sources in operation for 24 hours a day given the main thoroughfare character of Pacific Coast Highway, including freestanding streetlights, light fixtures on buildings, traffic signals, and vehicle headlights. Therefore, with compliance with City standards and coherence with surrounding lighting, impacts would be less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

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

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

No Impact. According to mapping available from the California Department of Conservation Important Farmland Finder (California Department of Conservation 2018) the project site is mapped within an area defined as “Urban and Built-Up Land,” and does not support agricultural uses. The project site does not contain lands mapped by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation 2018). Therefore, no impacts would occur.

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

No Impact. The proposed project is not located in area that is under Williamson Act contract (County of Orange 2012). According to the City General Plan, the project site has a land use designation of General Commercial (CG) and does not support agricultural uses; therefore, no impacts would occur.

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

No Impact. The project area is not zoned as forest land or timberland, and no related impacts would occur.

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

No Impact. The proposed project is not within or near forest land. No trees are located on site. Accordingly, project construction and operation would not convert forest land to non-forest use, and no impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The project site does not support agricultural or forestry uses, and implementation of the proposed project would not involve changes in the existing environment that would result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, no impacts would occur.

III. AIR QUALITY

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

Environmental Setting

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

The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. High pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located, are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, and resulting in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants

released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog. The basin-wide occurrence of inversions at 3,500 feet above mean sea level or less averages 191 days per year (SCAQMD 1993).

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for seven air pollution constituents. As permitted by the Clean Air Act, California has adopted more stringent air emissions standards, the California Ambient Air Quality Standards (CAAQS), and expanded the number of regulated air constituents.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once.

The project is located in Orange County. Air quality in Orange County is regulated by the SCAQMD. As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), County transportation commissions, and local governments and cooperates actively with all federal and state government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMP).

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

The AQMP, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to CARB, which develops the California State Implementation Plan (SIP). The SIP relies on the same information from SCAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The current federal and state attainment status for the SCAB is presented in Table 1, *South Coast Air Basin Attainment Status*.

Table 1
SOUTH COAST AIR BASIN ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
O ₃ (1-hour)	(No federal standard)	Nonattainment
O ₃ (8-hour)	Extreme Nonattainment	Nonattainment
CO	Attainment (Maintenance)	Attainment
PM ₁₀	Attainment (Maintenance)	Nonattainment
PM _{2.5}	Serious Nonattainment	Nonattainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Attainment
Visibility	(No federal standard)	Attainment

Source: SCAQMD 2016a

With respect to federal air quality standards, the EPA classifies the SCAB as in attainment for respirable particulate matter (PM₁₀), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead, and in nonattainment for 8-hour ozone (O₃) and fine particulate matter (PM_{2.5}). Under state designation, the SCAB is currently in attainment for CO, NO₂, SO₂, and lead; and in nonattainment for 1-hour and 8-hour ozone, PM₁₀, and PM_{2.5}.

Air Quality Monitoring

The SCAQMD maintains monitoring stations to measure ambient concentrations of pollutants in the SCAB. The nearest monitoring station, approximately five miles northwest of the project site, is the South Long Beach monitoring station which monitors PM₁₀ and PM_{2.5}. The Long Beach Hudson (2425 Webster Street) monitoring station, approximately 7.5 miles northwest of the project site, was used for ozone and NO₂. Table 2, *Air Quality Monitoring Data*, presents a summary of the ambient pollutant concentrations monitored at the air quality monitoring stations during the last three years (2015 through 2017) for which the SCAQMD has reported data.

Table 2
AIR QUALITY MONITORING DATA

Pollutant Standards	2015	2016	2017
Ozone (O₃) – Long Beach Hudson			
Maximum concentration 1-hour period (ppm)	0.087	0.079	0.082
Maximum concentration 8-hour period (ppm)	0.066	0.059	0.068
Days above 1-hour state standard (>0.09 ppm)	0	0	0
Days above 8-hour state/federal standard (>0.070 ppm)	0	0	0
Nitrogen Dioxide (NO₂) – Long Beach Hudson			
Maximum 1-hour concentration (ppm)	0.1018	0.0756	0.0895
Days above state 1-hour standard (0.18 ppm)	0	0	0
Days above federal 1-hour standard (0.100 ppm)	1	0	0
Suspended Particulates (PM₁₀) – South Long Beach			
Maximum 24-hour concentration (µg/m ³)	62.0	56.0	70.9
Estimated days above state standard (>50 µg/m ³)	12.7	*	*
Estimated days above federal standard (>150 µg/m ³)	0	0	*
Suspended Particulates (PM_{2.5}) – South Long Beach			
Maximum 24-hour concentration (µg/m ³)	48.3	28.9	56.3
Days above federal standard (>35 µg/m ³)	4	0	5

Source: CARB 2018a

ppm = parts per million

* insufficient data available to determine the value

The 1- and 8-hour ozone standards were not exceeded in the sample years. It was estimated that the federal NO₂ standard was exceeded once in 2015. The state PM₁₀ standard was exceeded 12.7 times in 2015 and the federal PM₁₀ standard was not exceeded in the three sample years. Data for PM_{2.5} showed several exceedances in 2015 and 2017 and no exceedances in 2016.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005, OEHHA 2015).

Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children and infants are considered more susceptible to health effects of air pollution due to their immature immune systems, developing organs, and higher breathing rates. As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities.

The closest existing sensitive receptor to the project site is a single-family residence approximately 50 feet southwest. Additional single-family residences are located across Galleon Way to the west and

across the Pacific Coast Highway to the east and southeast. The closest school is the J.H. McGaugh Elementary School approximately 3,300 feet (0.63 mile) to the east.

Evaluation of Air Quality

While the final determination of whether or not a project has a significant effect is within the purview of the lead agency pursuant to CEQA Guidelines Section 15064(b), SCAQMD recommends that its air pollution thresholds be used to determine the significance of project emissions. The criteria pollutant thresholds and various assessment recommendations are discussed under the checklist questions below.

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

Less Than Significant Impact. SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, economy, community development, and environment. With regard to air quality planning, SCAG has prepared the RTP/SCS, a long-range transportation plan that uses growth forecasts to project trends out over a 20-year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on projections originating with County and City General Plans.¹

The two principal criteria for determining conformance to the AQMP are:

1. Whether the project would result in an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards and
2. Whether the project would exceed the assumptions in the AQMP.

With respect to the first criterion, the analyses presented below demonstrate that the project would not generate short-term or long-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

With respect to the second criterion, the proposed project would be consistent with the City of Seal Beach General Plan zoning designation of General Commercial with a conditional use permit. Additionally, the proposed project, a fueling facility and market, would not substantially increase population or employment in the area.

Because the project is consistent with the two principal criteria identified above, pursuant to SCAQMD guidelines, the proposed project is considered consistent with the region's AQMP. As such, proposed project-related emissions are accounted for in the AQMP, which is crafted to bring the basin into

¹ SCAG serves as the federally designated Metropolitan Planning Organization (MPO) of six of the ten counties in Southern California, serving Imperial County, Los Angeles County, Orange County, Riverside County, San Bernardino County, and Ventura County.

attainment for all criteria pollutants. Accordingly, the proposed project would be consistent with the projections in the AQMP, thus resulting in a less than significant impact.

- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. In accordance with CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. If a project is not consistent with the AQMP, which is intended to bring the SCAB into attainment for all criteria pollutants, that project can be considered cumulatively considerable. Additionally, if the mass regional emissions calculated for a project exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable state and national ambient air quality standards, that project can be considered cumulatively considerable. As demonstrated above, the project would be consistent with the AQMP. The analysis that follows analyzes the project's emissions in comparison with the SCAQMD daily significance thresholds.

Construction Emissions

The project's construction emissions were estimated using the California Emissions Estimator Model (CalEEMod). CalEEMod contains OFFROAD2011 emission factors and EMFAC2014 emission factors from CARB's models for off-road equipment and on-road vehicles, respectively. Project-specific input was based on general information provided in the Project Description, assumptions provided by A & S Engineering, and default model settings to estimate reasonably conservative conditions.

Project construction is assumed to begin in June 2020 and be completed by December 2020. Construction activities include site preparation, grading, construction of structures, and paving and coating of the site. During site preparation, approximately 80 cubic yards of debris and cleared vegetation would be exported. Overall construction is expected to last approximately six months.

Construction design features include: fugitive dust control measures such as the use of an on-site water truck to wet down active grading areas and roads at least twice daily per SCAQMD Rule 403; providing 12 percent moisture content to unpaved roads; limiting vehicle speeds to 15 miles per hour; and using low VOC paint during architectural coating. Additional details of phasing, selection of construction equipment, and other input parameters, including CalEEMod data, are included in Appendix A.

The results of the calculations for project construction are shown in Table 3, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds.

Table 3
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Phase	Pollutant Emissions (pounds per day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Site Preparation	1	11	5	<0.5	1	<0.5
Grading	1	8	8	<0.5	1	1
Building Construction	1	9	8	<0.5	1	<0.5
Paving	1	7	8	<0.5	1	<0.5
Architectural Coating	3	2	2	<0.5	<0.5	<0.5
Maximum Daily Emissions¹	3	11	8	<0.5	1	1
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Significant Impact?	No	No	No	No	No	No

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

¹ Maximum daily emissions of ROG occur during the architectural coating phase; maximum daily emissions of NO_x and SO₂ occur during site preparation activities; and maximum daily emissions of CO, PM₁₀, and PM_{2.5} occur during grading activities.

Note: Totals may not sum due to rounding.

As shown in Table 3, emissions of all criteria pollutants related to project construction would be below SCAQMD significance thresholds. Therefore, direct impacts from criteria pollutants generated during construction would be less than significant. Nonetheless, to ensure that construction-related air pollutant emission would be minimized, mitigation measure AQ-1 and AQ-2, below, are provided to ensure that impacts would remain less than significant.

Operational Emissions

Operational impacts were estimated using CalEEMod. Operational sources of emissions include area, energy, and transportation sources. Operational emissions from area sources include the use of consumer products, engine emissions from landscape maintenance equipment, and VOC emissions from repainting of buildings. Operational emissions from mobile source emissions are associated with project-related vehicle trip generation and trip length. Project generated trips were estimated by the project specific Traffic Impact Study (TIS; Kimley-Horn and Associates, Inc 2017). CalEEMod default vehicle speeds, trip purpose, and distance were used. Operational emission calculations and model outputs are provided in Appendix A. Table 4, *Maximum Daily Operational Emissions*, presents the summary of operational emissions for the project.

Table 4
MAXIMUM DAILY OPERATIONAL EMISSIONS

Category	Pollutant Emissions (pounds per day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Energy	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mobile	3	8	17	<0.5	3	1
Total Daily Emissions	3	8	17	<0.5	3	1
<i>SCAQMD Thresholds</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Significant Impact?	No	No	No	No	No	No

Source: CalEEMod (output data is provided in Appendix A); Thresholds (SCAQMD 2015)

As shown in Table 4, project emissions of all criteria pollutants during operation would be below the daily thresholds. Therefore, operation of the project would not be considered a significant impact on air quality. Impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Construction Activities

Criteria Pollutants

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's LST method. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Emissions related to off-site delivery, haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. The project site is within Source Receptor Area (SRA) 18, North Coastal Orange County. Sensitive receptors are residences in the immediate vicinity of the project site, to the north, west and east. The project would utilize one grader during site preparation activities and one rubber-tired dozer during grading activities, which would disturb approximately 0.5 acres per 8-hour day during each phase (SCAQMD 2009a).

Therefore, the LSTs being applied to the project are based on SRA 18, receptors located within 25 meters, and a disturbed area not to exceed 1 acre. As shown in Table 5, *Maximum Localized Daily Construction Emissions*, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs. Impacts would be less than significant.

Table 5
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS

Phase	Pollutant Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Site Preparation	8	4	1	<0.5
Grading	8	8	1	1
Building Construction	9	7	1	<0.5
Paving	7	7	<0.5	<0.5
Architectural Coating	2	2	<0.5	<0.5
Maximum Daily Emissions¹	9	8	1	1
<i>SCAQMD LST Thresholds</i>	<i>92</i>	<i>647</i>	<i>4</i>	<i>3</i>
Significant Impact?	No	No	No	No

Source: CalEEMod (output data is provided in Appendix A); Thresholds (SCAQMD 2009b)

¹ Maximum on site daily emissions of NO_x occur during Building activities; maximum on site daily emissions of CO, PM₁₀, and PM_{2.5} occur during Grading activities

Note: Totals may not sum due to rounding

Toxic Air Contaminants

The greatest potential for toxic air contaminant (TAC) emissions during construction would be related to diesel particulate matter associated with heavy equipment operations during earth-moving activities.

The SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities. Construction activities associated with the proposed project would be sporadic, transitory, and short term in nature (i.e., less than six months). The assessment of cancer risk is typically based on a 30-year exposure period. Because exposure to diesel exhaust would be well below the 30-year exposure period, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons. As such, project-related TAC emission impacts during construction would be less than significant.

Operational Activities

CO Hotspots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at Level of Service (LOS) E or F or causes an intersection that would operate at LOS D or better without the project to operate at LOS E or F with the project, a quantitative screening is required.

The project site is located at the intersection of 5th Street and Pacific Coast Highway. The TIS (Kimley-Horn and Associates, Inc 2017) prepared for the project evaluated six intersections and five roadway segments. According to the TIS, all study intersections and roadways would operate at LOS D or better. Although one intersection, Pacific Coast Highway at Marvista Drive/5th Street, would experience a significant impact based on the City of Seal Beach guidelines, it would operate at LOS D and would therefore not have the potential to cause a CO hotspot. Thus, sensitive receptors would not be exposed to project-generated local CO emissions. Impacts would be less than significant.

Toxic Air Contaminants

The project includes a 16-station retail fueling facility that would involve the delivery and dispensing of gasoline. Activities at gasoline dispensing facilities can release TACs into the air, including the organic compounds benzene, toluene, and xylene. Benzene is a potent carcinogen and is one of the highest risk air pollutants regulated by CARB. The only identified pathway of exposure for air quality health risks from benzene is inhalation. Toluene and xylenes are not considered carcinogens, but they can contribute to chronic health conditions.

The new fuel facility would require an authority to construct and a permit to operate from the SCAQMD, which will review the facility design and location for compliance with SCAQMD standards for criteria pollutants and air quality. All tanks and dispensers would be equipped with the latest Phase I and Phase II Enhanced Vapor Recovery (EVR) air pollution control equipment technology per SCAQMD Rule 461. The Phase I EVR equipment controls the vapors in the return path from the tanks back to the tanker truck during offloading filling operations. The Phase II EVR equipment, which also includes “in-station diagnostics,” controls and monitors the vapors in the return path from the vehicles back to the tanks.

While gasoline dispensing facilities account for a small part of total benzene emissions in the state, near-source exposures from large facilities (more than 3.6 million gallons per year throughput) can be significant (CARB 2005). Per the project applicant, a conservative (highest anticipated) estimate of the project’s gasoline throughput would be 6 million gallons per year. Therefore, potential health risks to nearby sensitive receptors from the emission of toxic chemicals during operations at the proposed fueling facility were analyzed in accordance with the SCAQMD’s *Risk Assessment Procedures for Rules*

1401, 1401.1 and 212 (SCAQMD 2017b)), the California Air Pollution Control Officers' (CAPCOA) *Gasoline Service Station Industrywide Risk Assessment Guidelines* (CAPCOA 1997), and the OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015).

According to the SCAQMD (2017) procedures, benzene is the most important substance driving the risk in the gasoline service stations. Therefore, only the localized concentrations of benzene, and the associated increase in cancer risk, were analyzed in the health risk assessment (HRA).

Localized concentrations of benzene were modeled using Lakes AERMOD View version 9.6.1. The Lakes program utilizes the EPA AERMOD gaussian air dispersion model. The emissions of benzene were modeled in accordance with SCAQMD (2017) gasoline dispensing station risk assessment procedure. The locations of all sources of benzene were set at the center of the gas station pump canopy indicated on the project site plan. The modeling inputs and assumptions are included in Appendix B, *HRA Model Assumptions and Results*.

Health risks resulting from localized concentration of benzene were estimated using the CARB Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 18159. For the residential cancer risk, an exposure duration of 30 years was selected in accordance with the OEHHA (2015) guidelines. The model conservatively assumes that residents would be standing and breathing at the point of the property line closest to the gas station every day between 17 to 21 hours per day (depending on the age group) for 30 years. For off-site worker cancer risk, an exposure duration of 25 years was selected with an assumption of 8 hours per day of exposure, in accordance with the OEHHA guidelines. The resulting estimated health risk from exposure to benzene would be an increased cancer risk of 6.0 in 1 million for the maximum exposed individual resident, and 0.6 in 1 million for the maximum exposed individual off-site worker. This increased risk is less than the SCAQMD (2015) threshold of 10 in 1 million. As described above, this is a highly conservative value due to the modeling assumption of a resident standing at the property line for 17 to 21 hours per day for 30 years, and because a high fuel throughput was assumed for the project compared to similar gas stations. The modeling input files, output files, and the cancer risk isopleths are included in Appendix B, *HRA Model Assumptions and Results*.

Cancer burden is an estimate of the number of cancer cases expected from a 70-year exposure to project operational TAC emissions (OEHHA 2015). The cancer burden is calculated by multiplying the number of people exposed by the cancer risk of the maximum individual exposed resident (from a 70-year exposure), which is 7.1×10^{-6} . For this project, the number of people exposed would be the number of people living in the residences within the 1 in 1 million increased cancer risk isopleth (risk contour). There are 84 single-family residences within or touching this isopleth. While the number of people living at these residences is unknown, even assuming 10 people per household, the cancer burden would be 0.006, less than SCAQMD (2015) threshold of 0.5. Therefore, the impact of TAC emissions resulting from long-term operation of the gasoline dispensing station would be less than significant, and no mitigation is required.

While there would be other toxic substances, such as cleaning agents in use on site, compliance with State and federal handling regulations would ensure that emissions remain below the level of significance. The use of such substances such as cleaning agents is regulated by the 1990 Federal Clean Air Act Amendments as well as California-adopted regulations for the chemical composition of consumer products. As such, project-related TAC emission impacts during operation would be less than significant and no mitigation is required.

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

Less Than Significant Impact. Although some components of asphalt and diesel emissions are considered TACs, construction activities would not generate significant odor impacts due to the short-term duration of exposure. The CARB's Air Quality and Land Use Handbook includes a list of the most common sources of odor complaints received by local air districts. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The proposed project would not include these uses. The fueling station would emit odors during operation in the form of diesel exhaust from vehicles and operation of the fueling pumps. The increase in odor emission, however, would be minimal as vehicle exhaust is already prevalent in the area due to its proximity to Pacific Coast Highway and other major roadways. Additionally, solid waste generated by the proposed on-site uses would be collected by a contracted waste hauler, ensuring that any odors resulting from on-site waste would be managed and collected in a manner to prevent the proliferation of odors. Operational odor impacts would be less than significant.

Mitigation Measures

Although project-related emissions would be well below SCAQMD thresholds, and thus project-related impacts would be less than significant, the project would implement the following construction measures to ensure compliance with SCAQMD regulations pertaining to controlling fugitive dust during construction activities.

- AQ-1** During site preparation and grading construction phases, all haul trucks transporting soil to or from the project site shall be covered to prevent fugitive dust emissions.
- AQ-2** During project construction, the following measures shall be implemented to the satisfaction of the City of Seal Beach. Construction equipment maintenance records and data sheets of equipment design specifications (including the emission control tier of the equipment) shall be kept on-site during construction and subject to inspection by the City.
- a) Construction equipment shall be properly maintained according to manufacturer specifications.
 - b) All contractors shall turn off all construction equipment and delivery vehicles when not in use, or limit on-site idling for no more than 5 minutes in any one hour.
 - c) On-site electrical hook ups to a power grid shall be provided for electric construction tools, including saws, drills, and compressors, where feasible, to reduce the need for diesel-powered electric generators.
 - d) The project shall demonstrate compliance with South Coast Air Quality Management District (SCAQMD) Rule 403 concerning fugitive dust and provide appropriate documentation to the City.
 - e) Traffic speeds on all unpaved portions of the project site shall be reduced to 15 miles per hour or less.
 - f) Sweep streets at the end of the day if visible soil is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).
 - g) Use street sweepers that comply with SCAQMD Rules 1186 and 1186.1.

IV. BIOLOGICAL RESOURCES

BIOLOGICAL RESOURCES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?

No Impact. The project site is located on a previously developed vacant lot, now covered with gravel and environmental remediation equipment, surrounded by urban development (as shown on Figure 2). The site is entirely covered with gravel and there are no vegetated areas onsite. According to the City of General Plan Open Space/Recreation/Conservation Element, sensitive natural communities are primarily located in open space and undeveloped areas of the City, and no special status species would be anticipated on site (City 2003). The proposed project would, therefore, not have a substantial adverse effect on any species identified as a candidate, sensitive, or special-status species in local or regional plans 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 or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. The project site is located on a previously developed vacant lot surrounded by urban development. The site is entirely covered with gravel, and according to the City General Plan Open Space/Recreation/Conservation Element, no riparian habitat or sensitive natural communities are present (City 2003). The proposed project would, therefore, not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in any local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, no impacts to riparian habitat or other sensitive natural communities would occur.

- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site is located on a previously developed vacant lot surrounded by urban development. The site is entirely covered with gravel, and according to the City General Plan Open Space/Recreation/Conservation Element, no wetlands are present (City 2003). Therefore, no impacts to wetlands would occur.

- 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?

No Impact. The project site is located on a previously developed vacant lot surrounded by urban development. According to the City General Plan Open Space/Recreation/Conservation Element, it does not serve as a wildlife corridor or nursery site (City 2003). Therefore, no impacts would occur.

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

No Impact. The project site does not contain sensitive or protected biological resources. Therefore, the project would not conflict with any policies or ordinances pertaining to biological resources.

- 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?

No Impact. The proposed project site and immediate surrounding areas are not part of any habitat conservation plan or natural community conservation plan. The Seal Beach National Wildlife Refuge is located approximately 1.2 miles to the east and the refuge's Comprehensive Conservation Plan (CCP) is implemented to preserve biological resources within the refuge (U.S. Fish and Wildlife Service 2012). The proposed project would not impact the refuge, and no impacts would occur.

V. CULTURAL RESOURCES

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

A Cultural Resources Survey was prepared for the project (HELIX Environmental Planning, Inc. [HELIX] 2018; Appendix C). The results of the survey are presented below.

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

No Impact. As part of the Cultural Resources Survey, HELIX conducted a one-mile radius records search at the South Central Coastal Information Center (SCCIC) on August 29, 2018 (HELIX 2018). SCCIC is the California Historical Resources Information System (CHRIS) repository for Orange and Los Angeles Counties. The records search included archaeological and historical resources. One historic resource is located within a quarter mile of the project site, the historic Seal Beach Red Car (P-30-162293), a 1925 service car for the Pacific Electric Railway that shutdown in the 1950s, located approximately 800 feet to the south. As no resources are recorded within or adjacent to the project site, and as the project would have no adverse effects on the Seal Beach Red Car, no impacts to historical resources would occur.

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

Less Than Significant with Mitigation. The Cultural Resources Survey included a records search and literature review, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey to determine the cultural resource sensitivity of the project area (HELIX 2018).

The records search conducted at the South-Central Coastal Information Center (SCCIC) on August 29, 2018 indicated that 65 previous cultural resources studies have been conducted within a mile of the project area. Two of these are mapped as including the project site, but one did not include field survey, and it is unclear as to whether the other surveyed the project site, which was already developed by that time. The records search results also indicated that a total of 21 cultural resources have been previously recorded within a mile of the project area, two of which (CA-ORA-001473 and P-30-162293) are located within a quarter mile of the project site. These consist of a prehistoric shell deposit (CA-ORA-001473) and the historic Seal Beach Red Car, No. 1734 (P-30-162293), discussed under Item V.a. Although only one prehistoric resource is recorded within a quarter mile, the general area is rich in terms of cultural resources -- a series of archaeological sites on the nearby Hellman Ranch has been identified as significant, sometimes called Puvungna East, and a Gabrielino village was identified in the area of the

historic Anaheim Landing. This village site would have encompassed the Hellman Ranch sites as well as the project area. In addition, the Native American Heritage Commission noted that cultural resources on the Sacred Land File are known in the area.

A pedestrian survey of the project site was conducted in September 2018 by the HELIX field director and a tribal monitor from the Gabrieleño Band of Mission Indians, Kizh Nation. The ground surface of the survey area was covered with pea gravel and rock, obscuring the ground surface, but marine shell was found in soils that might have been brought to the surface during fencing or post placement; these soils did not appear to be fill. As previously noted, the project area was formerly developed as a gas station, including underground tanks, and large amounts of soil were removed due to soil contamination (further discussed under Section VIII). Therefore, the project site has been the subject of a great deal of past subsurface disturbance, and intact cultural deposits are considered unlikely.

Although the potential for intact subsurface deposits within the project site is low given the degree of past disturbance, the general area is culturally sensitive, with habitation sites and human burials known in the vicinity. Therefore, there is potential for project construction to encounter cultural resources, and impacts are assessed as potentially significant. Mitigation measures CUL-1 through CUL-4 would be implemented to reduce impacts to a less-than-significant level.

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

Less Than Significant with Mitigation. As discussed in Item V.b, the presence of cultural resources, including human remains, is not anticipated due to the disturbed nature of the project site, but the potential to encounter unknown human remains during ground-disturbing activities exists. Therefore, impacts would be potentially significant. Mitigation measure CUL-4 would be implemented to reduce impacts to a less-than-significant level.

Mitigation Measures

CUL-1 Pre-Construction Worker Environmental Awareness Program. Prior to the commencement of any ground-disturbing activities for the project, a qualified archaeologist and Native American monitors from both Gabrielino (Gabrieleno) and Juaneño tribes shall conduct a Worker Environmental Awareness Program (WEAP) to present to City staff, the grading contractor, and any relevant subcontractors information regarding the cultural and archaeological sensitivity of the project area, as well as the requirements of the monitoring program. The WEAP can be presented at a pre-grading meeting or separately. If the WEAP is held separately, the qualified archaeologist and Native American monitors shall be present for a pre-grading meeting with the grading contractor to discuss project schedule, safety requirements, and monitoring protocols.

CUL-2 Construction Monitoring for Cultural Resources Ground-disturbing activities during construction shall be monitored by a qualified archaeologist and Native American monitors from both Gabrielino (Gabrieleno) and Juaneño tribes. These activities include removal of existing gravel and other surface materials, grading, trenching, excavation, etc. If cultural material is encountered during monitoring, both the archaeologist and the Native American monitors would have the authority to temporarily halt or redirect activity in the area of the find while the cultural material is documented and a decision is made regarding the significance/eligibility of the find and whether additional excavation, analysis, or other mitigation measures are required. Determinations of significance will be made in consultation among the archaeological Principal Investigator, the Monitor Tribes, and City staff. If it is determined that the potential for

subsurface cultural material is too low to warrant fulltime monitoring, monitoring can be reduced to part-time or spot-checking, or can be discontinued. Such a decision would be made in consultation among the Native American monitors/Monitoring Tribes, the Principal Investigator, and City staff.

CUL-3 Monitoring Program Report. Following the conclusion of monitoring, a report shall be prepared documenting the methods and results of the monitoring program and submitted to the City and the SCCIC.

CUL-4 Procedure for Encountering Human Remains. In the event that human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code Section 7050.5 and Public Resources Code Section 5097.98 shall be followed.

VI. ENERGY

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

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

Less Than Significant Impact.

Construction-Related Energy Consumption

Energy used for construction would primarily consist of fuels in the form of diesel and gasoline. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction and would include the transportation of construction materials and construction worker commutes. Heavy-duty construction equipment associated with construction activities, haul trucks involved in the removal of construction and demolition materials, and smaller support equipment (such as lighting, air compressors, and pumps) would consume petroleum-based fuel. Construction workers would travel to and from the project site throughout the duration of construction, presumably in gasoline-powered vehicles.

Calculations of energy use for the project are based on the same assumptions used to calculate air quality criteria pollutant and GHG emissions. Table 6, *Construction Energy Use*, includes an estimation of energy usage from construction equipment. See Appendix A for additional construction energy usage data.

Table 6
CONSTRUCTION ENERGY USE

Phase	Total kBtu
Off-Road Construction Energy Use	
Grading	7,575
Site Preparation	12,919
Building Construction	912,458
Paving	34,994
Architectural Coating	4,927
Subtotal	972,872
On-Road Construction Energy Use	
Worker Vehicles and Haul Trucks	45,966
Construction Total	1,018,838

Source: HELIX 2019d (construction energy usage data provided in Appendix A)
kBtu = kilo-British thermal unit

While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. The petroleum consumed during project construction would also be typical of similar construction projects and would not require the use of new petroleum resources beyond what are typically consumed in California. Based on these considerations, construction of the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

Long-Term Operational Energy Consumption

The project will be served by Southern California Edison. No extensions of energy infrastructure and no new energy supplies beyond existing facilities are required to support the project. The project is an infill location in an area that is mostly developed. Operational energy consumption includes natural gas used for space and water heating. Electricity may also be used for space and water heating, well as lighting and space cooling. Vehicles traveling to and from the site will use transportation fuels such as gasoline and diesel. Energy use (in kilo-British thermal units [kBtu]) associated with gasoline, diesel, natural gas, and electricity usage for operation of the project is provided in Table 7, *Operational Energy Use*. See Appendix A for operational energy usage data.

Table 7
OPERATIONAL ENERGY USE

Energy Type	Quantity	kBtu
Gasoline (gallons)	52,540	6,514,987
Diesel (gallons)	8,455	1,175,293
Natural Gas (kBtu)	4,800	4,800
Electricity (KWh)	32,670	111,474
Total		7,806,554

Source: HELIX 2019d (operational energy usage data provided in Appendix A)
kBtu = kilo-British thermal unit; KWh = kilowatt-hour

The project would be required to meet the mandatory energy standards of CALGreen and the California Energy Code (Title 24, Part 6 of the CCR) and would benefit from the efficiencies associated with these

regulations as they relate to ventilating, and air conditioning mechanical systems, and lighting. Compliance with California energy efficiency regulations on new construction ensures that the buildings would not result in wasteful, inefficient, or unnecessary consumption of energy sources.

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

No Impact. The project would be built and operated in accordance with existing, applicable regulations, which include, but are not limited to, the California Green Building Standards Code and CARB regulations. Construction equipment and operation equipment would be maintained to allow for continuous energy-efficient operations. The project would therefore not conflict with any state or local plan for energy efficiency, and no impacts would occur.

VII. GEOLOGY AND SOILS

GEOLOGY AND SOILS:				
Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

Less Than Significant Impact. The nearest active fault to the project site is the Newport-Inglewood-Rose Canyon Fault, which is approximately two miles to the northeast (City 2003). No active, potentially active, or inactive faults occur within the project site and the site does not lie within an Alquist-Priolo Earthquake Fault Hazard Zone as defined by the State of California in the Alquist-Priolo Earthquake Fault Hazard Zoning Act (City 2003). Therefore, fault rupture on-site is unlikely, and impacts would be less than significant.

- ii. Strong seismic ground shaking?

Less Than Significant with Mitigation. An earthquake along the Newport-Inglewood-Rose Canyon Fault could result in severe ground shaking at the project site. Ground shaking can affect the integrity of project structures; therefore, the proposed project would potentially be subject to moderate to severe ground shaking hazards from earthquake events. Accordingly, ground shaking could potentially result in significant impacts to the proposed project structures, including the underground fuel tanks and the convenience store. This impact would be mitigated through implementation of mitigation measure GEO-1.

- iii. Seismic-related ground failure, including liquefaction?

Less Than Significant with Mitigation. According to the California Geological Survey Seismic Hazard Zones Map, the project site falls within an area that has the potential for seismically induced liquefaction occurrences (California Geological Survey 2016). Therefore, the project structures may be at risk for liquefaction (including the underground fuel tanks and the convenience store), and impacts would be potentially significant. This impact would be mitigated through implementation of mitigation measure GEO-1.

- iv. Landslides?

No Impact. The project site is characterized by level terrain. Additionally, according to the California Geological Survey, the project site is not located within an area of high susceptibility to seismically induced landslides (California Geological Survey 2016). Therefore, no impacts would occur.

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

Less Than Significant Impact. The proposed project would not result in long-term, operational impacts associated with soil erosion or loss of topsoil as the site would be developed and paved and would not contain a substantial amount of exposed soil. In addition, although the project would increase the amount of impervious surfaces on the site, the project's bioretention basins are large enough to ensure that there would be no net increase in off-site runoff compared to existing conditions (Waber Consultants, Inc. 2018).

Potential short-term erosion and sedimentation impacts from grading and construction activities would be addressed through compliance with applicable regulations as specified by the Regional Water Quality Control Board (RWQCB), including compliance with NPDES and the adoption and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Implementation of Best Management Practices (BMPs) during construction would reduce impacts to short-term erosion and sedimentation from the construction; BMPs may include the use of gravel bag barriers, silt fences, street sweeping, solid waste management, water conservation practices, and spill prevention and control.

Therefore, impacts related to soil erosion and the loss of topsoil would be less than significant.

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

Less Than Significant with Mitigation. According to the California Geological Survey Seismic Hazard Zones Map, the project site falls within an area that has the potential for seismically induced liquefaction occurrences (California Geological Survey 2016). Due to the location of the project in area with unstable soils, potentially significant impacts to the project structures could occur, including the underground fuel tanks and the convenience store. Implementation of mitigation measure GEO-1 would reduce potential impacts related to unstable soils to a less-than-significant level.

- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant with Mitigation. As described under Item VII.b, the proposed project may be located on unstable soil, which could be at risk for expansion. Therefore, project structures may be at risk of expansive soil, and impacts would be potentially significant. Implementation of mitigation measure GEO-1 would reduce potential impacts related to unstable soils to a less-than-significant level.

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

No Impact. As was done for the site when it was previously developed as a gas station, the proposed project would be connected to local wastewater disposal utilities and would not require septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur.

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

Less Than Significant Impact. The City General Plan does not identify areas within the City that may be sensitive for paleontological resources (City 2003). Figure VI-9 of the County of Orange General Plan designates areas of paleontological sensitivity within the County, and no areas within Seal Beach are identified (County 2005). Therefore, encountering unique paleontological resources is not anticipated, and impacts would be less than significant.

Mitigation Measures

The following mitigation measure would mitigate the potentially significant impacts identified under this section to less than significant levels.

GEO-1 Site-specific Geotechnical Investigation. A site-specific geotechnical investigation shall be completed prior to final site design approval by the City to identify site-specific criteria related to considerations such as grading, excavation, fill, and structure/facility design. All applicable results and recommendations from the geotechnical investigation will be incorporated into the project design and construction documents to address identified potential geologic and soil hazards, including but not necessarily limited to: (1) seismic hazards including ground rupture, ground acceleration (ground shaking), soil liquefaction (and related issues such as dynamic settlement and lateral spreading), landslides/slope instability, and seiche effects; and (2) non-seismic hazards including manufactured slope instability, subsidence/compressible soils, expansive or corrosive soils, and trench/excavation instability. The final project design and construction documents will also encompass applicable standard design and construction practices from established regulatory/industry sources including the California Building Code (CBC), International Building Code (IBC), California Geological Survey (CGS), Greenbook standards, as well as the results/recommendations of geotechnical review and field observations/testing to be conducted during project excavation, grading and construction activities (with all related requirements to be included in applicable engineering/design drawings and construction contract specifications). A summary of the types of remedial measures typically associated with identified potential seismic hazards, pursuant to applicable regulatory and industry standards, is provided below. The remedial measures identified/recommended as part of the described site-specific geotechnical investigation will take priority over the more general types of standard regulatory/industry measures provided herein.

- Ground Rupture: (1) Locate (or relocate) structures away from known active (or potentially active) faults and outside of associated CGS Earthquake Fault Zones; and (2) require appropriate (typically 50-foot) building exclusion buffers (setbacks) on either side of applicable fault traces.
- Ground Acceleration (Ground Shaking): (1) Incorporate applicable seismic loading factors (e.g., IBC/CBC/CGS criteria) into project structure design; (2) use remedial grading techniques where appropriate (e.g., removing/replacing and/or reconditioning unsuitable soils); and (3) use properly engineered fill per applicable industry/regulatory standards (e.g., IBC/CBC/CGS), including criteria such as appropriate fill composition, placement methodology, compaction levels, and moisture content.
- Liquefaction and Related Effects: (1) Remove unsuitable soils and replace with engineered fill (as previously described), per applicable regulatory/industry standards (e.g., IBC/CBC/CGS); (2) employ measures such as deep soil mixing (i.e., introducing cement to consolidate loose soils) or use of subsurface structures (e.g., stone columns or piles) to provide support (i.e., by extending structures into competent underlying units); (3) use appropriate surface drainage and/or subdrains in applicable areas to avoid or reduce near-surface saturation; and (4) design for potential settlement of liquefiable materials through means such as use of post-tensioned foundations and/or flexible couplings for utility connections.
- Landslides/Slope Instability: (1) Construct properly drained shear keys and/or replace susceptible deposits with manufactured buttress fills where appropriate; (2) employ applicable slope laybacks (i.e., shallower slopes) and/or structural setbacks; (3) incorporate

- structures such as retaining walls and stability fills where appropriate to provide support; (4) provide protective walls or other barriers in areas susceptible to landslides; and (5) implement proper slope drainage and landscaping where applicable per established regulatory/industry standards (e.g., IBC/CBC/CGS).
- Manufactured Slope Instability: (1) Limit slope grades to 2:1 (horizontal to vertical) or other applicable ratios based on site-specific conditions and the results of slope stability analyses (if recommended as part of the geotechnical analyses); (2) employ similar strategies regarding slope laybacks, structure setbacks and support/ protective structures as outlined above under the discussion of Landslides/Slope Instability; (3) provide appropriate short- and long-term drainage control, such as slope drains and/or brow ditches to avoid/minimize runoff on slopes; and (4) utilize native and/or drought-tolerant landscaping varieties, as well as “smart” irrigation systems (e.g., appropriate water schedules and rain/pressure-sensitive sensors/ shutoff devices) to minimize irrigation and associated runoff.
 - Subsidence/Compression: (1) Use standard efforts such as over-excavation and recompaction or replacement of unsuitable materials with engineered fill, and enhanced foundation design in applicable areas (e.g., post-tensioned or mat slab foundations); (2) use engineered fill, subdrains, surcharging (i.e., loading prior to construction to induce settlement) and/or settlement monitoring (e.g., through the use of settlement monuments) in appropriate areas; (3) implement groundwater withdrawal monitoring/restrictions per established legal/regulatory/industry standards (if applicable).
 - Collapsible Soils: (1) Over-excavation and recompaction or replacement of unsuitable materials with engineered fill; (2) deep soil mixing, use of subsurface structures to provide support, and proper surface drainage/subdrains (as described above under Liquefaction); and (3) surcharging (as described above under Subsidence/Compression).
 - Expansive Soils: (1) Replace and/or mix expansive materials with non-expansive fill; and (2) cap expansive soils in place with an appropriate thickness of non-expansive fill per established regulatory/industry standards (e.g., IBC/CBC).
 - Corrosive Soils: (1) Remove unsuitable deposits and replace with non-corrosive fill; (2) use corrosion-resistant construction materials (e.g., corrosion-resistant concrete and coated or non-metallic facilities); or (3) install cathodic protection devices (e.g., use of a more easily corroded “sacrificial metal” to serve as an anode and draw current away from the structure to be protected) per established regulatory/industry standards (e.g., IBC/CBC).
 - Trench/Excavation Instability: (1) Limit trench and other excavation depths and side slope grades to the minimum feasible levels; (2) provide shoring and/or other protective systems (e.g., benching and shielding) for applicable trenches/ excavations, pursuant to associated regulatory standards (e.g., Occupational Safety and Health Administration [OSHA] and Cal-OSHA); (3) restrict heavy equipment/vehicle access and material/soil stockpiles near trenches/excavations; and (4) inspect trenches/excavations and related conditions/facilities at the start of each shift and after precipitation (or other water intrusion) events.

VIII. GREENHOUSE GAS EMISSIONS

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

Environmental Setting

Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth's surface; this is attributed to an accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth's surface temperature. The emission of GHGs through fossil fuel combustion in conjunction with other human activities appears to be closely associated with global warming.

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). General discussions on climate change often include water vapor, ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development projects, nor can they be controlled in these projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies, such as CARB, as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, ozone, or aerosols is provided.

GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO₂. For example, since CH₄ and N₂O are approximately 25 and 298 times more powerful than CO₂, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO₂ has a GWP of 1). Carbon dioxide equivalent (CO₂e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO₂e. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 6, *Global Warming Potentials and Atmospheric Lifetimes*.

**Table 6
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES**

GREENHOUSE GAS	ATMOSPHERIC LIFETIME (years)	GLOBAL WARMING POTENTIAL (100-year time horizon)
Carbon Dioxide (CO ₂)	50.0–200.0	1

Methane (CH ₄)	12.0	25
Nitrous Oxide (N ₂ O)	114.0	298
HFC-134a	14	1,430
PFC: Tetrafluoromethane (CF ₄)	50,000.0	7,390
PFC: Hexafluoroethane (C ₂ F ₆)	10,000.0	12,200
Sulfur Hexafluoride (SF ₆)	3,200.0	22,800

HFC: hydrofluorocarbons; PFC: perfluorocarbons
Source: IPCC 2007

Regulatory Framework Relating to Greenhouse Gas Emissions

AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to help avert these potential consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020. In addition, AB 32 required CARB develop a Scoping Plan to help the state achieve the targeted GHG reductions. In 2015, Executive Order (EO) B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. As a follow-up to AB 32 and in response to EO-B-30-15, Senate Bill (SB) 32 was passed by the California legislature in 2016 to codify the EO's California GHG emission reduction target of 40 percent below 1990 levels by 2030.

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

In response to EO B-30-15 and SB 32, all state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB prepared a second update to the Scoping Plan to reflect the 2030 target set by EO B-30-15 and codified by SB 32. The 2017 Climate Change Scoping Plan Update, Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target, was adopted in December 2017. The Scoping Plan Update establishes a proposed framework for California to meet a 40 percent reduction in GHGs by 2030 compared to 1990 levels (CARB 2017).

California Code of Regulations, Title 24, Part 6

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

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest update to the Title 24 standards occurred in 2016 and went into effect on January 1, 2017. The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards include improvements for attics, walls, water heating, and lighting. The Energy Efficiency Standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards – the energy budgets – that vary by climate zone (of which there are 16 in California) and building type; thus, the Energy Efficiency Standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach. The next update to Title 24 will occur in 2019 and go into effect on January 1, 2020. The 2019 Standards will continue to improve the energy efficiency of new buildings and alterations to existing buildings.

California Green Building Standards Code

The California Green (CALGreen) Building Standards Code (CCR Title 24, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including industrial buildings) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR (California Building Standards Commission 2017). The current 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2017. The 2019 Standards, which will go into effect January 2020, will continue to improve upon the current 2016 Standards.

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

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

SCAQMD

There are no established City thresholds applicable to the project to determine the quantity of GHG emissions that may have a significant effect on the environment. CARB, the SCAQMD, and various cities and agencies have proposed, or adopted on an interim basis, thresholds of significance that require the

implementation of GHG emission reduction measures. For the proposed project, which is located in the SCAB, the most appropriate screening threshold for determining GHG emissions is the SCAQMD proposed Tier 3 screening threshold, which applies to commercial/residential projects (SCAQMD 2008); therefore, for the purposes of this analysis, a significant impact would occur if the proposed project would exceed the SCAQMD proposed Tier 3 screening threshold of 3,000 MT CO₂e per year.

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

Less Than Significant Impact.

Construction GHG Emissions

Project construction GHG emissions were estimated using the CalEEMod model as described in Item III.b. Project-specific input was based on general information provided in the Project Description and default model settings to estimate reasonably conservative conditions. Additional details of phasing, selection of construction equipment, and other input parameters, including CalEEMod data, are included in Appendix A.

Emissions of GHGs related to the construction of the project would be temporary. As shown in Table 8, *Estimated Construction Greenhouse Gas Emissions*, total GHG emissions associated with construction of the project are estimated at 59 MT CO₂e. For construction emissions, SCAQMD guidance recommends that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions (SCAQMD 2008). Averaged over 30 years, the proposed construction activities would contribute approximately 2 MT CO₂e emissions per year.

Table 7
ESTIMATED CONSTRUCTION GREENHOUSE GAS EMISSIONS

Phase	Emissions (MT CO ₂ e)
Site Preparation	1
Grading	1
Building Construction	53
Paving	3
Architectural Coating	1
TOTAL	59
<i>Amortized Construction Emission¹</i>	2

Source: CalEEMod (output data is provided in Appendix A);

¹ Construction emissions are amortized over 30 years in accordance with SCAQMD guidance

Operational GHG Emissions

Operational sources of GHG emissions include: (1) area sources; (2) energy use; (3) vehicle use; (4) solid waste generation; and (5) water conveyance and treatment. Area sources include emissions from landscaping equipment. Energy sources include electricity consumption from lighting, heating, and cooling. Operational emissions from mobile source emissions are associated with project-related vehicle trip generation and trip length. Based on the TIS prepared for the project, the project would generate 2,300 average daily trips (Kimley-Horn and Associates, Inc 2017). Solid waste generated by the project

would also contribute to GHG emissions due to treatment and disposal. A 25 percent operational solid waste diversion rate was applied to the project to account for 75 percent diversion rate consistent with AB 341 standards. Water-related GHG emissions would be generated from the conveyance and treatment of water. In accordance with 2016 CALGreen requirements, a 20 percent reduction in potable water use and wastewater generation was incorporated into the project design.

Table 8, *Total Estimated Operational Greenhouse Gas Emissions*, displays the total annual emissions for the project, including amortized construction emissions. Appendix A contains the CalEEMod output files for the project. As shown in Table 8, the project would result in annual GHG emissions of 664 MT CO₂e. This value would not exceed the SCAQMD 3,000 MT CO₂e per year significance threshold, and therefore, the impacts would be less than significant.

Table 8
TOTAL ESTIMATED OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Sources	Emissions (MT CO ₂ e)
Area Sources	<0.5
Energy Sources	10
Vehicular (Mobile) Sources	649
Solid Waste Sources	3
Water Sources	1
Operational Subtotal	662
<i>Construction (Annualized over 30 years)</i>	<i>2</i>
TOTAL OPERATIONAL EMISSIONS	664
<i>SCAQMD Thresholds</i>	<i>3,000</i>
Significant Impact?	No

Source: CalEEMod (output data is provided in Appendix A); Thresholds (SCAQMD 2008)

Note: Totals may not sum due to rounding

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

Less Than Significant Impact. There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. SB 32 would require further reductions of 40 percent below 1990 levels by 2030. Because the project's operational year is 2020, the project aims to make progress toward achieving the goals set by SB 32. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the project level is not addressed. Therefore, the proposed project does not conflict with those plans and regulations.

As previously discussed, this analysis applies a screening threshold of 3,000 MT CO₂e per year to comply with the reduction goals of AB 32. The proposed project's increase in GHG emissions would not exceed

the significance threshold. In addition, the City does not have plans, policies, standards, or regulations related to climate change and GHG emissions. Therefore, implementation of the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. This would represent a less than significant impact.

IX. HAZARDS AND HAZARDOUS MATERIALS

HAZARDS AND HAZARDOUS MATERIALS:				
Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant with Mitigation.

Construction

During the temporary, short-term construction period, there is the possibility of accidental release of hazardous substances such as spilling of hydraulic fluid or diesel fuel associated with construction

equipment maintenance. The level of risk associated with the accidental release of these hazardous substances is not considered significant due to the small volume and low concentration of these hazardous materials. The construction contractor would be required to use standard construction controls and safety procedures to avoid or minimize the potential for accidental release of such substances into the environment.

As described under Item IX.d, the site is listed as a potentially hazardous site due to a previous site use as a gas station, where the underground storage tanks and piping for that gas station leaked gasoline (hydrocarbons) into the soil and groundwater. After over 30 years of cleanup efforts, the groundwater plume has decreased in concentration to near non-detect levels and below the required maximum concentrations levels and is stable and meets the Low-Threat Underground Storage Tank Case Closure Policy (LTCP) criteria (Stantec 2018). As directed by the OCHCA, operation of the equipment will continue until shut down is approved by the OCHCA. The forecasted date for closure on the Geotracker website is March 2020 (SWRQB 2018). The existing operating groundwater and soil vapor recovery systems and testing systems would remain on site during and after project construction, with one environmental well relocated (see Figure 3 for environmental area and monitoring well locations). However, through project excavation, including excavation for the project's underground storage tanks, soil and groundwater with elevated hydrocarbon concentrations may be encountered, which could result in a significant hazard to construction workers and people near the construction site through reasonably foreseeable upset and accident conditions to the environment. Therefore, impacts from project construction would be potentially significant. These impacts would be mitigated with mitigation measures HAZ-1 and HAZ-2.

Operation

Operation of the project proposes a gas station that would involve the routine use and storage of hazardous materials, which includes storage of gasoline in the project's underground storage tanks, as well as delivery of gasoline and subsequent refilling of the tanks. Gasoline is considered a hazardous waste, and therefore the installation and operation of underground storage tanks are regulated by a variety of state and local agencies.

The USEPA has designed technical regulations for underground storage tanks to prevent releases from the tanks, last updated in 2015 (USEPA 2015). In addition, California's Underground Storage Tank Act is contained in Chapter 6.7 of the California Health and Safety Code and Title 23 of the California Code of Regulations. The program was developed to ensure that the facilities meet regulatory requirements for design, monitoring, maintenance, and emergency response in operating or owning underground storage tanks. This act requires an underground storage tank monitoring and response program. OCHCA's Environmental Health Division is the Certified Unified Program Agency (CUPA) for Orange County responsible for enforcing the Underground Storage Tank Act. As the CUPA, the OCHCA Environmental Health Division is required to regulate hazardous materials business plans and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk management plans.

For project approval for OCHCA Environmental Health Division for the underground storage tanks, the project would be required to submit an Underground Storage Tank Response Plan and Monitoring Plan (OCHCA 2018), in addition to a Hazardous Materials Business Plan (HMBEP). The HMBEP is required to contain basic information on the location, type, quantity and health risks of hazardous materials stored, used, or disposed of onsite. The plan also contains an emergency response plan which describes the procedures for mitigating a hazardous release, procedures, and equipment for minimizing the potential

damage of a hazardous materials release, and provisions for immediate notification of the OCHCA Environmental Health Division and other emergency response personnel such as the local Fire Agency having jurisdiction. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release, thereby reducing potential adverse impacts. Furthermore, the OCHCA Environmental Health Division is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release of hazardous substances. The threshold for having to prepare a HMBEP is if the site would have at least 55 gallons of a liquid hazardous waste.

For operation, the project would comply with the OCHCA Environmental Health Division (CUPA) underground storage tank requirements, would obtain a Permit to Operate, and would prepare an Underground Storage Tank Response Plan and Monitoring Plan prior to project operation. In addition, the underground storage tanks would be designed in accordance with USEPA and OCHCA Environmental Health Division underground storage tank design standards prior to project construction.

However, given the project's use as a gas station with underground storage tanks, there would be potential for spillage of gasoline during either routine transport, use, or disposal of hazardous materials or reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, including from the project's underground storage tanks into the soil and groundwater. Therefore, impacts would be potentially significant from operation of the project from its use of hazardous materials. These impacts would be mitigated with mitigation measure HAZ-3.

As discussed under Item III.d, the project would result in airborne emissions of benzene (a hydrocarbon). An HRA was performed to determine the potential cancer risks from those emissions. The project's emissions would be less than the applicable cancer risk thresholds and impacts from the release of airborne hazardous materials during routine operation would be less than significant.

In accordance with Table VIII.1 of the Technical Guidance Document for preparing Water Quality Management Plans (WQMPs; Orange County Public Works 2013), infiltration is prohibited for fueling stations due to potentially hazardous waste spillage into the groundwater. As discussed under Item X.a, the project would install bioretention basins and other low-impact design stormwater collection that would not allow for infiltration into the groundwater due to the potential presence of contaminants. All runoff would be collected before infiltration to avoid further spread of hazardous materials.

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

Less Than Significant with Mitigation. The nearest school to the project site is J. H. McGaugh Elementary School, which is located greater than 0.25 mile from the project site at a distance of 0.6 mile to the east. Although the project is located more than 0.25 mile from the nearest school, as described under Items IX.a, b, and d, there is a potential for the release of hazardous materials during construction and operation. Therefore, impacts would be potentially significant. These impacts would be mitigated through mitigation measures HAZ-1 and HAZ-2 for construction and HAZ-3 for operation.

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant with Mitigation. The project site appears in SWRCB's GeoTracker database of potentially hazardous sites under site Arco #6066 (SWRCB 2018; all background information below provided by Stantec 2017). The project is located on the site of a former gas station that released gasoline (hydrocarbons) into the soil and groundwater from leaking underground storage tanks, with the leaking problem first being discovered in 1986. Cleanup began in late 1986 and early 1987 under the supervision of the OCHCA Environmental Health Division and the Santa Ana RWQCB, with removal of the underground storage tanks, installation of new tanks, and removal of groundwater and soil in the project area. Groundwater monitoring wells were installed to monitor the pollutant concentrations. Over the next thirteen years, monitoring would continue, including gathering soil samples in addition to the groundwater monitoring. Due to the continued presence of hydrocarbons, an Interim Remedial Action Plan (IRAP) was implemented in 2000 to perform temporary dual phase extraction (DPE) to remove hydrocarbons for the soil and groundwater. This work continued through 2003 with implementation of a new IRAP and continued DPE.

With concentrations still at elevated levels after this extraction work, it was discovered in 2003 that the piping system under the gas station was leaking, and tests confirmed gasoline leaked from these pipes was comprised of both old and new gasoline. All piping was replaced in 2004, including dispensers and sumps for the underground storage tanks. Extensive soil remediation occurred at this time, with 554 tons of impacted soil removed. Sampling showed that the majority of impacted soil had been successfully excavated (Stantec 2017). Elevated hydrocarbon concentrations remained in some areas, and vacuum truck activities continued for cleanup. Soil vapor probes were installed in 2008 and 2009 to monitor the southwest area of the site. Per the results of these probes, soil vapor extraction (SVE) wells were installed.

Extensive monitoring of both groundwater and soils continued. With further extensive testing in 2010, hydrocarbon plumes in groundwater were more clearly defined in the northwest and west portions of the site, extending off site into the intersection area of Galleon Way and Schooner Way, and a second plume beneath the central and eastern portion of the site. In 2010 testing, it was determined the highest hydrocarbon concentrations were reported in soil samples collected from 5, 8, and 10 feet below ground surface.

The gas station and underground storage tanks were removed in May 2011. Further remediation via soil removal occurred in 2011 and 2012, with nearly 18,000 tons of impacted soil removed. In addition, approximately 7.5 million gallons of groundwater were extracted. SVE wells and groundwater monitoring wells remained on site. Concentrations of hydrocarbons were greatly reduced during these activities. Testing continued through to 2016, when it was determined that additional soil excavation would take place, with nearly 6,000 tons removed. Approximately 4,300 tons were taken to Soil Safe of California and treated for thermal desorption. Soil testing after this removal showed that the hydrocarbon (benzene) concentrations were below the OCHCA benzene cleanup goal of 0.5 milligrams per kilogram (mg/kg) benzene in all bottom soil samples collected (Stantec 2017).

According to the 2018 Third Quarter Monitoring Report (Stantec 2018), the treatment systems consisting of SVE and groundwater extraction has effectively reduced on- and off-site hydrocarbon concentrations in unsaturated soil and in groundwater. The groundwater plume has decreased in

concentration to near non-detect levels and below the required maximum concentrations levels and is stable and meets the LTCP criteria (Stantec 2018). As directed by the OCHCA, operation of the equipment will continue until shut down is approved by the OCHCA. The forecasted date for closure on the Geotracker website is March 2020 (SWRQB 2018). The existing operating groundwater and soil vapor recovery systems and testing systems would remain on site during and after project construction, with one environmental well relocated (see Figure 3 for environmental area and monitoring well locations).

Although the concentrations are considered below the required maximum concentration levels per Stantec's latest monitoring report, as described under Item IX.a, through project excavation, including excavation for the project's underground storage tanks, soil and groundwater with elevated hydrocarbon concentrations may be encountered, which could result in a significant hazard to construction workers and people near the construction site through reasonably foreseeable upset and accident conditions to the environment. Therefore, impacts from project construction would be potentially significant. These impacts would be mitigated with mitigation measures HAZ-1 and HAZ-2.

For operation, the project would comply with the OCHCA Environmental Health Division (CUPA) underground storage tank requirements, would obtain a Permit to Operate, and would prepare an Underground Storage Tank Response Plan and Monitoring Plan prior to project operation. In addition, the underground storage tanks would be designed in accordance with USEPA and OCHCA Environmental Health Division underground storage tank design standards prior to project construction. However, given the project's proposed use as a gas station, there would be potential for spillage of gasoline during either routine transport, use, or disposal of hazardous materials or reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, including from the project's underground storage tanks to soil and groundwater, which could exacerbate the existing conditions of the listed hazardous waste site. Therefore, impacts would be potentially significant from operation of the project. These impacts would be mitigated with mitigation measure HAZ-3.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project site is located within the Airport Environs Land Use Plan height restriction area for the Los Alamitos Joint Forces Training Base (Orange County Airport Land Use Commission 2016), which is located approximately 3.5 miles to the northeast. The height restriction for the project at this distance would be approximately 400 feet, which the project would be well below. Therefore, no impacts would occur.

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

No Impact. The project site does not contain emergency facilities, nor does it serve as an emergency evacuation route. During construction, no road closures would be necessary (Kimley-Horn and Associates, Inc 2017). During operation, the project would have four driveways for access, and an alleyway lane runs behind the project site. In addition, a fire hydrant is located on the sidewalk in front of the project on Pacific Coast Highway for fire-related issues. Upon completion of construction, emergency access to the site and surrounding areas would not be affected by the project. Therefore, no impacts would occur.

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less Than Significant with Mitigation. The project site is not located within a fire hazard zone, as defined by the Fire Hazard Severity Zone (FHSZ) map prepared by the California Department of Forestry and Fire Protection (CALFIRE). The project site is in a developed area and not adjacent to wildland areas. Therefore, the project would not expose people or structures to a significant risk involving wildland fires.

The project may be at risk of urban fires due to the flammable materials (gasoline) stored on site. The local fire agency is the Orange County Fire Authority (OCFA), which serves 23 Orange County cities, including Seal Beach. Due to the fire risk, impacts would be potentially significant. This impact would be mitigated with mitigation measure HAZ-3 through submittal of the emergency response plan section of the HMBEP to the OCFA.

Mitigation Measures

HAZ-1 Construction Worker Health and Safety Work Plan. Prior to construction, the project applicant shall have a project-specific health and safety work plan prepared and distributed to the construction workers to address the potential exposure to hazardous materials associated with working with or near hydrocarbon contamination in soil and groundwater. This work plan shall comply with all OCHCA Environmental Health Division work plan requirements to address physical hazards, site security, management of soil and water, and monitoring equipment. A description of engineering controls and measures that would be put in place to prevent and/or reduce the risks posed to site workers, public and the environment in the unlikely event of excavating contaminated soil from the project construction area shall be provided in the work plan and submitted to the OCHCA Environmental Health Division for approval. These engineering controls and measures shall include, but not be limited to the following:

- Written notifications shall be posted on the perimeter fencing in advance of start of excavation to notify the general public of the nature and duration of work activities. The postings shall also include emergency contact names and telephone numbers.
- Site workers shall be required to wear personal protective equipment (PPE) including gloves, dust masks or respirators, hard hats, steel toed boots, protective clothing, eye shield and ear plugs or ear muffs.
- All excavated soil shall be underlain and covered by plastic or Visqueen, if stored on site, to prevent or reduce off-gassing into the atmosphere and to protect the stockpile from erosion due to storm runoff. If on-site temporary storage becomes necessary, the stockpiles shall be placed downwind of any sensitive receptors in the area.
- All work shall stop if ambient air concentrations exceed acceptable thresholds as approved by the OCHCA Environmental Health Division, and excavation shall be backfilled with inert soil or other material until concentration drop back to normal.
- Exposure to dust and potential inhalation hazards shall be controlled by lightly spraying the excavated materials with clean water as they are stockpiled on site or as they are transferred to trucks for shipment offsite. A dust monitor shall be used on site to measure airborne dust during activities that are expected to generate dust. If dust levels exceed

permissible exposure levels as set by OSHA standards, additional measures for dust control such as the use of industrial non-toxic dust suppressants shall be implemented.

- Runoff around the excavation site shall be controlled by placing fiber rolls or other similar types of erosion and runoff control means to direct surface runoff and to protect the nearby downstream storm drains.
- Vehicular and pedestrian traffic shall be directed away from the construction zone prior to and during excavation and follow-on activities in accordance with a traffic plan approved by the City of Seal Beach and in coordination with the project applicant.

HAZ-2 Excavation Monitoring. All excavation activities shall be actively monitored by a Registered Environmental Assessor for the potential presence of hydrocarbon contaminated soils. In the event of encountering hydrocarbon contaminated soils, these soils shall be properly tested, managed, and disposed of at a licensed facility in accordance with OCHCA requirements.

HAZ-3 Hazardous Materials Business Emergency Plan. The project applicant shall complete a HMBEP. The HMBEP shall contain the following:

- Basic information on the location, type, quantity and health risks of hazardous materials stored, used, or disposed of onsite.
- An emergency response plan that describes the procedures for mitigating a hazardous release, procedures, and equipment for minimizing the potential damage of a hazardous materials release, and provisions for immediate notification of the OCHCA Environmental Health Division and other emergency response personnel such as the OCFA.
- The HMBEP shall be submitted to the OCHCA Environmental Health Division, who would review the plan; monitor for compliance with existing laws and regulations; identify safety hazards that could cause or contribute to an accidental spill or release; and suggest preventative measures to minimize the risk of a spill or release of hazardous substances.

X. HYDROLOGY AND WATER QUALITY

HYDROLOGY AND WATER QUALITY:				
Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

HYDROLOGY AND WATER QUALITY:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:					
i.	result in substantial erosion or siltation on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii.	substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii.	create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv.	impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	In flood hazard, tsunami, or seiche zones, risk or release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Less Than Significant Impact. The project location is under the jurisdiction of the Santa Ana RWQCB for issues related to water quality. The RWQCB has adopted a Water Quality Control Plan (WQCP; Santa Ana RWQCB 2016) and a Drainage Area Management Plan (DAMP; Orange County Stormwater Program 2007), which is implemented by the Orange County Flood Control District, the County of Orange, and the City. Both the WQCP and the DAMP are prepared in compliance with the NPDES storm water program. The DAMP utilizes control techniques and BMPs to minimize potential impacts to water quality. Project construction would entail paving, building construction, utility installation, and landscaping installation, which could potentially result in water quality pollutants including silt, debris, chemicals, paint, and other solvents. Construction would be completed in compliance with applicable regulations as specified by the RWQCB, including compliance with NPDES and the adoption and implementation of a SWPPP. Implementation of BMPs during construction would reduce impacts of storm water discharged from the construction site. Such practices may include the use of gravel bag barriers, silt fences, street sweeping, solid waste management, water conservation practices, and spill prevention and control.

Operational impacts of the project to water quality may include runoff containing sediments, nutrients, trash, oils, and pesticides. To prevent these impacts, the City requires the adoption and implementation of a WQMP to ensure that operational runoff would not impact water quality. A WQMP was prepared for the project by Waber Consultants, Inc. (2018). Measures provided within the WQMP include the use of bioretention basins, filtration, and catch basins on site (see Figures 4 and 5). In addition, to prevent groundwater infiltration into the existing, previously contaminated groundwater, and in accordance with Table VIII.1 of the Technical Guidance Document for preparing WQMPs (Orange County Public Works 2013), which prohibits groundwater infiltration at fueling stations, no infiltration on site would occur.

With compliance with these construction and operation water quality control measures, the impacts of the project to water quality would be less than significant.

- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The project does not propose the use of groundwater but would result in an increase in impervious surfaces. To prevent groundwater infiltration into the existing, previously contaminated groundwater, and in accordance with Table VIII.1 of the Technical Guidance Document for preparing WQMPs (Orange County Public Works 2013), which prohibits groundwater infiltration at fueling stations, the site would implement bioretention basins and other low impact storm water design that would ensure that site runoff would be collected and not infiltrate into the groundwater. Therefore, no infiltration on site would occur. Although this would decrease groundwater recharge, the groundwater basin underneath the site is not used for beneficial uses, and by decreasing recharge, it would decrease the potential travel of contaminants further down the basin. Therefore, impacts to groundwater supplies would be less than significant.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- i. result in substantial erosion or siltation on- or off-site;

Less Than Significant Impact. Implementation of the proposed project would result in modifications to the existing drainage pattern of the site through the development of impervious paved areas and structures. A WQMP was prepared for the project by Waber Consultants, Inc. (2018). Measures provided within the WQMP include the use of bioretention basins, filtration, and catch basins on site (see Figures 4 and 5) so that the site runoff would conform with applicable standards. There are no streams or rivers within the vicinity of the project site. Alterations to the on-site drainage pattern would not result in long-term erosion or siltation as there would be a limited amount of exposed soil from which erosion or siltation could occur. During construction, the project would comply with applicable NPDES requirements through implementation of a SWPPP and BMPs to avoid short-term erosion and siltation. Therefore, impacts would be less than significant.

- ii. substantially increase the rate or amount of surface or runoff in a manner which would result in flooding on- or offsite;

Less Than Significant Impact. The proposed project would alter the existing drainage pattern of the site by increasing the area of impervious surfaces, and thus increasing the amount of surface runoff it generates. However, this runoff would be accommodated on-site by water quality BMPs required as part of the project-specific WQMP, as described in detail under Item X.a above, which would result in no net increase in the rate or volume of stormwater discharged from the project site to the local storm drain system. Therefore, the project would not result in any increased flooding potential compared to existing conditions, and impacts related to on- or off-site flooding would be less than significant.

- iii. create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff; or

Less Than Significant Impact. The additional runoff associated with the addition of new impervious surface area on-site would be accommodated on-site by the required WQMP BMPs, which would minimize the potential for pollutants to be discharged from the site and would also result in no net increase in the rate or volume of stormwater discharged from the project site to the local storm drain system. As such, the project would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff, and impacts would be less than significant.

- iv. impede or redirect flood flows?

Less Than Significant Impact. The project site is located in an urbanized area with relatively flat topography and is surrounded by paved streets, which include curbs, gutters, and catch basins to direct drainage to the local storm drain system. As such, substantial flood flows in the immediate area are not expected. The project would, as noted previously, contain all additional project-related stormwater flows on-site through implementation of applicable BMPs, and construction and operation of the proposed fuel islands and retail structure on the site would not notably affect the flow of stormwater in the surrounding area, including on the surrounding streets. As such, the project would have little potential to impede or redirect flood flows in the area, and impacts would be less than significant.

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

Less Than Significant Impact. The project site is located less than a mile from the Pacific Ocean. However, according to the City General Plan Safety Element, seismically induced seiches are not considered a potential hazard in the city (City 2003). Additionally, the tsunami hazard is considered low for elevations above the beach area. The proposed project is approximately 10 feet above sea level in a completely urbanized area of the city. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. As described above under Item X.a, through conformance with applicable regulatory standards and implementation of BMPs, the project would not substantially degrade water quality, and therefore the project would not conflict with or obstruct implementation of the applicable water quality control plan. With regard to sustainable groundwater management plans, as noted above in item X.b., the project would not have the potential to adversely affect groundwater supplies or the management of groundwater basins in the area, given the ongoing remediation activities on-site, which are intended to address, at least in part, potential groundwater contamination from past uses on the property. As such, the project would not result in any conflicts with or affect implementation of such plans, and impacts would be less than significant.

XI. LAND USE AND PLANNING

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

a) Physically divide an established community?

No Impact. The proposed project includes the construction and operation of a gas station on an existing undeveloped lot in an urban area. The project site has a City General Plan zoning designation of General Commercial (CG) and is consistent and compatible with surrounding land uses, which include commercial uses to the north and south and single-family residential to the east (across Pacific Coast Highway) and west (see Figure 2). The project does not propose construction of any roadway, flood control channel, or other structure that would physically divide any portion of the community. As such, implementation of the proposed project would not physically divide an established community, and no impacts would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The project site is located within the City of Seal Beach Old Town/Surfside Planning Area (City 2003) and has a zoning designation of General Commercial (CG). Per Section 11.2.10.010 of the Municipal Code, automobile service stations are allowed in CG zones subject to the approval of a conditional use permit. Therefore, with approval of a conditional use permit, the proposed gas station would be compatible with the land use designation, and the project would be compatible with surrounding commercial land uses on the Pacific Coast Highway. It should be noted that due to the dimensions of the project site, the project also requires approval of a variance of standards to allow the proposed structure, pump islands, and other improvements to be efficiently configured on the property.

In addition, the previous site use was a gas station as early as 1986, when records on the underground storage tanks are first discussed in the site’s remediation documents (Stantec 2017). The gas station components and underground storage tanks were removed in May 2011 (Stantec 2017). Therefore, the project use would be consistent with existing uses at the same location.

Overall, the project would not conflict with other ordinances or policies, as described the other sections of this Initial Study. Therefore, the proposed project would not cause a significant environmental impact due to a conflict with an applicable land use plan, policy, or regulation, and no impacts would occur.

XII. MINERAL RESOURCES

MINERAL RESOURCES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The project site is not located within a known and/or designated mineral resources area identified by the City General Plan, as the only mineral resources identified include oil extraction sites in the Seal Beach National Wildlife Refuge area (approximately 1.5 miles to the southeast) and the Hellman property, located approximately one mile to the north (City 2003). Therefore, no decrease of natural resources is anticipated because of the project.

- b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The project site is located within a fully urbanized area of the city and is surrounded by commercial and residential uses. As described under Item XII.b., no mineral resource areas exist in the immediate vicinity, with the nearest oil extraction sites located approximately one mile from the project site (City 2003). The City General Plan does not identify the site as mineral resource site and given its developed nature adjacent to residential and commercial land uses, it would not be envisioned that the site would be used for oil extraction in the future (City 2003). Therefore, development would not result in the loss of a known mineral resource and no impacts would occur.

XIII. NOISE

NOISE: Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

NOISE: Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Generation of a substantial temporary or permanent increase and ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact With Mitigation.

Construction Noise Impacts

Construction noise impacts from general construction activities of the project would include noise generated from construction equipment involved in minor grading and building of the project structures. The loudest pieces of equipment from this type of construction would be an excavator and ad dump truck used during fuel storage tank installation. According to the Roadway Construction Noise Model (RCNM; U.S. Department of Transportation 2008), at 70 feet (the approximate average distance of operating construction equipment to the nearest off-site noise sensitive land use [NSLU], the single-family residence to the west), an excavator would generate a noise level of 76.8 A-weighted decibels (dBA) one-hour average sound level (L_{EQ}). While nearby residences would experience elevated noise levels from construction activities, the duration would be short-term (with storage tank excavation occurring for less than one week and the overall project lasting a total of approximately six months), and according to Table 3 of the City General Plan Noise Element, noise levels already exceed 60 Community Noise Equivalent Level (CNEL) at the nearest residences (City 2003). An existing, approximately 6-foot high concrete wall separates the proposed project and the nearest residential properties to the west; this wall would further attenuate noise levels. In addition, Section 7.15.025 of the City Municipal Code states that any construction within the City shall only be completed between the hours of 7 a.m. to 8 p.m. Monday through Friday, and from 8 a.m. to 8 p.m. on Saturday. Construction activities would comply with the applicable hours. Therefore, noise impacts from general construction activities would be less than significant.

As indicated above, the City noise ordinance does not require project noise control for normal weekday daytime construction. However, a typical construction noise control goal for short-term noise is to limit impacts to 75 dBA L_{EQ} ; to achieve this, as required by Mitigation Measure NOISE-1 below, a 10-foot-tall temporary noise control barrier would be provided within 100-feet of tank excavation activities to shield nearby residential properties from a line of site view, which would reduce noise levels to less than 75 dBA L_{EQ} . The noise control barrier should be solid with no cracks or gaps and be constructed with either ½-inch thick (or thicker) plywood, noise control blankets, or other purpose-designed acoustic barrier materials. All equipment should have sound-control devices that are no less effective than those provided on the original equipment. All stationary construction equipment should be positioned as far as feasible from the residential property line and no equipment should be left idling on the site.

Implementation of Mitigation Measure NOISE-1 would ensure that construction noise effects are minimized and impacts would be less than significant.

Operational Noise Impacts

Traffic Noise

According to the TIS prepared for the proposed project by Kimley-Horn and Associates, Inc. (2017), the project would generate 140 a.m. peak hour trips and 157 p.m. peak hour trips. At the Pacific Coast Highway/Marvista Drive intersection, traffic volumes during the evening peak hour through the intersection during the opening year (2019) scenario without the project would be 3,444 trips. A doubling of ADT would cause a doubling in noise (a 3 dBA increase), which is often noticeable to residents and will be perceived by residents as “increasing significantly” (City 2003). Therefore, for this analysis, a significant increase would be considered a 3 dBA increase. The project would only increase traffic by approximately 5 percent, much less than a doubling in noise. Therefore, project traffic noise impacts would be less than significant.

Other Noise Sources

Section 7.15.015 of the City’s Municipal Code states that exterior noise levels at residential properties shall not exceed 55 dBA from 7:00 a.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m. and at commercial properties shall not exceed 65 dBA at any time (City 2018a). The main source of operational noise from the proposed project would be from the project’s heating, ventilation, air conditioning (HVAC) system, and refrigeration units (the proposed project does not include loud noise sources that are sometimes included with a gas station and convenience store, such as car wash or drive through). The HVAC and refrigeration systems would be located approximately 50 feet from the nearest residential property line to the west. A typical commercial HVAC system is a 10-ton Carrier Centurion Model 50 PG03-12 with a sound rating of 80 dBA sound power (Appendix D, *HVAC Specifications*) with most refrigeration units at a similar level, which would result in a noise level of approximately 48 dBA L_{EQ} and up to approximately 53 dBA L_{EQ} if up to three HVAC or refrigeration units are operating at the same time, at a distance of 50 feet. In addition, an existing, approximately 6-foot concrete wall separates the proposed project and the nearest residential properties to the west and a rooftop parapet wall to shield a line of site view of the equipment; this parapet wall would further attenuate noise levels described above to less than 43 dBA at a five-foot elevation. Therefore, the proposed project’s operational noise would be less than the most restrictive 50 dBA nighttime threshold, and impacts would be less than significant.

The project would result in a permanent increase in ambient noise levels from project operation, as well as from traffic generated by the project. As discussed in Item XIII.a., operational noise generated by the project would conform to the City Municipal Code standards. In addition, the noise level increases along roadways in the project vicinity as a result of project-generated traffic would be well below the significance threshold of a doubling of roadway noise. Therefore, impacts related to a permanent increase in ambient noise levels would be less than significant.

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

Less Than Significant Impact. Groundborne vibration is a concern for projects that require heavy construction activity such as blasting, pile-driving, and operating heavy earth-moving equipment. Groundborne vibration can result in a range of impacts, from minor annoyances to people to major

shaking that damages buildings. Typically, groundborne vibration generated by man-made sources attenuates rapidly with distance from the source of vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly and sick), and vibration-sensitive equipment.

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted as part of the project. A possible source of vibration during general project construction activities would be a vibratory roller, which may be used within approximately 100 feet of the nearest off-site residence. A vibratory roller would create approximately 0.210 inch per second peak particle velocity (PPV) at a distance of 25 feet (Caltrans 2013). A 0.210 inch per second PPV vibration level would equal 0.021 inch per second PPV at a distance of 200 feet.² This would be lower than what is considered a “strongly perceptible” impact for humans of 0.1 inches per second PPV, and the structural damage impact to older residential structures of 0.5 inches per second PPV. Therefore, although a vibratory roller may be perceptible to nearby human receptors, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

The proposed gas station land use does not include equipment that would generate substantial vibration during its day-to-day operation, as operations would generally include general visitors to the gas station and convenience store, and periodic re-fueling of the underground tanks. Therefore, no operational vibration impacts would occur.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest airport to the project site is the Los Alamitos Joint Forces Training Base, located approximately 3.5 miles to the northeast. Therefore, as the project is located greater than two miles from an airport, airport noise would not create substantial noise at the project site, and no impacts would occur.

Mitigation Measures

NOISE-1 During construction activities a 10-foot-tall temporary noise control barrier shall be provided within 100-feet of tank excavation activities to shield nearby residential properties from a line of site view, which would reduce noise levels to less than 75 dBA L_{EQ} . The noise control barrier shall be solid with no cracks or gaps and be constructed with either ½-inch thick (or thicker) plywood, noise control blankets, or other purpose-designed acoustic barrier materials. In addition, all equipment shall have sound-control devices that are no less effective than those provided on the original equipment, stationary construction equipment shall be positioned as far as feasible from the residential property line, and no equipment shall be left idling on the site.

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

XIV. POPULATION AND HOUSING

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

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The project entails the development of a commercial gas station expected to serve the existing population and transient visitors. No residential uses or other land uses associated with directly or indirectly impacting population growth are included with the project. Therefore, the project would not induce substantial direct or indirect population growth.

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

No Impact. No residential uses are located on the project site, and no existing housing would be displaced because of the project. No impacts associated with displacing housing or people would occur.

XV. PUBLIC SERVICES

PUBLIC SERVICES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

PUBLIC SERVICES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Fire protection?
- b) Police protection?

Less Than Significant Impact. Although the proposed gas station would generate an increase in the number of on-site visitors beyond existing conditions (a vacant lot), a substantial increase in the number of calls for fire or police services is not anticipated. In addition, demand for the gas station would be similar to the demand for the previous gas station on the site (removed in 2011). The project site is located in a developed area currently served by fire and police protection services, and project implementation would not require the construction of new or the expansion of existing fire and police facilities. Therefore, impacts would be less than significant.

- c) Schools?
- d) Parks?
- e) Other public facilities?

No Impact. The proposed project would not result in an increase in population, and there would be no increased demand on schools, parks, or other public facilities.

XVI. RECREATION

RECREATION: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

No Impact. The proposed project does not include housing and would therefore not generate residents who would require parks or other recreational facilities; no impacts would occur to such facilities.

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

No Impact. The proposed project neither includes recreational facilities nor requires the construction or expansion of recreational facilities. Therefore, no impacts would occur.

XVII. TRANSPORTATION

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

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

Less Than Significant with Mitigation. A TIS was prepared for the proposed project by Kimley-Horn and Associates, Inc (2017; Appendix E). The study is summarized below.

Intersection operating conditions are typically described in terms of LOS. LOS is a scale used to indicate the quality of traffic flow at intersections, with a range of LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). Based on the County of Orange criteria, if intersections are operating at LOS D or better, impacts are not considered significant. However, according to City guidelines, a significant impact at an intersection would occur when the addition of project-related trips causes the volume-to-capacity ratio (V/C) at an intersection to increase by the thresholds specified on Table 9, *City of Seal Beach Intersection Traffic Impact Criteria*, below. LOS D is considered satisfactory for roadway segments.

**Table 9
CITY OF SEAL BEACH INTERSECTION
TRAFFIC IMPACT CRITERIA**

Existing V/C	V/C Difference
0.00-0.69	0.06
0.70-0.79	0.04
0.80-0.89	0.02
0.90+	0.01

V/C = vehicle to capacity ratio
Source: Kimley-Horn and Associates, Inc 2017

According to the TIS, after applying pass-by reductions, the development is projected to generate a net of 2,300 daily trips, 140 morning peak hour trips, and 157 evening peak hour trips. The TIS assumed the majority of project traffic would be distributed on Pacific Coast Highway.

Existing Plus Project

The project-related peak hour trips were added to the existing peak hour volumes to evaluate Existing Plus Project conditions. Existing Plus Project intersection results are shown in Table 10, *Intersection Operations – Existing Plus Project*. Although the intersections operate at an acceptable LOS D or better in all study scenarios, the intersection of Pacific Coast Highway at Marvista Drive/5th Street would experience a significant impact per the City’s significance thresholds due to project traffic. This impact would be mitigated to less than significant with mitigation measure TRA-1.

Table 10
INTERSECTION OPERATIONS - EXISTING PLUS PROJECT

Intersection	Existing				Existing Plus Project				Impact		
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Increase		Significant Impact
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	
Pacific Coast Highway at 1st Street	0.711	C	0.681	B	0.719	C	0.68	B	0.008	0.008	No
Pacific Coast Highway at Marvista Drive/5th Street	0.745	C	0.698	B	0.807	D	0.767	C	0.062	0.069	Yes
Pacific Coast Highway at Bolsa Avenue/Main Street	0.687	B	0.643	B	0.695	B	0.652	B	0.008	0.009	No
Pacific Coast Highway at Balboa Drive/12th Street	0.729	C	0.685	B	0.736	C	0.694	B	0.007	0.009	No
1st Street at Marina Drive	0.251	A	0.319	A	0.253	A	0.321	A	0.002	0.002	No

V/C = vehicle to capacity ratio; LOS = Level of Service

Source: Kimley-Horn and Associates, Inc (2017)

Existing Plus Project roadway segment results are shown in Table 11, *Roadway Operations – Existing Plus Project Conditions*. No roadway segments would operate below LOS D with the proposed project; therefore, impacts would be less than significant.

Table 11
ROADWAY OPERATIONS - EXISTING PLUS PROJECT

Roadway Segment	Roadway Classification	Direction	Existing Conditions				Existing Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	24.4	C	21.1	C	25.0	C	21.7	C
		SB	25.0	C	23.1	C	25.5	C	23.7	C
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	25.3	C	22.7	C	25.7	C	23.0	C
		WB	24.2	C	21.4	C	24.5	C	21.8	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	24.3	C	20.6	C	24.7	C	21.0	C
		WB	23.8	C	21.1	C	24.2	C	21.6	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	24.7	C	20.5	C	25.1	C	20.9	C
		WB	23.1	C	20.3	C	23.4	C	20.7	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	1.9	A	2.5	A	2.5	A	3.2	A
		SB	1.0	A	2.4	A	1.7	A	3.2	A

NB = Northbound; SB= Southbound; EB = Eastbound; WB = Westbound; pc/mi/ln = passenger cars per mile per lane; LOS = Level of Service
Source: Kimley-Horn and Associates, Inc (2017)

Opening Year 2019

The project-related peak hour trips were added to the Opening Year 2019 peak hour volumes to evaluate Opening Year 2019 Plus Project conditions. These results are shown in Table 12, *Intersection Operations – Opening Year 2019 Plus Project*. As shown in the table, the intersection of Pacific Coast Highway at Marvista Drive/5th Street would experience a significant impact per the City’s significance thresholds due to project traffic. This impact would be mitigated to less than significant with mitigation measure TRA-1.

Table 12
INTERSECTION OPERATIONS – OPENING YEAR 2019 PLUS PROJECT

Intersection	Opening Year 2019				Opening Year 2019 Plus Project				Impact		
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Increase		Significant Impact
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	
Pacific Coast Highway at 1st Street	0.744	C	0.730	C	0.752	C	0.738	C	0.008	0.008	No
Pacific Coast Highway at Marvista Drive/5th Street	0.772	C	0.738	C	0.834	D	0.807	D	0.062	0.069	Yes
Pacific Coast Highway at Bolsa Avenue/Main Street	0.723	C	0.698	B	0.731	C	0.706	C	0.008	0.008	No
Pacific Coast Highway at Balboa Drive/12th Street	0.755	C	0.721	C	0.762	C	0.730	C	0.007	0.009	No
1st Street at Marina Drive	0.252	A	0.328	A	0.254	A	0.331	A	0.002	0.003	No

V/C = vehicle to capacity ratio; LOS = Level of Service
Source: Kimley-Horn and Associates, Inc. (2017)

Opening Year 2019 Plus Project roadway segment results are shown in Table 13, *Roadway Operations – Opening Year 2019 Plus Project*. No roadway segments would operate below LOS D with the proposed project; therefore, impacts would be less than significant.

Table 13
ROADWAY OPERATIONS – OPENING YEAR 2019 PLUS PROJECT

Roadway Segment	Roadway Classification	Direction	Opening Year 2019				Opening Year 2019 Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	25.5	C	22.6	C	26.1	D	23.2	C
		SB	26.1	D	24.8	C	26.7	D	25.4	C
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	26.6	D	24.4	C	26.9	D	24.8	C
		WB	25.4	C	23.1	C	25.7	C	23.5	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	25.3	C	21.9	C	25.7	C	22.3	C
		WB	24.9	C	22.7	C	25.3	C	23.1	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	25.8	C	21.8	C	26.1	D	22.2	C
		WB	24.1	C	21.9	C	24.5	C	22.3	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	1.9	A	2.6	A	2.6	A	3.3	A
		SB	1.1	A	2.5	A	1.7	A	3.2	A

NB = Northbound; SB= Southbound; EB = Eastbound; WB = Westbound; pc/mi/ln = passenger cars per mile per lane; LOS = Level of Service
Source: Kimley-Horn and Associates, Inc. (2017)

Future Build-out 2039

The project-related peak hour trips were added to the Future Build-out 2039 peak hour volumes to evaluate Future Build-out 2039 Plus Project conditions. Future Build-out 2039 Plus Project intersection results are shown in Table 14, *Intersection Operations – Future Build-out 2039 Plus Project*. As shown in the table, the intersection of Pacific Coast Highway at Marvista Drive/5th Street would experience a significant impact per the City's significance thresholds due to project traffic. This impact would be mitigated to less than significant with mitigation measure TRA-1.

Table 14
INTERSECTION OPERATIONS – FUTURE BUILD-OUT 2039 PLUS PROJECT

Intersection	Future Build-out 2039				Future Build-out 2039 Plus Project				Impact		
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		Increase		Significant Impact
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	
Pacific Coast Highway at 1st Street	0.782	C	0.748	C	0.790	C	0.757	C	0.008	0.009	No
Pacific Coast Highway at Marvista Drive/5th Street	0.820	D	0.768	C	0.882	D	0.836	D	0.062	0.068	Yes
Pacific Coast Highway at Bolsa Avenue/Main Street	0.755	C	0.706	C	0.763	C	0.715	C	0.008	0.009	No
Pacific Coast Highway at Balboa Drive/12th Street	0.801	D	0.753	C	0.809	D	0.762	C	0.008	0.009	No
1st Street at Marina Drive	0.263	A	0.344	A	0.265	A	0.347	A	0.002	0.003	No

V/C = vehicle to capacity ratio; LOS = Level of Service
Source: Kimley-Horn and Associates, Inc (2017)

Future Build-out 2039 Plus Project roadway segment results are shown in Table 15, *Roadway Operations – Future Build-out 2039 Plus Project*. No roadway segments would operate below LOS D with the proposed project; therefore, impacts would be less than significant.

Table 15
ROADWAY OPERATIONS – FUTURE BUILD-OUT 2039 PLUS PROJECT

Roadway Segment	Roadway Classification	Direction	Future Build-out 2039 Conditions				Future Build-out 2039 Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	27.2	D	23.5	C	27.8	D	24.1	C
		SB	27.9	D	25.8	C	28.4	D	26.4	D
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	28.3	D	25.3	C	28.6	D	25.7	C
		WB	27.0	D	23.9	C	27.3	D	24.3	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	27.1	D	22.9	C	27.5	D	23.3	C
		WB	26.6	D	23.6	C	26.9	D	24.0	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	27.6	D	22.8	C	28.0	D	23.2	C
		WB	25.7	C	22.7	C	26.1	D	23.1	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	2.1	A	2.8	A	2.7	A	3.5	A
		SB	1.0	A	2.4	A	1.7	A	3.2	A

NB = Northbound; SB= Southbound; EB = Eastbound; WB = Westbound; pc/mi/ln = passenger cars per mile per lane; LOS = Level of Service
Source: Kimley-Horn and Associates, Inc (2017)

As relates to alternative transportation programs, plans, ordinances or policies, the project is not expected to result in substantial adverse effects to alternative transportation facilities or activities. Specifically, during construction, no road closures would be required (Kimley-Horn and Associates, Inc 2017) and therefore no bike lanes or public transit would be made inaccessible. Relocation of driveways

may temporarily restrict access to sidewalks for pedestrians; however, this work would be temporary and full access would be restored once the driveways are relocated. Once construction is complete, the project would have no potential to affect alternative transportation programs or facilities compared to existing conditions. Therefore, impacts in this regard would be less than significant.

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

Less Than Significant Impact. SB 743 was approved by the California legislature in September 2013. SB 743 requires changes to CEQA, specifically directing the Governor’s Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular “level of service” (LOS) for evaluating transportation projects. OPR has updated guidelines for CEQA and written a technical advisory for evaluating transportation impacts in CEQA and has set a deadline of July 2020 for local agencies to update their CEQA transportation procedures. OPR has recommended that VMT replace LOS as the primary measure of transportation impacts.

The City of Seal Beach has until July 2020 to update their traffic impact study guidelines to comply with SB 743. Since Seal Beach guidelines are not in place, the traffic impact study has not conducted a quantitative VMT analysis. Rather, this letter refers to the guidance provided by the OPR within the Technical Advisory on Evaluating Transportation Impacts in CEQA document.

The Technical Advisory establishes that, for local-serving urban commercial uses, impact should be established based on the net increase in VMT. However, the document further establishes that local-serving commercial uses, such as a gas station and convenience market in this case, can be determined to result in an overall VMT reduction.

Local-serving commercial uses, particularly in urban areas, primarily serve pre-existing needs and as a result do not generate new trips because there are existing demands. As a result, local-serving commercial uses can be presumed to reduce trip lengths when a new site is proposed. For instance, a customer may travel to the new development because of a closer proximity from other gas stations in the area and is therefore not a new trip. These customers will access the proposed site because it is closer to their origin, or because the site is more convenient than similar sites in the vicinity. This results in an existing trip on the roadway network becoming shorter, rather than a new trip being added to the roadway network. In accordance with the Technical Advisory, it is appropriate that the proposed gas station and convenience market be presumed to result in a VMT reduction and support the goals of SB 743. As such, impacts in this regard would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed project would not include design features or incompatible features that would affect traffic safety. The project would include four unsignalized driveways. The northern driveway along Pacific Coast Highway would be shared with the existing retail development to the north. The western driveway on 5th Street is also shared with the existing development. The two driveways on Pacific Coast Highway are restricted to right-in/right-out movements due to the raised median along Pacific Coast Highway; therefore, no left-turns would occur on to Pacific Coast Highway. The two driveways on 5th Street are full-movement. Fuel trucks along Pacific Coast Highway would access the site by traveling southbound and making a right-turn movement at 5th Street, and by using the eastern driveway along 5th Street to maneuver into position. From there, a fuel truck can circulate counterclockwise to exit via the western driveway on 5th Street and return to Pacific Coast Highway at

the signalized intersection. Likewise, a delivery truck to the convenience store component can utilize this same path. Therefore, these larger trucks would not inhibit traffic on Pacific Coast Highway during deliveries or exit. Therefore, due to design of the project’s driveways, substantial hazards would not occur, and impacts would be less than significant.

d) Result in inadequate emergency access?

No Impact. During construction, no road closures would be required (Kimley-Horn and Associates, Inc 2017). The project would have four driveways for access, including an alleyway lane behind the project site. In addition, a fire hydrant would remain accessible on the sidewalk in front of the project on Pacific Coast Highway if needed for emergencies. Based on the fact that the project would not require road closures during construction and that the site would include several ingress points that are at least 25 feet wide, it is not anticipated that the project would result in inadequate emergency access.

Mitigation Measures

A potentially significant impact was identified to the Pacific Coast Highway at Marvista Drive/5th Street intersection under all three scenarios. The following mitigation measure would be implemented to reduce impacts to this intersection to a less than significant level.

TRA-1 Marvista Drive/5th Street Intersection Restriping. Prior to opening day of the proposed project, to increase the left-turn capacity of the intersection, the eastbound approach at the Pacific Coast Highway at Marvista Drive/5th Street intersection shall be restriped by the City to provide a left-turn lane, a shared left-through lane, and a right-turn lane. The applicant shall pay a fee to the City to perform the work. If determined necessary through City of Seal Beach coordination with Caltrans, the traffic signal shall be adjusted to provide split phasing in the east-west direction.

XVIII. TRIBAL CULTURAL RESOURCES

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

TRIBAL CULTURAL RESOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
- i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
 - ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant with Mitigation. Tribal Cultural Resources (TCRs) are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources, as defined in subdivision (k) of Public Resources Code Section 5020.1, or determined to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1. As discussed in Item V.b, the presence of cultural resources, including TCRs, is not anticipated due to the disturbed nature of the project site, but the potential to encounter resources during ground-disturbing activities exists due to the sensitive cultural resource sites identified in the surrounding area. Therefore, impacts would be potentially significant. Mitigation measures CUL-1 through CUL-4 would be implemented to reduce impacts to TCRs to a less-than-significant level.

XIX. UTILITIES AND SERVICE SYSTEMS

UTILITIES AND SERVICE SYSTEMS:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Less Than Significant Impact. Sewage transmission and collection facilities would be installed as part of the project to accommodate the project’s wastewater and would connect to the existing sewer system. As described above under Item XIX.a., the project’s generation of wastewater would be accommodated by the existing capacity of the OCSD collection system.

The City provides water to a population of 23,706 throughout its service area, as of 2015 (City 2016a). The City receives its water from two main sources: 1) the Lower Santa Ana River Groundwater basin, which is managed by Orange County Water District (OCWD); and 2) imported water from the Municipal Water District of Orange County (MWDOC) (City 2016a). Groundwater is pumped from three active wells located throughout the City, and imported water is treated at the Diemer Filtration Plant and delivered to the City via imported water connections. According to the 2015 Urban Water Management Plan for the City, projected water demand would be 3,488 acre-feet per year (AFY) in 2020 up to 3,774 AFY in 2040. As described under Item XIX.a, the project would use 177,000 gallons of water per year, or 0.54 AFY. Projected water use from land use designations in the City, including for the project land use, are incorporated into the Urban Water Management Plan. As shown in Table 3-4 of the Urban Water Management Plan, the City would be able to accommodate all projected water demand, including the proposed project.

The project site is served by the public sewer system. Wastewater generated by the proposed project would be discharged into the local sewer main and conveyed for treatment at the Orange County Sanitation District's (OCSD's) reclamation plants. OCSD, under contract with Seal Beach, collects and treats wastewater at regional facilities. According to the 2015 Urban Water Management Plan for the City, OCSD's collection system eventually feeds into OCSD Plant No. 1 in Fountain Valley and Plant No. 2 in Huntington Beach (City 2016a). OCSD Plant No. 1 has a treatment capacity of 320 million gallons per day (MGD) and OCSD Plant No. 2 has a treatment capacity of 312 MGD (City 2016a). Based on the CalEEMod default estimates for water use, the gas station and convenience store would use approximately 177,000 gallons of water annually (Appendix A) for indoor uses such as restrooms. Conservatively assuming that all indoor water use would end as wastewater, the project is estimated to generate approximately 485 gallons per day (gpd). This volume is well within the remaining treatment capacity of the OCSD plants.

With regard to storm drain facilities, as noted above in Item X.c.iii., the project would include the construction of bioretention basins, storm drains, filters, and a catch basin to accommodate storm water resulting from the increase in on-site runoff (see Figures 4 and 5). As such, the project would not require the construction or expansion of additional, off-site storm water drainage facilities. No additional improvements are anticipated to either water lines, sewer lines, storm drains, or treatment facilities to serve the proposed project, as the project represents a very small use in the context of all development served. Standard connection fees would address any incremental impacts of the proposed project. Therefore, the project would result in less than significant impacts from construction or expansion of water, wastewater, stormwater, or related treatment facilities.

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. See Item XIX.b. The project's water use would be accommodated by the City's water sources, and impacts would be less than significant.

- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. See Item XIX.a. The amount of wastewater generated by the project would be well within the remaining treatment capacity of OCSD, and impacts would be less than significant.

- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. Republic Services provides exclusive waste and recycling collection services for residential and commercial uses in the City of Seal Beach (Republic Services 2018). Republic Services operates landfills in Gardena and Anaheim (CalRecycle 2018a and 2018b). The Gardena facility has a max permitted throughput of 2,225 tons per day (CalRecycle 2018a); the Anaheim facility has a maximum permitted throughout of 6,000 tons per day (CalRecycle 2018b).

For project operation, CalRecycle lists various waste generation factors for commercial uses; the most conservative commercial waste generation listed 13 pounds per 1,000 square foot per day (CalRecycle 2018c). With a 2,438 square foot mart and 4,052 square foot gas station area, it is assumed that the project would generate approximately 84 pounds per day. The addition of 84 pounds per day (0.04 tons)

of solid waste would not be anticipated to exceed the solid waste capacity of Republic Services facilities given the tiny fraction the waste represents of the capacity of the facilities. In addition, per AB 341 standards, a 75 percent diversion rate for operational waste would be achieved.

Project construction would be short-term over approximately six months and given the above stated max permitted throughput of the landfills above, solid waste from construction of a project with a gas station and convenience store would not be substantial that the permitted capacity would be exceeded.

Therefore, impacts to the capacity of landfills would be less than significant.

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

No Impact. See Item XIX.f, above. The proposed project, during both construction and operation, would not exceed the capacity of local landfills, and, in addition, the project would comply with AB 341. Therefore, no impacts to applicable, federal, state, and local statutes and regulations would occur.

XX. WILDFIRE

WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The project site is located in an urbanized area with flat topography in close proximity to the Pacific Ocean, and no areas containing substantial amounts of natural vegetation or hillside areas susceptible to wildfire risks are located near the property. While a portion of the Los Cerritos Wetlands is located east of the project site and contains some natural vegetation areas, these wetlands are tidally influenced lowland areas that are not typically susceptible to wildfire hazards. In addition, no portion of the City is located within a designated Very High Fire Hazard Severity Zones (VHFHSZ) as determined by the California Department of Forestry and Fire Protection (Cal Fire, 2007). Furthermore, as discussed

above in Item IX.f., the project site does not contain emergency facilities, nor does it serve as an emergency evacuation route. During construction, no road closures would be necessary (Kimley-Horn and Associates, Inc 2017). During operation, the project would have four driveways for access, and an alleyway lane runs behind the project site. In addition, a fire hydrant is located on the sidewalk in front of the project on Pacific Coast Highway for fire-related issues. Upon completion of construction, emergency access to the site and surrounding areas would not be affected by the project. Therefore, no impacts would occur.

- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. Although the proposed project would involve the sale of vehicle fuels, which are themselves highly flammable, given the lack of natural vegetation sources or hillside areas in the immediate vicinity, the potential for the project to contribute to wildfire risks is considered remote. As such, the project would not exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors. No impact would occur.

- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The project would involve the development of a new gas station on a properly previously occupied by a similar use. The project site is served by all necessary utilities and is surrounded by public streets and urban development on all sides. Therefore, the project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No impact would occur.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The project site is located in an urbanized area characterized by existing development and flat topography. Given the flat, urbanized nature of the project area, the potential for the project to result directly in or otherwise contribute to significant risks to people or structures, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes is considered remote. No impact would occur.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

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

a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant with Mitigation. The project would have no impacts on biological resources. The project may result in potentially significant impacts to unknown archaeological and tribal resources. However, potential degradation of the quality of the environment would be reduced to below a level of significance through implementation of mitigation measures CUL-1 through CUL-4, as identified in Section V.

b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects)?

Less Than Significant Impact. Cumulative projects in the area, as identified by the project TIS, include Tentative Tract Map 17425, a development of 30 single-family residential units approximately 1750 feet to the south, and the 2nd + PCH Project, which is demolition of an existing hotel and construction of retail and restaurant uses approximately one mile to the north. In addition, the Bay Theater Restoration Project, located at 340 Main Street, would occur approximately 1,200 feet southeast of the proposed project. However, the Bay Theater Restoration Project would only include restoration of a closed theater. These future projects within the surrounding area would be required to comply with applicable

local, state, and federal regulations to reduce potential impacts to less than significant in compliance with CEQA, or to the extent possible. In addition, as discussed under Item III.c, cumulative impacts from air quality emissions would not be cumulatively considerable from the project. Therefore, the project is not anticipated to contribute to cumulatively considerable environmental impacts.

- c) Have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant with Mitigation. The proposed project would cause an increase in ambient noise levels during construction and occasional operational maintenance. However, impacts would be temporary and in compliance with local ordinances, and noise levels would be reduced through implementation of project design features. The temporarily increased noise levels would not cause substantial adverse impacts on human beings.

The project would result in airborne emissions of benzene (a hydrocarbon). An HRA was performed to determine the potential cancer risks from those emissions. The project's emissions would be less than the applicable cancer risk thresholds and impacts from the release of airborne hazardous materials during routine operation would be less than significant.

Risks may occur to humans due to the potential for seismic ground shaking, liquefaction, unstable soil, and/or expansive soil to affect project structures, including the underground storage tanks. These impacts would be mitigated through mitigation measure GEO-1.

Risks may also occur to humans from hazardous materials associated with the project from construction that may encounter existing hydrocarbon contamination in the soil and groundwater, and from project operation that may result in similar contamination through leaking from the project's underground storage tanks or from general spillage of gasoline above ground. These impacts would be mitigation through mitigation measures HAZ-1 through HAZ-3.

3.0 REFERENCES

California Air Pollution Control Officers Association (CAPCOA)

- 1997 Gasoline Service Station Industrywide Risk Assessment Guidelines. Available at:
<https://www.arb.ca.gov/ab2588/rrap-iwra/GasIWRA.pdf>

California Air Resources Board (CARB)

- 2018a iADAM: Air Quality Data Statistics. Available: <https://www.arb.ca.gov/adam>. Accessed September 2018.
- 2017 The 2017 Climate Change Scoping Plan Update. January. Available:
https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.
- 2014 First Update to the Climate Change Scoping Plan: Building on the Framework. May. Available at:
http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.
- 2008 Climate Change Scoping Plan – A Framework for Change. December.
- 2005 Air Quality and Land Use Handbook: A Community Health Perspective. Available at:
<https://www.arb.ca.gov/ch/handbook.pdf>

California Building Standards Commission

- 2017 CALGreen (CCR Title 24, Part 11). Available:
<http://www.bsc.ca.gov/Home/CALGreen.aspx>.

California Department of Conservation (CDC)

- 2018 California Important Farmland Finder. Available from:
<https://maps.conservation.ca.gov/DLRP/CIFF/>.

California Department of Forestry and Fire Protection (Cal Fire)

- 2007 Fire Hazards Severity Zones Maps. Available from:
<https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

California Department of Transportation (Caltrans)

- 2013 Transportation and Construction Vibration Guidance Manual. Available from:
http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf.
- 2011 California Scenic Highway Mapping System. September 7. Available at:
http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm

California Geological Survey

- 2016 Earthquake Zones of Required Investigation, Seal Beach Quadrangle. Available at:
http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/SEAL_BEACH_EZRIM.pdf

CalRecycle

2018a CVT Regional Material Recovery and TS (30-AB-0335). Available at:
<https://www2.calrecycle.ca.gov/swfacilities/Directory/30-AB-0335/>

2018b Estimated Solid Waste Generation Rates. Accessed October 8, 2018. Available at:
<https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>

2018c American Waste Transfer Station (19-AA-0001). Available at:
<https://www2.calrecycle.ca.gov/swfacilities/Directory/19-AA-0001/>

Federal Emergency Management Agency (FEMA)

2018 FEMA Flood Map Service Center, #06059C0226J. Accessed on October 9, 2018. Available at:
<https://msc.fema.gov/portal/search?AddressQuery=490%20pch%2C%20seal%20beach%2C%20ca#searchresultsanchor>

HELIX Environmental Planning, Inc.

2018 490 Pacific Coast Highway Project, Seal Beach, Orange County, California, Cultural Resources Survey. October.

Intergovernmental Panel on Climate Change

2007 *Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* February.

Kimley-Horn and Associates, Inc.

2017 Traffic Impact Study for the 490 Pacific Coast Highway Project in the City of Seal Beach. December.

Office of Environmental Health Hazard Assessment (OEHHA)

2015 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Available at: <https://oehha.ca.gov/air/cnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>

Orange, County of

2012 County of Orange General Plan. Available at:
<https://www.ocgov.com/gov/pw/cd/planning/generalplan2005.asp>

Orange County Health Care Agency

2018 UST Forms. Accessed on October 10, 2018. Available at:
<http://www.occupainfo.com/programs/ustforms>

Orange County Airport Land Use Commission

2016 Airport Environs Land Use Plan for Joint Forces Training Base, Los Alamitos.

Orange County Public Works

2013 Technical Guidance Document for the Preparation of Conceptual/Preliminary And/Or Project Water Quality Management Plans (WQMPs).

Orange County Stormwater Program

- 2007 Drainage Area Management Plan. Available at:
https://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/docs/ocpermit/2007/2007_damp.pdf

Orange County Transportation Authority

- 2017 2017 Orange County Congestion Management Program. October. Available at:
<http://www.octa.net/pdf/2017%20Final%20CMP.pdf>

Republic Services

- 2018 City of Seal Beach (Trash & Recycle Services). Accessed on October 8, 2018. Available at:
<http://local.republicservices.com/site/los-angeles-ca/seal-beach>

Santa Ana Regional Water Quality Control Board (RWQCB)

- 2016 Water Quality Control Plan. Available at:
https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/

Seal Beach, City of

- 2018a Seal Beach Municipal Code. Last revised September. Available at:
<http://www.qcode.us/codes/sealbeach/main.php>
- 2018b Environmental Documents Under Review. Available at:
<http://www.sealbeachca.gov/Departments/Community-Development/Planning-Development/Environmental-Documents-Under-Review>. Accessed October 8, 2018.
- 2016a City of Seal Beach 2015 Urban Water Management Plan, Final. June.
- 2016b LA Fitness Health Club Initial Study. December.
- 2010 Zoning Map (Old Town & Bridgeport). June.
- 2003 City of Seal Beach General Plan. December. Available at:
<http://www.sealbeachca.gov/Departments/Community-Development/Planning-Development/General-Plan>

South Coast Air Quality Management District (SCAQMD)

- 2017a 2016 Air Quality Management Plan. Available at:
<http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>.
- 2017b Risk Assessment Procedure for Rules 1401, 1401.1 and 212. Available at:
<http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12>.
- 2016 National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. Available at:
<http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>.

- 2015 SCAQMD Air Quality Significance Thresholds. Available:
<http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>
- 2009a Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. Available:
<http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf>. Accessed September 2018
- 2009b Mass Rate Localized Significance Thresholds Look-up Tables. Available from:
<http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>.
- 2008 Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. December.
- 2007 Emission Inventory and Risk Assessment guidelines for Gasoline Dispensing Stations. January. Available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/gas_station_hra.pdf.
- 1993 CEQA Air Quality Handbook.
- Stantec
- 2018 Third Quarter 2018 Quarterly Groundwater Monitoring and Remediation System Operations Status Report. Available at:
https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6174820184/T0605900372.PDF
- 2017 Third Quarter 2017 Quarterly Groundwater Monitoring and Remediation System Operations Status Report. Available at:
https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5834724128/T0605900372.PDF
- State Water Resources Control Board
- 2018 Geotracker Database, Arco #6066. Available from:
https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605900372.
- U.S. Environmental Protection Agency (USEPA)
- 2015 Revisions Underground Storage Tank Regulations. July 15. Available at:
<https://www.gpo.gov/fdsys/pkg/FR-2015-07-15/pdf/2015-15914.pdf>
- U.S. Department of Transportation
- 2008 Roadway Construction Noise Model.
- U.S. Fish and Wildlife Service
- 2012 Seal Beach National Wildlife Refuge. December 20. Available at:
https://www.fws.gov/refuge/Seal_Beach/what_we_do/conservation.html

Waber Consultants, Inc

2018 County of Orange/Santa Ana Region Priority Project Water Quality Management Plan (WQMP). April.

Appendix A

Air Quality, Greenhouse Gas,
and Energy Data Outputs

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market With Gas Pumps	2.40	1000sqft	0.06	2,400.00	0
Parking Lot	13.00	Space	0.12	5,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use -

Construction Phase -

Grading -

Architectural Coating - Low VOC coating

Vehicle Trips - Per Traffic Impact Study (Kimley Horn 2017)

Area Coating - Low VOC coating

Construction Off-road Equipment Mitigation -

Water Mitigation - Per CalGreen

Waste Mitigation - Per AB-341

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	PhaseEndDate	6/19/2020	7/31/2020
tblConstructionPhase	PhaseEndDate	6/5/2020	7/17/2020
tblConstructionPhase	PhaseEndDate	1/17/2020	2/4/2020
tblConstructionPhase	PhaseEndDate	6/12/2020	7/24/2020
tblConstructionPhase	PhaseEndDate	1/15/2020	1/1/2020
tblConstructionPhase	PhaseStartDate	6/13/2020	7/25/2020
tblConstructionPhase	PhaseStartDate	1/18/2020	3/1/2020
tblConstructionPhase	PhaseStartDate	1/16/2020	2/1/2020
tblConstructionPhase	PhaseStartDate	6/6/2020	7/18/2020
tblConstructionPhase	PhaseStartDate	1/15/2020	1/1/2020
tblGrading	MaterialExported	0.00	80.00
tblVehicleTrips	ST_TR	1,448.33	958.33
tblVehicleTrips	SU_TR	1,182.08	958.33
tblVehicleTrips	WD_TR	845.60	958.33

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	0.1258	0.1258
2	4-1-2020	6-30-2020	0.3198	0.3198
3	7-1-2020	9-30-2020	0.0909	0.0909
		Highest	0.3198	0.3198

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	9.6200e-003	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004
Energy	3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5841	9.5841	3.9000e-004	8.0000e-005	9.6190
Mobile	0.4416	1.3937	3.1088	7.0200e-003	0.5206	8.0600e-003	0.5287	0.1394	7.5400e-003	0.1470	0.0000	647.5290	647.5290	0.0399	0.0000	648.5267
Waste						0.0000	0.0000		0.0000	0.0000	1.4636	0.0000	1.4636	0.0865	0.0000	3.6259
Water						0.0000	0.0000		0.0000	0.0000	0.0564	1.1232	1.1796	5.8400e-003	1.5000e-004	1.3692
Total	0.4513	1.3939	3.1092	7.0200e-003	0.5206	8.0800e-003	0.5287	0.1394	7.5600e-003	0.1470	1.5200	658.2367	659.7567	0.1326	2.3000e-004	663.1412

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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	9.6200e-003	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004
Energy	3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5841	9.5841	3.9000e-004	8.0000e-005	9.6190
Mobile	0.4416	1.3937	3.1088	7.0200e-003	0.5206	8.0600e-003	0.5287	0.1394	7.5400e-003	0.1470	0.0000	647.5290	647.5290	0.0399	0.0000	648.5267
Waste						0.0000	0.0000		0.0000	0.0000	1.0977	0.0000	1.0977	0.0649	0.0000	2.7194
Water						0.0000	0.0000		0.0000	0.0000	0.0451	0.8986	0.9437	4.6700e-003	1.2000e-004	1.0954
Total	0.4513	1.3939	3.1092	7.0200e-003	0.5206	8.0800e-003	0.5287	0.1394	7.5600e-003	0.1470	1.1428	658.0121	659.1548	0.1098	2.0000e-004	661.9609

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.81	0.03	0.09	17.18	13.04	0.18

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/1/2020	5	1	
2	Grading	Grading	2/1/2020	2/4/2020	5	2	
3	Building Construction	Building Construction	3/1/2020	7/17/2020	5	100	
4	Paving	Paving	7/18/2020	7/24/2020	5	5	
5	Architectural Coating	Architectural Coating	7/25/2020	7/31/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.12

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,600; Non-Residential Outdoor: 1,200; Striped Parking Area: 312 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	3.4000e-004	4.2200e-003	2.0500e-003	0.0000	2.7000e-004	1.7000e-004	4.4000e-004	3.0000e-005	1.5000e-004	1.8000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314

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3.2 Site Preparation - 2020

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	4.0000e-005	1.4200e-003	3.6000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3845	0.3845	4.0000e-005	0.0000	0.3855
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0238
Total	5.0000e-005	1.4300e-003	4.4000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.4082	0.4082	4.0000e-005	0.0000	0.4093

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					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	3.4000e-004	4.2200e-003	2.0500e-003	0.0000	1.2000e-004	1.7000e-004	2.9000e-004	1.0000e-005	1.5000e-004	1.6000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314

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3.2 Site Preparation - 2020

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	4.0000e-005	1.4200e-003	3.6000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3845	0.3845	4.0000e-005	0.0000	0.3855
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0238
Total	5.0000e-005	1.4300e-003	4.4000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.4082	0.4082	4.0000e-005	0.0000	0.4093

3.3 Grading - 2020

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005	7.5000e-004	4.7000e-004	1.2200e-003	4.1000e-004	4.5000e-004	8.6000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457

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3.3 Grading - 2020

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	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0950	0.0950	0.0000	0.0000	0.0951
Total	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0950	0.0950	0.0000	0.0000	0.0951

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					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005	3.4000e-004	4.7000e-004	8.1000e-004	1.9000e-004	4.5000e-004	6.4000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457

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3.3 Grading - 2020

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	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0950	0.0950	0.0000	0.0000	0.0951
Total	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0950	0.0950	0.0000	0.0000	0.0951

3.4 Building Construction - 2020

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	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4348
Total	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4348

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3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	5.3000e-003	1.4400e-003	1.0000e-005	3.1000e-004	3.0000e-005	3.4000e-004	9.0000e-005	3.0000e-005	1.2000e-004	0.0000	1.2171	1.2171	1.0000e-004	0.0000	1.2197
Worker	5.8000e-004	4.1000e-004	4.6500e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4252	1.4252	3.0000e-005	0.0000	1.4261
Total	7.4000e-004	5.7100e-003	6.0900e-003	3.0000e-005	1.9600e-003	4.0000e-005	2.0000e-003	5.3000e-004	4.0000e-005	5.7000e-004	0.0000	2.6424	2.6424	1.3000e-004	0.0000	2.6457

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	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4347
Total	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4347

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3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6000e-004	5.3000e-003	1.4400e-003	1.0000e-005	3.1000e-004	3.0000e-005	3.4000e-004	9.0000e-005	3.0000e-005	1.2000e-004	0.0000	1.2171	1.2171	1.0000e-004	0.0000	1.2197
Worker	5.8000e-004	4.1000e-004	4.6500e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4252	1.4252	3.0000e-005	0.0000	1.4261
Total	7.4000e-004	5.7100e-003	6.0900e-003	3.0000e-005	1.9600e-003	4.0000e-005	2.0000e-003	5.3000e-004	4.0000e-005	5.7000e-004	0.0000	2.6424	2.6424	1.3000e-004	0.0000	2.6457

3.5 Paving - 2020

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	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	1.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0900e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653

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3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.3900e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4276	0.4276	1.0000e-005	0.0000	0.4278
Total	1.8000e-004	1.2000e-004	1.3900e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4276	0.4276	1.0000e-005	0.0000	0.4278

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	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	1.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0900e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653

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3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.2000e-004	1.3900e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4276	0.4276	1.0000e-005	0.0000	0.4278
Total	1.8000e-004	1.2000e-004	1.3900e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4276	0.4276	1.0000e-005	0.0000	0.4278

3.6 Architectural Coating - 2020

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	5.9200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	6.5300e-003	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396

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3.6 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0238
Total	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0238

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	5.9200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	6.5300e-003	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396

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3.6 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0238
Total	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0238

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive 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	0.4416	1.3937	3.1088	7.0200e-003	0.5206	8.0600e-003	0.5287	0.1394	7.5400e-003	0.1470	0.0000	647.5290	647.5290	0.0399	0.0000	648.5267
Unmitigated	0.4416	1.3937	3.1088	7.0200e-003	0.5206	8.0600e-003	0.5287	0.1394	7.5400e-003	0.1470	0.0000	647.5290	647.5290	0.0399	0.0000	648.5267

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	2,299.99	2,299.99	2,299.99	1,372,807	1,372,807
Parking Lot	0.00	0.00	0.00		
Total	2,299.99	2,299.99	2,299.99	1,372,807	1,372,807

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002
Parking Lot	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.3280	9.3280	3.9000e-004	8.0000e-005	9.3613
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.3280	9.3280	3.9000e-004	8.0000e-005	9.3613
NaturalGas Mitigated	3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2562	0.2562	0.0000	0.0000	0.2577
NaturalGas Unmitigated	3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2562	0.2562	0.0000	0.0000	0.2577

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	4800	3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2562	0.2562	0.0000	0.0000	0.2577
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		3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2562	0.2562	0.0000	0.0000	0.2577

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					
Convenience Market With Gas Pumps	4800	3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2562	0.2562	0.0000	0.0000	0.2577
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		3.0000e-005	2.4000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2562	0.2562	0.0000	0.0000	0.2577

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	27456	8.7481	3.6000e-004	7.0000e-005	8.7794
Parking Lot	1820	0.5799	2.0000e-005	0.0000	0.5820
Total		9.3280	3.8000e-004	7.0000e-005	9.3613

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	27456	8.7481	3.6000e-004	7.0000e-005	8.7794
Parking Lot	1820	0.5799	2.0000e-005	0.0000	0.5820
Total		9.3280	3.8000e-004	7.0000e-005	9.3613

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive 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	9.6200e-003	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004
Unmitigated	9.6200e-003	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004
Total	9.6200e-003	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004
Total	9.6200e-003	0.0000	2.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.8000e-004	3.8000e-004	0.0000	0.0000	4.1000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.9437	4.6700e-003	1.2000e-004	1.0954
Unmitigated	1.1796	5.8400e-003	1.5000e-004	1.3692

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.177774 / 0.108958	1.1796	5.8400e-003	1.5000e-004	1.3692
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		1.1796	5.8400e-003	1.5000e-004	1.3692

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.142219 / 0.0871666	0.9437	4.6700e-003	1.2000e-004	1.0954
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.9437	4.6700e-003	1.2000e-004	1.0954

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0977	0.0649	0.0000	2.7194
Unmitigated	1.4636	0.0865	0.0000	3.6259

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market With Gas Pumps	7.21	1.4636	0.0865	0.0000	3.6259
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		1.4636	0.0865	0.0000	3.6259

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market With Gas Pumps	5.4075	1.0977	0.0649	0.0000	2.7194
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		1.0977	0.0649	0.0000	2.7194

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market With Gas Pumps	2.40	1000sqft	0.06	2,400.00	0
Parking Lot	13.00	Space	0.12	5,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use -

Construction Phase -

Grading -

Architectural Coating - Low VOC coating

Vehicle Trips - Per Traffic Impact Study (Kimley Horn 2017)

Area Coating - Low VOC coating

Construction Off-road Equipment Mitigation -

Water Mitigation - Per CalGreen

Waste Mitigation - Per AB-341

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	PhaseEndDate	6/19/2020	7/31/2020
tblConstructionPhase	PhaseEndDate	6/5/2020	7/17/2020
tblConstructionPhase	PhaseEndDate	1/17/2020	2/4/2020
tblConstructionPhase	PhaseEndDate	6/12/2020	7/24/2020
tblConstructionPhase	PhaseEndDate	1/15/2020	1/1/2020
tblConstructionPhase	PhaseStartDate	6/13/2020	7/25/2020
tblConstructionPhase	PhaseStartDate	1/18/2020	3/1/2020
tblConstructionPhase	PhaseStartDate	1/16/2020	2/1/2020
tblConstructionPhase	PhaseStartDate	6/6/2020	7/18/2020
tblConstructionPhase	PhaseStartDate	1/15/2020	1/1/2020
tblGrading	MaterialExported	0.00	80.00
tblVehicleTrips	ST_TR	1,448.33	958.33
tblVehicleTrips	SU_TR	1,182.08	958.33
tblVehicleTrips	WD_TR	845.60	958.33

2.0 Emissions Summary

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2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0528	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003
Energy	1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563
Mobile	2.5453	7.5525	17.2390	0.0380	2.9118	0.0448	2.9566	0.7786	0.0419	0.8205		3,857.983 3	3,857.983 3	0.2467		3,864.151 1
Total	2.5982	7.5538	17.2416	0.0380	2.9118	0.0449	2.9567	0.7786	0.0420	0.8206		3,859.533 8	3,859.533 8	0.2468	3.0000e-005	3,865.711 1

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0528	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003
Energy	1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563
Mobile	2.5453	7.5525	17.2390	0.0380	2.9118	0.0448	2.9566	0.7786	0.0419	0.8205		3,857.983 3	3,857.983 3	0.2467		3,864.151 1
Total	2.5982	7.5538	17.2416	0.0380	2.9118	0.0449	2.9567	0.7786	0.0420	0.8206		3,859.533 8	3,859.533 8	0.2468	3.0000e-005	3,865.711 1

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	1/1/2020	5	1	
2	Grading	Grading	2/1/2020	2/4/2020	5	2	
3	Building Construction	Building Construction	3/1/2020	7/17/2020	5	100	
4	Paving	Paving	7/18/2020	7/24/2020	5	5	
5	Architectural Coating	Architectural Coating	7/25/2020	7/31/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.12

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,600; Non-Residential Outdoor: 1,200; Striped Parking Area: 312 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

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					0.5393	0.0000	0.5393	0.0586	0.0000	0.0586			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	0.6853	8.4307	4.0942	9.7400e-003	0.5393	0.3353	0.8746	0.0586	0.3085	0.3671		943.4872	943.4872	0.3051		951.1158

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3.2 Site Preparation - 2020

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	0.0774	2.7843	0.7315	7.5400e-003	0.1741	9.0700e-003	0.1832	0.0477	8.6700e-003	0.0563		840.1799	840.1799	0.0905		842.4431
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	0.0217	0.0133	0.1513	5.2000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		51.5811	51.5811	1.1800e-003		51.6105
Total	0.0991	2.7976	0.8828	8.0600e-003	0.2300	9.4400e-003	0.2394	0.0625	9.0100e-003	0.0715		891.7610	891.7610	0.0917		894.0536

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					0.2427	0.0000	0.2427	0.0264	0.0000	0.0264			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	0.6853	8.4307	4.0942	9.7400e-003	0.2427	0.3353	0.5780	0.0264	0.3085	0.3349	0.0000	943.4872	943.4872	0.3051		951.1158

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3.2 Site Preparation - 2020

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	0.0774	2.7843	0.7315	7.5400e-003	0.1741	9.0700e-003	0.1832	0.0477	8.6700e-003	0.0563		840.1799	840.1799	0.0905		842.4431
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	0.0217	0.0133	0.1513	5.2000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		51.5811	51.5811	1.1800e-003		51.6105
Total	0.0991	2.7976	0.8828	8.0600e-003	0.2300	9.4400e-003	0.2394	0.0625	9.0100e-003	0.0715		891.7610	891.7610	0.0917		894.0536

3.3 Grading - 2020

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	0.8674	7.8729	7.6226	0.0120	0.7528	0.4672	1.2200	0.4138	0.4457	0.8595		1,147.2352	1,147.2352	0.2169		1,152.6578

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3.3 Grading - 2020

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	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210
Total	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210

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					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	0.8674	7.8729	7.6226	0.0120	0.3387	0.4672	0.8059	0.1862	0.4457	0.6319	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578

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3.3 Grading - 2020

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	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210
Total	0.0434	0.0266	0.3025	1.0300e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		103.1621	103.1621	2.3500e-003		103.2210

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962

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3.4 Building Construction - 2020

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	3.3400e-003	0.1041	0.0301	2.4000e-004	6.3900e-003	5.5000e-004	6.9400e-003	1.8400e-003	5.3000e-004	2.3700e-003		26.4466	26.4466	2.3000e-003		26.5042
Worker	0.0130	7.9800e-003	0.0908	3.1000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.1000e-003		30.9486	30.9486	7.1000e-004		30.9663
Total	0.0164	0.1121	0.1209	5.5000e-004	0.0399	7.7000e-004	0.0407	0.0107	7.3000e-004	0.0115		57.3952	57.3952	3.0100e-003		57.4705

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962

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3.4 Building Construction - 2020

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	3.3400e-003	0.1041	0.0301	2.4000e-004	6.3900e-003	5.5000e-004	6.9400e-003	1.8400e-003	5.3000e-004	2.3700e-003		26.4466	26.4466	2.3000e-003		26.5042
Worker	0.0130	7.9800e-003	0.0908	3.1000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.1000e-003		30.9486	30.9486	7.1000e-004		30.9663
Total	0.0164	0.1121	0.1209	5.5000e-004	0.0399	7.7000e-004	0.0407	0.0107	7.3000e-004	0.0115		57.3952	57.3952	3.0100e-003		57.4705

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.0629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8344	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323

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3.5 Paving - 2020

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	0.0782	0.0479	0.5446	1.8600e-003	0.2012	1.3300e-003	0.2025	0.0534	1.2300e-003	0.0546		185.6918	185.6918	4.2400e-003		185.7977
Total	0.0782	0.0479	0.5446	1.8600e-003	0.2012	1.3300e-003	0.2025	0.0534	1.2300e-003	0.0546		185.6918	185.6918	4.2400e-003		185.7977

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.0629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8344	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323

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3.5 Paving - 2020

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	0.0782	0.0479	0.5446	1.8600e-003	0.2012	1.3300e-003	0.2025	0.0534	1.2300e-003	0.0546		185.6918	185.6918	4.2400e-003		185.7977
Total	0.0782	0.0479	0.5446	1.8600e-003	0.2012	1.3300e-003	0.2025	0.0534	1.2300e-003	0.0546		185.6918	185.6918	4.2400e-003		185.7977

3.6 Architectural Coating - 2020

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	2.3694					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	2.6116	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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3.6 Architectural Coating - 2020

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	4.3400e-003	2.6600e-003	0.0303	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0300e-003		10.3162	10.3162	2.4000e-004		10.3221
Total	4.3400e-003	2.6600e-003	0.0303	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0300e-003		10.3162	10.3162	2.4000e-004		10.3221

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	2.3694					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	2.6116	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

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3.6 Architectural Coating - 2020

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	4.3400e-003	2.6600e-003	0.0303	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0300e-003		10.3162	10.3162	2.4000e-004		10.3221
Total	4.3400e-003	2.6600e-003	0.0303	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	7.0000e-005	3.0300e-003		10.3162	10.3162	2.4000e-004		10.3221

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5453	7.5525	17.2390	0.0380	2.9118	0.0448	2.9566	0.7786	0.0419	0.8205		3,857.983 3	3,857.983 3	0.2467		3,864.151 1
Unmitigated	2.5453	7.5525	17.2390	0.0380	2.9118	0.0448	2.9566	0.7786	0.0419	0.8205		3,857.983 3	3,857.983 3	0.2467		3,864.151 1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	2,299.99	2,299.99	2,299.99	1,372,807	1,372,807
Parking Lot	0.00	0.00	0.00		
Total	2,299.99	2,299.99	2,299.99	1,372,807	1,372,807

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002
Parking Lot	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563
NaturalGas Unmitigated	1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Convenience Market With Gas Pumps	13.1507	1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563
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		1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563

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					
Convenience Market With Gas Pumps	0.0131507	1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563
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		1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5471	1.5471	3.0000e-005	3.0000e-005	1.5563

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0528	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003
Unmitigated	0.0528	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5000e-004	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003
Total	0.0528	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5000e-004	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003
Total	0.0528	1.0000e-005	1.5800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3700e-003	3.3700e-003	1.0000e-005		3.6000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Construction Energy Use

Off-Road Construction Equipment Energy Use										
Phase	Equipment	Fuel	HP	Equipment Count	Hours/Day	Work Days	Gallons /Hour	Gallons /Day	Total Gallons	Total KBtu
Grading	Concrete/Industrial Saws	Diesel	81	1	8.0	1	3.40135	27.211	27.2	3,782
	Rubber Tired Dozers	Diesel	247	1	1.0	1	5.04717	5.047	5.0	702
	Tractors/Loaders/Backhoes	Diesel	97	2	6.0	1	1.85320	22.238	22.2	3,091
Site Preparation	Graders	Diesel	187	1	8.0	2	3.95548	31.644	63.3	8,797
	Tractors/Loaders/Backhoes	Diesel	97	1	8.0	2	1.85320	14.826	29.7	4,122
Building Construction	Cranes	Diesel	231	1	4.0	100	3.44094	13.764	1,376.4	191,317
	Forklifts	Diesel	89	2	6.0	100	1.85245	22.229	2,222.9	308,989
	Tractors/Loaders/Backhoes	Diesel	97	2	8.0	100	1.85320	29.651	2,965.1	412,153
Paving	Cement and Mortar Mixers	Diesel	9	4	6.0	5	0.28834	6.920	34.6	4,809
	Pavers	Diesel	130	1	7.0	5	2.79827	19.588	97.9	13,614
	Rollers	Diesel	80	1	7.0	5	1.55296	10.871	54.4	7,555
	Tractors/Loaders/Backhoes	Diesel	97	1	7.0	5	1.85320	12.972	64.9	9,016
Architectural Coating	Air Compressors	Diesel	78	1	6.0	5	1.18142	7.089	35.4	4,927
Total									6,999.1	972,872

Notes:

1. Equipment types and horsepower from CalEEMod defaults.
2. Equipment count and hours from CalEEMod for the AQ/GHG report.
3. Fuel consumption factors from CARB OFFROAD2017- ORION Web Database, for San Diego county, aggregate model years for 2020. <https://www.arb.ca.gov/orion/>
4. 1 Gallon of diesel = 139,000 Btu

On-Road Construction Energy Use										
Phase	Trip Type (Fleet Mix)	Trips	Distance (miles)	Work Days	Total VMT	gallons diesel/VMT	Total diesel gallons	gallons gas/VMT	Total gasoline gallons	Total KBtu
Grading	Worker (LDA, LDT1, LDT2)	10	14.7	1	147	0.000222523	0.03	0.036148348	5.31	663
Site Preparation	Worker (LDA, LDT1, LDT2)	5	14.7	2	147	0.000222523	0.03	0.036148348	5.31	663
Site Preparation	Hauling (HHDT)	10	20	2.00	200	0.161758496	32.35	0.000279275	0.06	4,504
Building Construction	Worker (LDA, LDT1, LDT2)	3	14.7	100	4410	0.000222523	0.98	0.036148348	159.41	19,904
Building Construction	Vendor (HHDT, MHDT)	1	6.9	100	690	0.133316243	91.99	0.013349803	9.21	13,929
Paving	Worker (LDA, LDT1, LDT2)	18	14.7	5	1323	0.000222523	0.29	0.036148348	47.82	5,971
Architectural Coating	Worker (LDA, LDT1, LDT2)	1	14.7	5	73.5	0.000222523	0.02	0.036148348	2.66	332
Total					6,991		125.70		229.79	45,966

Notes:

1. Fleet mix and trip distances from CalEEMod defaults.
2. Fuel consumption factors weighted average for fleet mix from CARB EMFAC2107, for San Diego, aggregate model years for 2020, aggregate speeds. <https://www.arb.ca.gov/emfac/2017/>.
3. 1 Gallon of diesel = 139 KBtu; 1 gallon of gasoline = 124 KBtu

Construction Total			
Gallons Diesel		Gallons Gas	KBtu
7,124.78		229.79	1,018,838

Operational Energy Use

On-Road Operational Energy Use																		
Annual VMT	Fleet Mix													Gallons Diesel/VMT	Total Diesel Gallons	Gallons Gas/VMT	Total Gas Gallons	Total KBtu
	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH					
1,372,807	56%	4%	21%	12%	2%	1%	3%	2%	0%	0%	0%	0%	0%	0.006159	8,455.34	0.038272	52540.22	7,690,280

Facility Electricity and Natural Gas			
Type	Source	KWhr	KBtu
Natural Gas	Market	-	4,800
Electricity	Market	27,456	93,684
	Parking Lot	1,820	6,210
	Subtotal	29,276	99,894
Total		29,276	104,694

Facility Water Energy Use								
Source	Water Use (Mgal)		Electricity Intensity Factors (KWhr/Mgal)				KWhr	KBtu
	Indoor	Outdoor	Supply	Treat Water	Distribute	Treat Wastewater		
Market	0.177774	0.108958	9,727	111	1,272	1,911	3,394	11,580
	0	0.000000	9,727	111	1,272	1,911	0	0
Total							3,394	11,580

Project Operation Total		
Energy Type	Quantity	KBtu
Gasoline (Gal)	52,540	6,514,987
Diesel (Gal)	8,455	1,175,293
Natural Gas (Kt)	4,800	4,800
Electricity (KW)	32,670	111,474
Total		7,806,554

Notes:
 1. VMT, Electricity, Natural Gas, and Water use from project CalEEMod.
 2. Fuel consumption factors weighted average for fleet mix from CARB EMFAC2107, for San Diego, aggregate model years for 2020, aggregate speeds. <https://www.arb.ca.gov/emfac/2017/>.
 3. Water electricity intensity factors from CalEEMod default for San Diego County.
 4. Fuel consumption factors for generator from CARB OFFROAD2017- ORION Web Database, for San Diego county, aggregate model years for 2020. <https://www.arb.ca.gov/orion/>.
 5. 1 Gallon of diesel = 139 KBtu; 1 gallon of gasoline = 124 KBtu; 1 KWhr = 3.412142 KBtu.

Appendix B

HRA Model Results

ASE-06 Seal Beach Gas Station HRA Model Inputs and Assumptions

Guiding Documents:

- SCAQMD *Risk Assessment Procedures for Rules 1401, 1401.1 and 212* (2017)
- CAPCOA *Gasoline Service Station Industrywide Risk Assessment Guidelines* (1997)
- OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (2015)

Modeling Tools:

- Air Dispersion – Lakes AERMOD View version 9.6.1
- Health Risks – CARB Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 18159

Gasoline Throughput:

500,000 gallons per month (6 million gallons per year) maximum throughput per the project applicant.

Sources:

The emissions of benzene were modeled in accordance with SCAQMD (2017) gasoline dispensing station risk assessment procedure which breaks the emissions into five sources:

- Loading – Loading emissions occur when a cargo tank truck unloads gasoline to the storage tanks at the gasoline station. Storage tank vapors are emitted from the vent pipe during the initial fuel transfer period. Loading is modeled as a point source.
- Breathing – Gasoline vapors are emitted from the storage tank vent pipe due to temperature and pressure changes within the storage tank vapor space. Breathing is modeled as a point source.
- Refueling – During the refueling process, gasoline vapors are emitted at the vehicle/nozzle interface. Refueling is modeled as a volume source.
- Spillage – Spillage emissions occur from spills during vehicle fueling. Spillage is modeled as a volume source.
- Hose Permeation – Emissions occur when liquid gasoline or gasoline vapors diffuse through the dispensing hose outer surface to the atmosphere. Hose permeation is modeled as a volume source.

The locations of all sources were set at the center of the gas station pump canopy indicated on the project site plan. All recommended values from the SCAQMD guidance were used, except the actual square footage of the gas pump canopy for the project was used for the size of the volume sources. The source modeling assumes that 80 percent of the daily emissions would occur from 6 a.m. to 8 p.m. and 20 percent of the daily emissions would occur from 8 p.m. to 6 a.m. The benzene emissions factor for each source is shown in Table 1, *Benzene Emissions*, and the source parameters are shown in Table 2, *Source Modeling Parameters*.

Table 1
BENZENE EMISSIONS

Process	Emission Factor (pounds/1000 gallons)	Average Hourly Emissions ¹ (pounds/hour)
Loading	0.000683	4.6749E-04
Breathing	0.000109	7.4606E-05
Refueling	0.001460	9.9932E-04
Spillage	0.001700	1.1636E-03
Hose Permeation	0.000041	2.8063E-05

Source: SCAQMD Risk Assessment Procedure for Rules 1401, 1401.1 and 212 (2017).

Notes: ¹Average hourly emissions assume a throughput of 6 million gallons per year.

Table 2
SOURCE MODELING PARAMETERS

Process	Release Height (m)	Point Source Parameters			Volume Source Parameters	
		Stack Diameter (m)	Gas Temperature (K)	Gas Velocity ¹ (m/s)	Volume Side (m)	Volume Height (m)
Loading	3.7	0.05	289	0.01	-	-
Breathing	3.7	0.05	289	0.01	-	-
Refueling	1	-	-	-	19.4	5
Spillage	0	-	-	-	19.4	5
Hose Permeation	1	-	-	-	19.4	5

Source: SQAQMD Risk Assessment Procedure for Rules 1401, 1401.1 and 212 (2017); CAPCOA Gasoline Service Station Industrywide Risk Assessment Guidelines (1997).

Notes: ¹Assumes the vent pipe is fitted with a rain cap and the initial gas exit vertical velocity is near zero; m = meters; m/s = meters per second; K = degrees Kelvin; - = not applicable

Meteorological Data

The SCAQMD provides pre-processed meteorological data suitable for use with AERMOD. The available data set most representative of conditions in the project vicinity was from the Long Beach Airport station, approximately 5 miles northwest of the project site. The Long Beach Airport set includes 5 years of data collected from 2012 to 2016. Urban dispersion coefficients were selected in the model to reflect the developed nature of the project vicinity.

Terrain Data

CARB provides digital elevation model (DEM) files suitable for use in AERMAP (a terrain preprocessing program for AERMOD). Elevation files with 10-meter resolution from the United States Geological Survey quadrangle maps for Los Alamitos and Seal Beach were used in the model to cover the analysis area.

Receptors

To develop risk isopleths, and ensure the area of maximum impact was captured, receptors were placed in a cartesian grid 600 meters by 600 meters, centered on the project site with a grid spacing of 15 meters and a receptor height (flagpole height) of 1.2 meters above the ground. Additional discrete receptors were placed at the residential property line of the 10 closest identified sensitive receptors and at the 2 closest off-site worker buildings.

Health Risk Modeling Scenario:

- Residential cancer risk – 30-year exposure starting at infants in utero in the third trimester of pregnancy; pathway inhalation only; intake rate OEHHA derived method.
- Off-site worker cancer risk – 25-year exposure starting at age 16; pathway inhalation only; intake rate OEHHA derived method.
- Cancer burden – 70-year exposure starting at infants in utero in the third trimester of pregnancy; pathway inhalation only; intake rate OEHHA derived method.

Dispersion Options

Titles C:\Users\martin\Desktop\490PCH\490PCH.isc	
Dispersion Options <input checked="" type="checkbox"/> Regulatory Default <input type="checkbox"/> Non-Default Options	Dispersion Coefficient Urban Population: Name (Optional): Roughness Length:
	Output Type <input checked="" type="checkbox"/> Concentration <input type="checkbox"/> Total Deposition (Dry & Wet) <input type="checkbox"/> Dry Deposition <input type="checkbox"/> Wet Deposition
	Plume Depletion <input type="checkbox"/> Dry Removal <input type="checkbox"/> Wet Removal
	Output Warnings <input type="checkbox"/> No Output Warnings <input type="checkbox"/> Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type OTHER - BENZENE	Exponential Decay <input checked="" type="checkbox"/> Half-life of 4 hrs will be used
Averaging Time Options Hours <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input checked="" type="checkbox"/> 8 <input type="checkbox"/> 12 <input type="checkbox"/> 24 <input type="checkbox"/> Month <input checked="" type="checkbox"/> Period <input type="checkbox"/> Annual	Terrain Height Options <input type="checkbox"/> Flat <input checked="" type="checkbox"/> Elevated SO: Meters RE: Meters TG: Meters
Flagpole Receptors <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Default Height = 1.20 m	

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: MET and DEM Files\KLGB_v9.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: MET and DEM Files\KLGB_v9.PFL
Format Type: Default AERMET format

Wind Speed



Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 22.00 [ft]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2012			
Upper Air		2012			

Data Period

Data Period to Process

Start Date: 1/1/2012 Start Hour: 1 End Date: 12/31/2016 End Hour: 24





















Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

AERMOD

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1												No
8												No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: 490PCH.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
8	ALL	1st	08H1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

Receptor Pathway

AERMOD

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	397280.50	3734333.50	40	40	15.00	15.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	397532.30	3734599.10		2.23	1.20
2	397623.20	3734629.60		2.92	1.20
3	397616.50	3734644.60		2.96	1.20
4	397611.00	3734660.20		2.80	1.20
5	397605.60	3734675.40		2.92	1.20
6	397507.90	3734659.90		2.13	1.20
7	397511.70	3734622.10		2.21	1.20
8	397638.70	3734602.20		3.03	1.20
9	397653.30	3734572.80		2.74	1.20
10	397645.30	3734585.90		2.92	1.20
11	397555.00	3734657.00		2.44	1.20
12	397604.00	3734583.00		2.74	1.20

Plant Boundary Receptors

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	397561.00	3734595.00	FENCEPRI	2.44	
2	397594.00	3734612.00	FENCEPRI	2.74	
3	397581.00	3734647.00	FENCEPRI	2.74	
4	397565.00	3734649.00	FENCEPRI	2.61	
5	397539.00	3734642.00	FENCEPRI	2.44	
6	397538.00	3734616.00	FENCEPRI	2.44	

Receptor Pathway

AERMOD

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors
2	FENCEINT	Cartesian plant boundary Intermediate Receptors

Source Pathway - Source Inputs

AERMOD

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	STCK1	397573.00	3734626.00	2.74	3.70	0.00006	289.00	0.01	0.05
		Loading							
POINT	STCK2	397573.00	3734626.00	2.74	3.70	9.40E-6	289.00	0.01	0.05
		Breathing							

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL1	397573.00	3734626.00	2.74	0.00	0.00015	19.40	Surface-Based	4.51	2.33
		Spillage								
VOLUME	VOL2	397573.00	3734626.00	2.74	1.00	0.00013	19.40	Surface-Based	4.51	1.16
		Refueling								
VOLUME	VOL3	397573.00	3734626.00	2.74	1.00	3.54E-6	19.40	Surface-Based	4.51	1.16
		Hose Permeation								

Source Pathway

AERMOD

Building Downwash Information

Source ID: <u>STCK1</u>						
Heights [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	5.49	5.49
70-120 deg	5.49	5.49	5.49	5.49	5.49	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	5.49	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Widths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	23.65	22.75
70-120 deg	21.52	22.98	23.74	23.78	23.10	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	23.10	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Lengths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	17.03	13.87
70-120 deg	11.04	14.55	17.61	20.14	22.05	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	22.05	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Along Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	-29.44	-29.65
70-120 deg	-29.34	-31.47	-32.65	-32.83	-32.02	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	9.97	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Across Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	12.16	8.35
70-120 deg	4.27	0.07	-4.13	-8.21	-12.04	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	12.04	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: <u>STCK2</u>						
Heights [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	5.49	5.49

Source Pathway

AERMOD

70-120 deg	5.49	5.49	5.49	5.49	5.49	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	5.49	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Widths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	23.65	22.75
70-120 deg	21.52	22.98	23.74	23.78	23.10	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	23.10	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Lengths [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	17.03	13.87
70-120 deg	11.04	14.55	17.61	20.14	22.05	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	22.05	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Along Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	-29.44	-29.65
70-120 deg	-29.34	-31.47	-32.65	-32.83	-32.02	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	9.97	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00
Across Flow [m] (10 to 360 deg)						
10-60 deg	0.00	0.00	0.00	0.00	12.16	8.35
70-120 deg	4.27	0.07	-4.13	-8.21	-12.04	0.00
130-180 deg	0.00	0.00	0.00	0.00	0.00	0.00
190-240 deg	0.00	0.00	0.00	0.00	0.00	0.00
250-300 deg	0.00	0.00	0.00	0.00	12.04	0.00
310-360 deg	0.00	0.00	0.00	0.00	0.00	0.00

Emission Rate Units for Output

For Concentration

Unit Factor: 1E6
 Emission Unit Label: GRAMS/SEC
 Concentration Unit Label: MICROGRAMS/M**3

Source Pathway

AERMOD

Variable Emissions

Hourly Emission Rate Variation

Scenario: Scenario 2

Source ID:		STCK1					
1 to 6		0.48	0.48	0.48	0.48	0.48	0.48
7 to 12		1.37	1.37	1.37	1.37	1.37	1.37
13 to 18		1.37	1.37	1.37	1.37	1.37	1.37
19 to 24		1.37	1.37	0.48	0.48	0.48	0.48
Source ID:		STCK2					
1 to 6		0.48	0.48	0.48	0.48	0.48	0.48
7 to 12		1.37	1.37	1.37	1.37	1.37	1.37
13 to 18		1.37	1.37	1.37	1.37	1.37	1.37
19 to 24		1.37	1.37	0.48	0.48	0.48	0.48
Source ID:		VOL1					
1 to 6		0.48	0.48	0.48	0.48	0.48	0.48
7 to 12		1.37	1.37	1.37	1.37	1.37	1.37
13 to 18		1.37	1.37	1.37	1.37	1.37	1.37
19 to 24		1.37	1.37	0.48	0.48	0.48	0.48
Source ID:		VOL2					
1 to 6		0.48	0.48	0.48	0.48	0.48	0.48
7 to 12		1.37	1.37	1.37	1.37	1.37	1.37
13 to 18		1.37	1.37	1.37	1.37	1.37	1.37
19 to 24		1.37	1.37	0.48	0.48	0.48	0.48

Results Summary

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BENZENE - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	5.03553	ug/m^3	397580.50	3734603.50	2.50	1.20	2.50	10/3/2013, 7
8-HR	1ST	1.98525	ug/m^3	397581.00	3734647.00	2.74	1.20	2.74	2/5/2013, 24
PERIOD		0.45917	ug/m^3	397594.00	3734612.00	2.74	1.20	2.74	

Sensitive Receptor Summary

C:\Users\martin\Desktop\490PCH\490PCH.isc

BENZENE - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	1.88851	ug/m^3	424GalW	397532.30	3734599.10	2.23	1.20	2.23	9/19/2013, 7
1-HR	1ST	1.56605	ug/m^3	430CoaD	397623.20	3734629.60	2.92	1.20	2.92	10/27/2016, 7
1-HR	1ST	1.71515	ug/m^3	420CoaD	397616.50	3734644.60	2.96	1.20	2.96	10/8/2013, 20
1-HR	1ST	1.56212	ug/m^3	410CoaD	397611.00	3734660.20	2.80	1.20	2.80	1/22/2013, 17
1-HR	1ST	1.25813	ug/m^3	400CoaD	397605.60	3734675.40	2.92	1.20	2.92	1/30/2013, 17
1-HR	1ST	1.04251	ug/m^3	434SchW	397507.90	3734659.90	2.13	1.20	2.13	11/3/2014, 19
1-HR	1ST	1.39319	ug/m^3	425GalW	397511.70	3734622.10	2.21	1.20	2.21	9/25/2014, 7
1-HR	1ST	1.33725	ug/m^3	500CoaD	397638.70	3734602.20	3.03	1.20	3.03	1/18/2014, 20
1-HR	1ST	0.74800	ug/m^3	520CoaD	397653.30	3734572.80	2.74	1.20	2.74	9/27/2016, 7
1-HR	1ST	0.98559	ug/m^3	510CoaD	397645.30	3734585.90	2.92	1.20	2.92	4/14/2016, 20
8-HR	1ST	0.73834	ug/m^3	424GalW	397532.30	3734599.10	2.23	1.20	2.23	12/16/2012, 24
8-HR	1ST	0.63163	ug/m^3	430CoaD	397623.20	3734629.60	2.92	1.20	2.92	11/8/2012, 24
8-HR	1ST	0.67407	ug/m^3	420CoaD	397616.50	3734644.60	2.96	1.20	2.96	3/5/2013, 24
8-HR	1ST	0.48430	ug/m^3	410CoaD	397611.00	3734660.20	2.80	1.20	2.80	9/20/2016, 24
8-HR	1ST	0.59460	ug/m^3	400CoaD	397605.60	3734675.40	2.92	1.20	2.92	2/5/2013, 24
8-HR	1ST	0.31603	ug/m^3	434SchW	397507.90	3734659.90	2.13	1.20	2.13	1/20/2016, 8
8-HR	1ST	0.46497	ug/m^3	425GalW	397511.70	3734622.10	2.21	1.20	2.21	12/11/2014, 8
8-HR	1ST	0.43925	ug/m^3	500CoaD	397638.70	3734602.20	3.03	1.20	3.03	2/15/2013, 24
8-HR	1ST	0.35461	ug/m^3	520CoaD	397653.30	3734572.80	2.74	1.20	2.74	2/15/2014, 24
8-HR	1ST	0.41417	ug/m^3	510CoaD	397645.30	3734585.90	2.92	1.20	2.92	1/5/2014, 24

Sensitive Receptor Summary

C:\Users\martin\Desktop\490PCH\490PCH.isc

BENZENE - Concentration - Source Group: ALL										
Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.06001	ug/m^3	424GalW	397532.30	3734599.10	2.23	1.20	2.23	
PERIOD		0.06218	ug/m^3	430CoaD	397623.20	3734629.60	2.92	1.20	2.92	
PERIOD		0.05652	ug/m^3	420CoaD	397616.50	3734644.60	2.96	1.20	2.96	
PERIOD		0.05479	ug/m^3	410CoaD	397611.00	3734660.20	2.80	1.20	2.80	
PERIOD		0.05176	ug/m^3	400CoaD	397605.60	3734675.40	2.92	1.20	2.92	
PERIOD		0.03335	ug/m^3	434SchW	397507.90	3734659.90	2.13	1.20	2.13	
PERIOD		0.04604	ug/m^3	425GalW	397511.70	3734622.10	2.21	1.20	2.21	
PERIOD		0.07460	ug/m^3	500CoaD	397638.70	3734602.20	3.03	1.20	3.03	
PERIOD		0.05918	ug/m^3	520CoaD	397653.30	3734572.80	2.74	1.20	2.74	
PERIOD		0.07162	ug/m^3	510CoaD	397645.30	3734585.90	2.92	1.20	2.92	
PERIOD		5.72580		424GalW	397532.30	3734599.10	-99.00	-99.00	-99.00	
PERIOD		5.93290		430CoaD	397623.20	3734629.60	-99.00	-99.00	-99.00	
PERIOD		5.39280		420CoaD	397616.50	3734644.60	-99.00	-99.00	-99.00	
PERIOD		5.22780		410CoaD	397611.00	3734660.20	-99.00	-99.00	-99.00	
PERIOD		4.93860		400CoaD	397605.60	3734675.40	-99.00	-99.00	-99.00	
PERIOD		3.18210		434SchW	397507.90	3734659.90	-99.00	-99.00	-99.00	
PERIOD		4.39290		425GalW	397511.70	3734622.10	-99.00	-99.00	-99.00	
PERIOD		7.11790		500CoaD	397638.70	3734602.20	-99.00	-99.00	-99.00	
PERIOD		5.64660		520CoaD	397653.30	3734572.80	-99.00	-99.00	-99.00	
PERIOD		6.83360		510CoaD	397645.30	3734585.90	-99.00	-99.00	-99.00	
PERIOD		4.82400		424GalW	397532.30	3734599.10	-99.00	-99.00	-99.00	

Project File: C:\Users\martin\Desktop\490PCH HRA\490PCH.isc

AERMOD View by Lakes Environmental Software

Sensitive Receptor Summary

C:\Users\martinr\Desktop\490PCH\490PCH.isc

BENZENE - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		4.99850		430CoaD	397623.20	3734629.60	-99.00	-99.00	-99.00	
PERIOD		4.54350		420CoaD	397616.50	3734644.60	-99.00	-99.00	-99.00	
PERIOD		4.40440		410CoaD	397611.00	3734660.20	-99.00	-99.00	-99.00	
PERIOD		4.16080		400CoaD	397605.60	3734675.40	-99.00	-99.00	-99.00	
PERIOD		2.68090		434SchW	397507.90	3734659.90	-99.00	-99.00	-99.00	
PERIOD		3.70100		425GalW	397511.70	3734622.10	-99.00	-99.00	-99.00	
PERIOD		5.99690		500CoaD	397638.70	3734602.20	-99.00	-99.00	-99.00	
PERIOD		4.75730		520CoaD	397653.30	3734572.80	-99.00	-99.00	-99.00	
PERIOD		5.75730		510CoaD	397645.30	3734585.90	-99.00	-99.00	-99.00	
PERIOD		0.33763		424GalW	397532.30	3734599.10	-99.00	-99.00	-99.00	
PERIOD		0.34984		430CoaD	397623.20	3734629.60	-99.00	-99.00	-99.00	
PERIOD		0.31799		420CoaD	397616.50	3734644.60	-99.00	-99.00	-99.00	
PERIOD		0.30826		410CoaD	397611.00	3734660.20	-99.00	-99.00	-99.00	
PERIOD		0.29121		400CoaD	397605.60	3734675.40	-99.00	-99.00	-99.00	
PERIOD		0.18763		434SchW	397507.90	3734659.90	-99.00	-99.00	-99.00	
PERIOD		0.25903		425GalW	397511.70	3734622.10	-99.00	-99.00	-99.00	
PERIOD		0.41972		500CoaD	397638.70	3734602.20	-99.00	-99.00	-99.00	
PERIOD		0.33296		520CoaD	397653.30	3734572.80	-99.00	-99.00	-99.00	
PERIOD		0.40295		510CoaD	397645.30	3734585.90	-99.00	-99.00	-99.00	

ProjectSummaryReport

HARP Project Summary Report 10/5/2018 1:42:28 PM

PROJECT INFORMATION

HARP Version: 18159
 Project Name: 490PCH
 Project Output Directory: C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT
 HARP Database: NA

FACILITY INFORMATION

Origin
 X (m):397573
 Y (m):3734626
 Zone:11
 No. of Sources:0
 No. of Buildings:0

EMISSION INVENTORY

No. of Pollutants:0
 No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev
Multi	Annual Ems	MaxHr Ems	MWAF	
	(lbs/yr)	(lbs/hr)		

Background

PolID	PolAbbrev	Conc (ug/m^3)	MWAF
-------	-----------	---------------	------

Ground level concentration files (\glc\)

POLLUTANT HEALTH INFORMATION

Health Database: C:\HARP2\Tables\HEALTH17320.mdb
 Health Table Version: HEALTH18232
 Official: True

PolID	PolAbbrev	InhCancer	OralCancer	AcuteREL
InhChronicREL	OralChronicREL	InhChronic8HRREL		

71432	Benzene	0.1		27	3
		3			

LIST OF RISK ASSESSMENT FILES

ProjectSummaryReport

Health risk analysis files (\hra\)

Pop CancerCancerRisk.csv
Pop CancerCancerRiskSumByRec.csv
Pop CancerGLCLList.csv
Pop CancerHRAInput.hra
Pop CancerOutput.txt
Pop CancerPathwayRec.csv
Pop CancerPolDB.csv
ProjectSummaryReport.txt
Residential Cancer Risk.plt
Residential CancerCancerRisk.csv
Residential CancerCancerRiskSumByRec.csv
Residential CancerGLCLList.csv
Residential CancerHRAInput.hra
Residential CancerOutput.txt
Residential CancerPathwayRec.csv
Residential CancerPolDB.csv
Worker Cancer Risk.plt
Worker CancerCancerRisk.csv
Worker CancerCancerRiskSumByRec.csv
Worker CancerGLCLList.csv
Worker CancerHRAInput.hra
Worker CancerOutput.txt
Worker CancerPathwayRec.csv
Worker CancerPolDB.csv

Spatial averaging files (\sa\)

Residential CancerOutput

HARP2 - HRACalc (dated 17023) 10/5/2018 1:31:42 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors set to 0

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: Cancer
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 30

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 14
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Residential CancerOutput

Daily breathing rate: LongTerm24HR

****Worker Adjustment Factors****

Worker adjustment factors enabled: NO

****Fraction at time at home****

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

TIER 2 SETTINGS

Tier2 not used.

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT\hra\Residential
CancerCancerRisk.csv

Cancer risk total by receptor saved to: C:\Users\martinr\Desktop\490PCH HRA\490PCH
ADMRT\hra\Residential CancerCancerRiskSumByRec.csv

HRA ran successfully

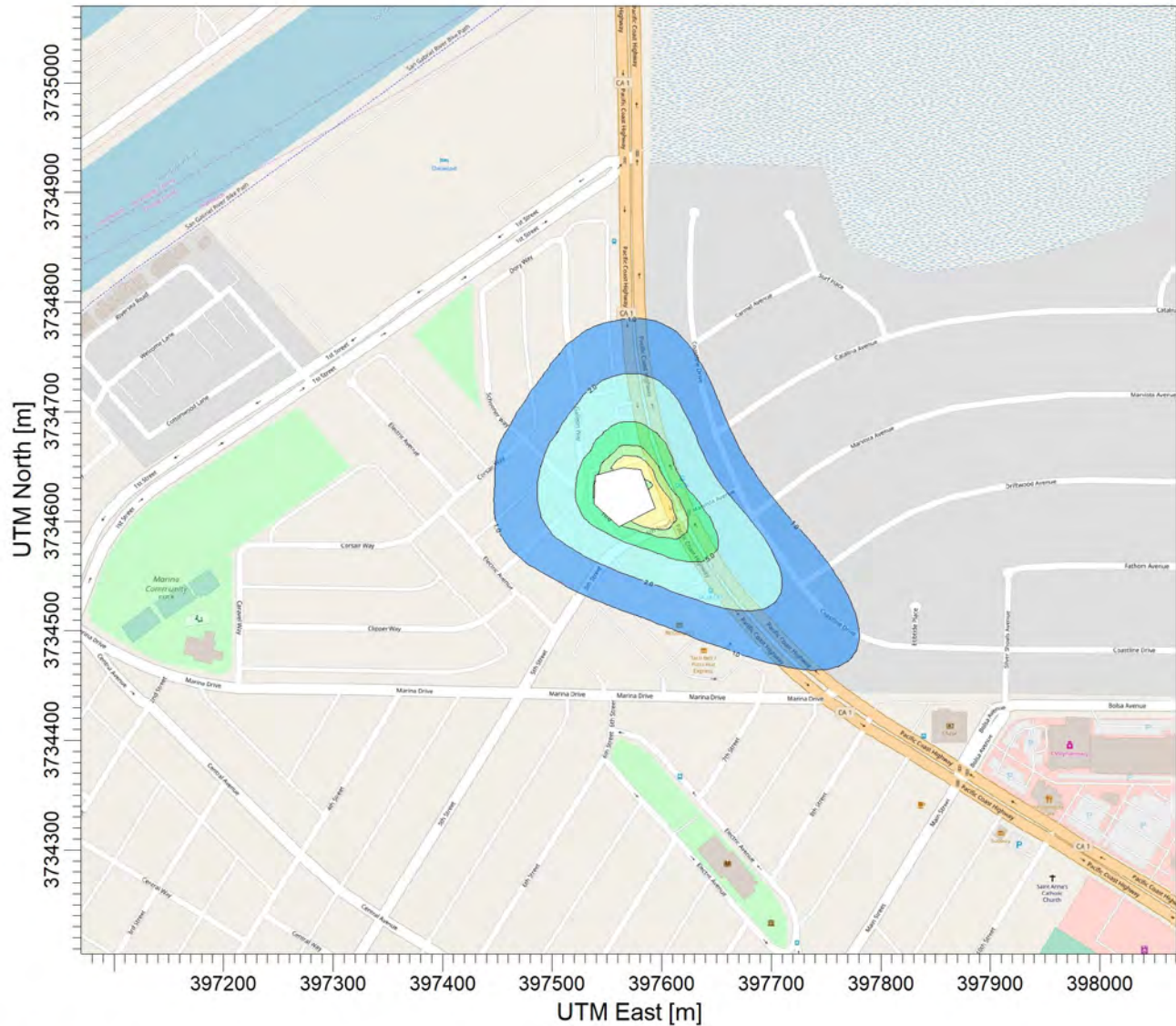
*HARP - HRACalc v17023 10/5/2018 1:31:42 PM - Cancer Risk -

Input File: C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT\hra\Residential CancerHRAInput.hra

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1601	ALL		397532.3	3734599	4.82E-06	30YrCancerDerived_Inh
1602	ALL		397623.2	3734630	5.00E-06	30YrCancerDerived_Inh
1603	ALL		397616.5	3734645	4.54E-06	30YrCancerDerived_Inh
1604	ALL		397611	3734660	4.40E-06	30YrCancerDerived_Inh
1605	ALL		397605.6	3734675	4.16E-06	30YrCancerDerived_Inh
1606	ALL		397507.9	3734660	2.68E-06	30YrCancerDerived_Inh
1607	ALL		397511.7	3734622	3.70E-06	30YrCancerDerived_Inh
1608	ALL		397638.7	3734602	6.00E-06	30YrCancerDerived_Inh
1609	ALL		397653.3	3734573	4.76E-06	30YrCancerDerived_Inh
1610	ALL		397645.3	3734586	5.76E-06	30YrCancerDerived_Inh


PROJECT TITLE:

**490 PCH Shell Station
Residential Cancer Risk Isopleths**



PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL



<p>COMMENTS:</p> <p>Increased residential cancer risk isopleths shown in chances per 1 million.</p>	<p>SOURCES:</p> <p>5</p>	<p>COMPANY NAME:</p> <p>HELIX Environmental Planning</p>	
	<p>RECEPTORS:</p> <p>1618</p>		
	<p>OUTPUT TYPE:</p> <p>Risk</p>	<p>SCALE:</p> <p>1:6,292</p> <p>0  0.2 km</p>	
	<p>MAX:</p>	<p>DATE:</p> <p>10/5/2018</p>	<p>PROJECT NO.:</p> <p>ASE-06</p>

Worker CancerOutput
HARP2 - HRACalc (dated 17023) 10/5/2018 1:34:17 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors set to 0

RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: Cancer
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16
Total Exposure Duration: 25

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 25

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Worker CancerOutput

Daily breathing rate: Moderate8HR

****Worker Adjustment Factors****

Worker adjustment factors enabled: NO

****Fraction at time at home****

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05

Soil mixing depth (m): 0.01

Dermal climate: Mixed

TIER 2 SETTINGS

Tier2 not used.

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT\hra\Worker CancerCancerRisk.csv

Cancer risk total by receptor saved to: C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT\hra\Worker CancerCancerRiskSumByRec.csv

HRA ran successfully

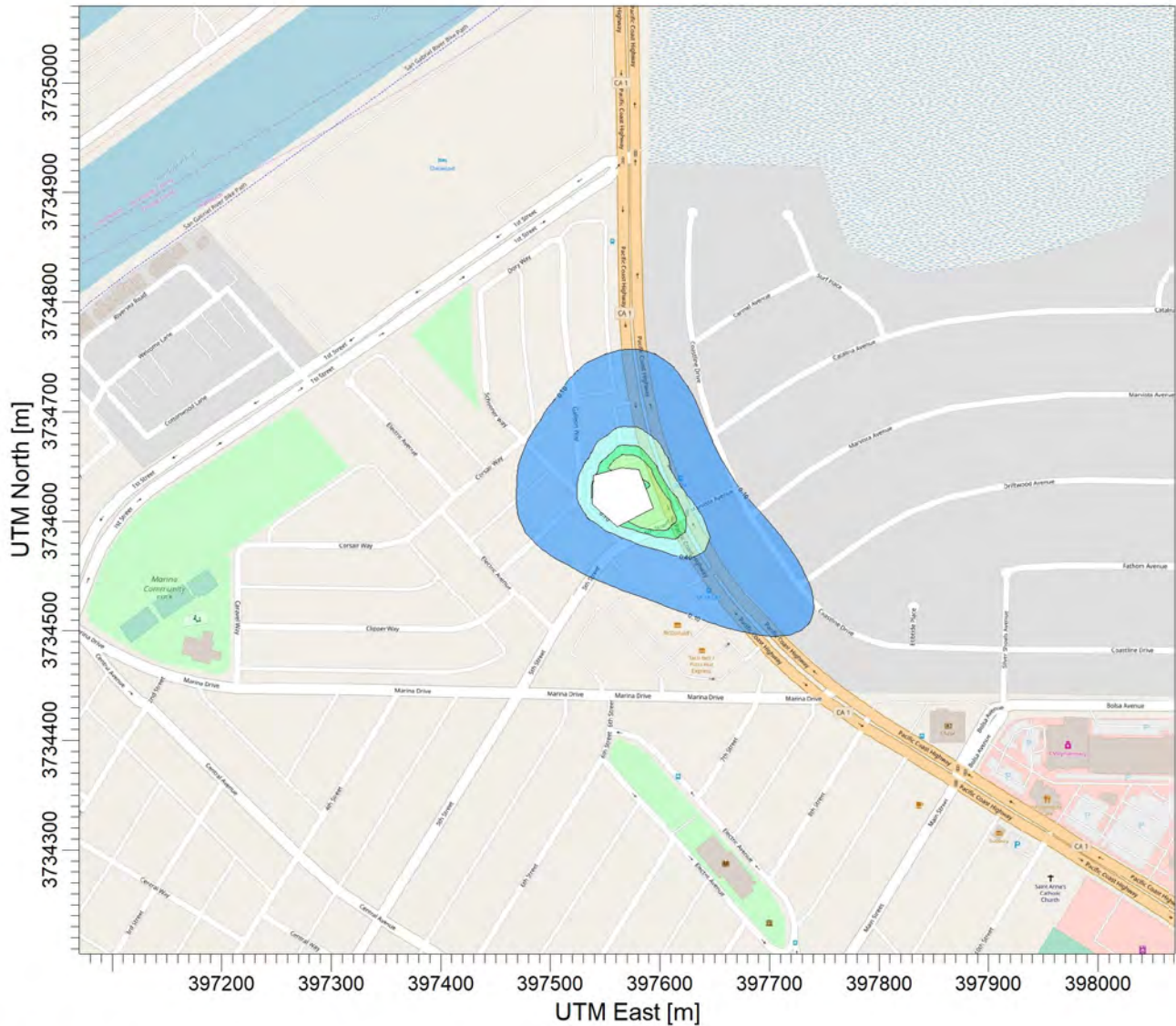
*HARP - HRACalc v17023 10/5/2018 1:34:17 PM - Cancer Risk -

Input File: C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT\hra\Worker CancerHRAInput.hra

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1617	ALL		397539	3734642	6.13E-07	25YrCancerDerived_InhSoilDerm
1618	ALL		397538	3734616	6.42E-07	25YrCancerDerived_InhSoilDerm

PROJECT TITLE:


**490 PCH Shell Station
Off-Site Worker Cancer Risk Isoleths**



PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL

ug/m³



<p>COMMENTS:</p> <p>Increased worker cancer risk isopleths shown in chances per 1 million.</p>	<p>SOURCES:</p> <p>5</p>	<p>COMPANY NAME:</p> <p>HELIX Environmental Planning</p>	
	<p>RECEPTORS:</p> <p>1618</p>		
	<p>OUTPUT TYPE:</p> <p>Risk</p>	<p>SCALE:</p> <p>1:6,292</p> <p>0  0.2 km</p>	
	<p>MAX:</p>	<p>DATE:</p> <p>10/5/2018</p>	<p>PROJECT NO.:</p> <p>ASE-06</p>

Pop CancerOutput

HARP2 - HRACalc (dated 17023) 10/5/2018 1:38:36 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors set to 0

RISK SCENARIO SETTINGS

Receptor Type: Population
Scenario: Cancer
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 70

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 0
16 to 70 Years Bin: 54

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Pop CancerOutput

Daily breathing rate: LongTerm24HR

****Worker Adjustment Factors****

Worker adjustment factors enabled: NO

****Fraction at time at home****

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

TIER 2 SETTINGS

Tier2 not used.

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT\hra\Pop CancerCancerRisk.csv

Cancer risk total by receptor saved to: C:\Users\martinr\Desktop\490PCH HRA\490PCH
ADMRT\hra\Pop CancerCancerRiskSumByRec.csv

HRA ran successfully

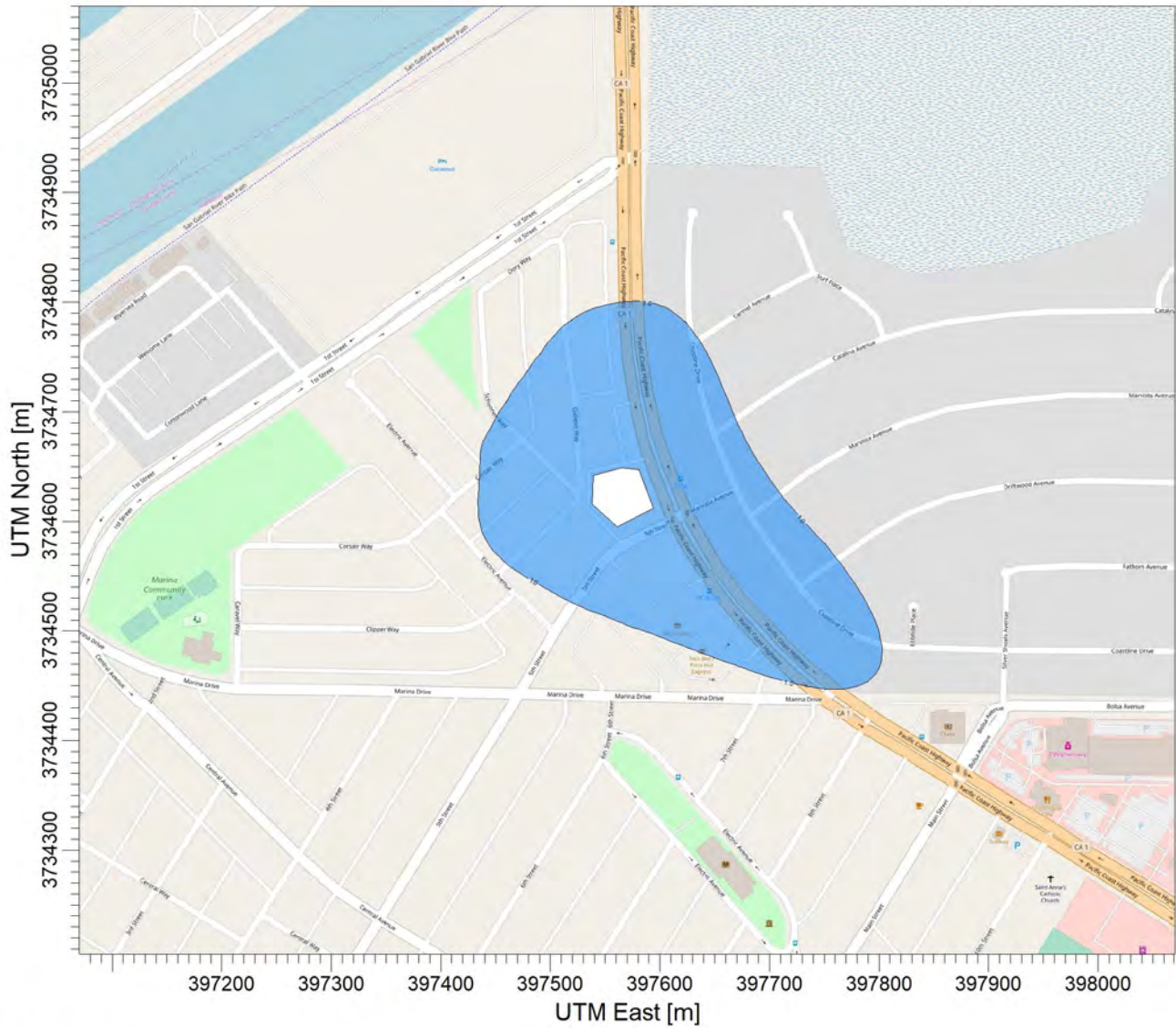
*HARP - HRACalc v17023 10/5/2018 1:38:36 PM - Cancer Risk -

Input File: C:\Users\martinr\Desktop\490PCH HRA\490PCH ADMRT\hra\Pop CancerHRAInput.hra

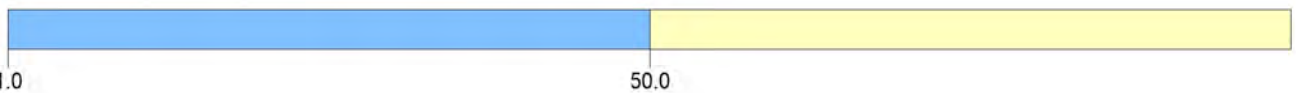
REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1601	ALL		397532.3	3734599	5.73E-06	70YrCancerDerived_Inh
1602	ALL		397623.2	3734630	5.93E-06	70YrCancerDerived_Inh
1603	ALL		397616.5	3734645	5.39E-06	70YrCancerDerived_Inh
1604	ALL		397611	3734660	5.23E-06	70YrCancerDerived_Inh
1605	ALL		397605.6	3734675	4.94E-06	70YrCancerDerived_Inh
1606	ALL		397507.9	3734660	3.18E-06	70YrCancerDerived_Inh
1607	ALL		397511.7	3734622	4.39E-06	70YrCancerDerived_Inh
1608	ALL		397638.7	3734602	7.12E-06	70YrCancerDerived_Inh
1609	ALL		397653.3	3734573	5.65E-06	70YrCancerDerived_Inh
1610	ALL		397645.3	3734586	6.83E-06	70YrCancerDerived_Inh


PROJECT TITLE:

**490 PCH Shell Station
Population Cancer Risk Isoleths**



PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL



<p>COMMENTS:</p> <p>Increased population cancer risk isopleths shown in chances per 1 million.</p>	<p>SOURCES:</p> <p>5</p>	<p>COMPANY NAME:</p> <p>HELIX Environmental Planning</p>	
	<p>RECEPTORS:</p> <p>1618</p>		
	<p>OUTPUT TYPE:</p> <p>Risk</p>	<p>SCALE:</p> <p>1:6,292</p> <p>0  0.2 km</p>	
	<p>MAX:</p>	<p>DATE:</p> <p>10/5/2018</p>	<p>PROJECT NO.:</p> <p>ASE-06</p>

Appendix C

Cultural Resources Survey

490 Pacific Coast Highway Project

Cultural Resources Survey

October 2018 | ASE-06



Mary Robbins-Wade
Director of Cultural Resources

Submitted to:

City of Seal Beach
211 Eighth Street
Seal Beach, CA 90740

Prepared for:

A&S Engineering, Inc.
28405 Sand Canyon Road, Suite "B"
Canyon County, CA 91387

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

490 Pacific Coast Highway Project

Cultural Resources Survey

Submitted to:

City of Seal Beach
211 Eighth Street
Seal Beach, CA 90740

Prepared for:

A&S Engineering, Inc.
28405 Sand Canyon Road, Suite "B"
Canyon County, CA 91387

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

October 2018 | ASE-06

National Archaeological Database Information

Authors: Mary Robbins-Wade, M.A., RPA, and Dominique Diaz de Leon, B.A.

Firm: HELIX Environmental Planning, Inc.

Client/Project: A&S Engineering, Inc. 28405 Sand Canyon Road, Suite "B", Canyon County, CA 91387/ 490 Pacific Coast Highway Project

Report Date: October 2018

Report Title: Cultural Resources Survey for the 490 Pacific Coast Highway Project, Seal Beach, Orange County, California

Submitted to: City of Seal Beach, 211 Eighth Street, Seal Beach, CA 90740

Type of Study: Cultural resources survey

New Sites: None

Updated Sites: None

USGS Quad: Seal Beach 7.5-minute quadrangle

Acreage: <1 acre

Key Words: Orange County, Seal Beach, coastal; negative cultural resources survey; culturally sensitive area; Assessor Parcel Number 043-301-02; Township 5 South, Range 12 West, unsectioned

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
CRM	Cultural Resources Management
HELIX	HELIX Environmental Planning, Inc.
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
SLF	Sacred Lands File
SCCIC	South Central Coastal Information Center
TCP	Traditional Cultural Properties
TCR	Tribal Cultural Resources
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted to provide cultural resources services for the 490 Pacific Coast Highway Project (project) in the City of Seal Beach (City), in northwestern Orange County, California. The project consists of development of the currently vacant lot with a 16-pump gas station and a 2,400 square-foot convenience store. A cultural resources study including a records search and literature review, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA).

The records search conducted at the South-Central Coastal Information Center (SCCIC) on August 29, 2018 indicated that 65 previous cultural resources studies have been conducted within a mile of the project area. Two of these are mapped as including the project site, but one did not include field survey, and it is unclear as to whether the other surveyed the project site, which was already developed by that time. The records search results also indicated that a total of 21 cultural resources have been previously recorded within a mile of the project area, two of which (CA-ORA-001473 and P-30-162293) are located within a quarter mile of the project site. These consist of a prehistoric shell deposit (CA-ORA-001473) and the historic Seal Beach Red Car, No. 1734 (P-30-162293). Although only one prehistoric resource is recorded within a quarter mile, the general area is rich in terms of cultural resources, and the Native American Heritage Commission noted that cultural resources on the Sacred Land File are known in the area.

A pedestrian survey of the project site was conducted in September 2018 by the HELIX field director and a tribal monitor from the Gabrieleño Band of Mission Indians, Kizh Nation. The ground surface of the survey area was covered with pea gravel and rock, obscuring the ground surface, but marine shell was found in soils that might have been brought to the surface during fencing or post placement; these soils did not appear to be fill. As previously noted, the project area was formerly developed as a gas station, including underground tanks, and large amounts of soil were removed, due to soil contamination. Thus, the project site has been the subject of a great deal of past subsurface disturbance, and intact cultural deposits are considered unlikely.

Although the potential for intact subsurface deposits within the project site is low, given the degree of past disturbance, the general area is culturally sensitive, with habitation sites and human burials known in the vicinity. Based on this, it is recommended that ground-disturbing activity for the project be monitored by a qualified archaeologist and Native American monitors from both the Gabrielino (Gabrieleno) and Juaneño tribes. If cultural material is encountered during monitoring, both the archaeologist and the Native American monitors would have the authority to temporarily halt or redirect activity in the area of the find while the cultural material is documented, and a decision is made regarding the significance/eligibility of the find and whether additional excavation, analysis, or other mitigation measures are required. Determinations of significance will be made in consultation among the archaeological Principal Investigator, Native American monitors, and City staff. In addition, should the project limits change to incorporate new areas of proposed disturbance, a cultural resources survey of these areas will be required.

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1.0 INTRODUCTION

1.1 PROJECT LOCATION

The 490 Pacific Coast Highway Project (project) is located in the City of Seal Beach (City) in far northwestern Orange County, California (Figure 1, *Regional Location*). The project is located immediately west of California State Route 1 (SR-1)/Pacific Coast Highway, a short distance south of the San Gabriel River and the Los Angeles County line, west of Seal Beach Boulevard and north of San Pedro Bay. The project site is bordered by SR-1/Pacific Coast Highway on the east and 5th Street on the south (Figures 2 and 3, *USGS Topography* and *Aerial Photograph*, respectively). The project parcel, Assessor's Parcel Number (APN) 043-301-02, is located in an unsectioned portion of Township 5 South, Range 12 West on the U.S. Geological Survey (USGS) Seal Beach, CA 7.5-minute quadrangle (Figure 2).

1.2 PROJECT DESCRIPTION

The project proposes to develop a vacant lot with a 16-pump gas station and a 2,400 square-foot convenience store (Figure 4, *Site Plan*). The project site was previously a gas station that was demolished in 2011, and gravel was placed over the vacant lot with an environmental cleanup area. The environmental cleanup area has operating groundwater and soil vapor recovery systems for previously released gasoline into the soil from the former gas station and would remain on site with one monitoring well relocated. A 4,052-square foot steel canopy would be installed above the gas pumps. The project would have 19,797 square feet of paved areas with 13 parking spaces. Ingress and egress to the site would be provided via four unsignalized driveways: two driveways along Pacific Coast Highway and two driveways along 5th Street. In addition, underground storage fuel tanks would be installed in the southern portion of the project site.

The ongoing environmental cleanup measures have included removal of contaminated soils. During 2016, a total of 5,881 tons of soil was excavated from the project site and disposed of at State-licensed facilities (Stantec Consulting Services, Inc. 2018). Other episodes of soil removal occurred in 2004 and 2011/2012 and covered the vast majority of the project site (Stantec Consulting Services, Inc. 2018:Figure 2). Fill soils were used to restore the project site to its original topography.

HELIX Environmental Planning, Inc. (HELIX) conducted a cultural resources survey that included a records search and literature review, a Sacred Lands File search, a field survey by a HELIX archaeologist and a Native American monitor from the Gabrieleño Band of Mission Indians, Kizh Nation, as well as tribal outreach and completion of this report.

1.3 REGULATORY FRAMEWORK

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources are those resources that have been found eligible to the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP), as applicable.

1.3.1 National Historic Preservation Act (NHPA)

Federal regulations that would be applicable to the project if there is a federal nexus, such as funding or permits from a federal agency, consist of the National Historic Preservation Act (NHPA) and its implementing regulations (16 United States Code 470 et seq., 36 CFR Part 800). Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on “historic properties”, that is, properties (either historic or archaeological) that are eligible for the NRHP. To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
- D. Has yielded or may be likely to yield, information important in prehistory or history.

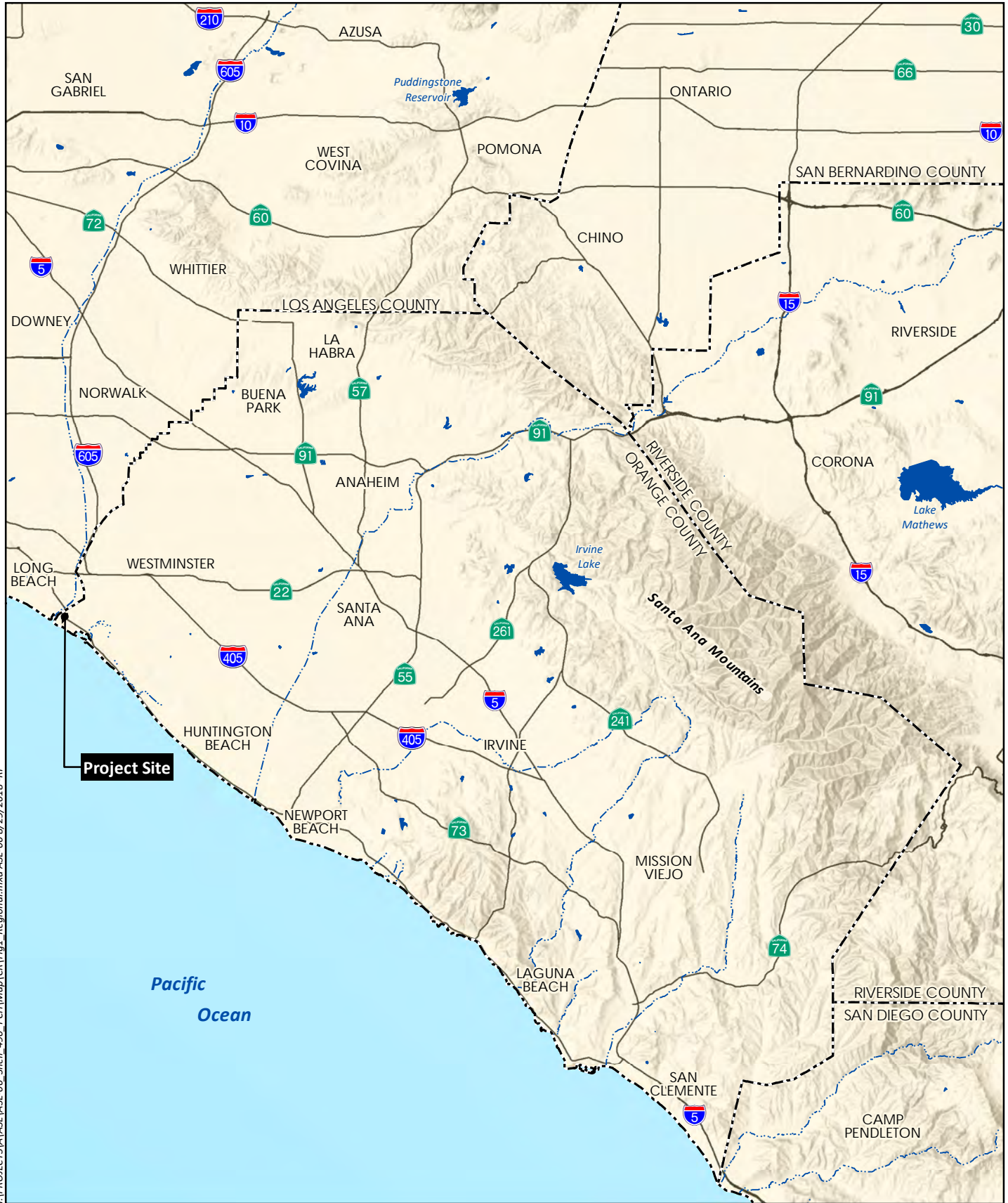
1.3.2 California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA), Public Resources Code (PRC) 21084.1 and CEQA Guidelines, California Code of Regulations (CCR) Title 14 Section 15064.5 discuss significant cultural resources as “historical resources” and define them as:

- Resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])
- Resource(s) either listed in the NRHP or in a “local register of historical resources” or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless “the preponderance of evidence demonstrates that it is not historically or culturally significant” (14 CCR Section 15064.5[a][2])
- Resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

- A. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- B. It is associated with the lives of persons important to local, California, or national history;
- C. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values;



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Project Site

Pacific Ocean

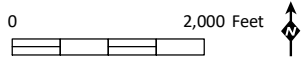



Source: Base Map Layers (Esri, 2013)

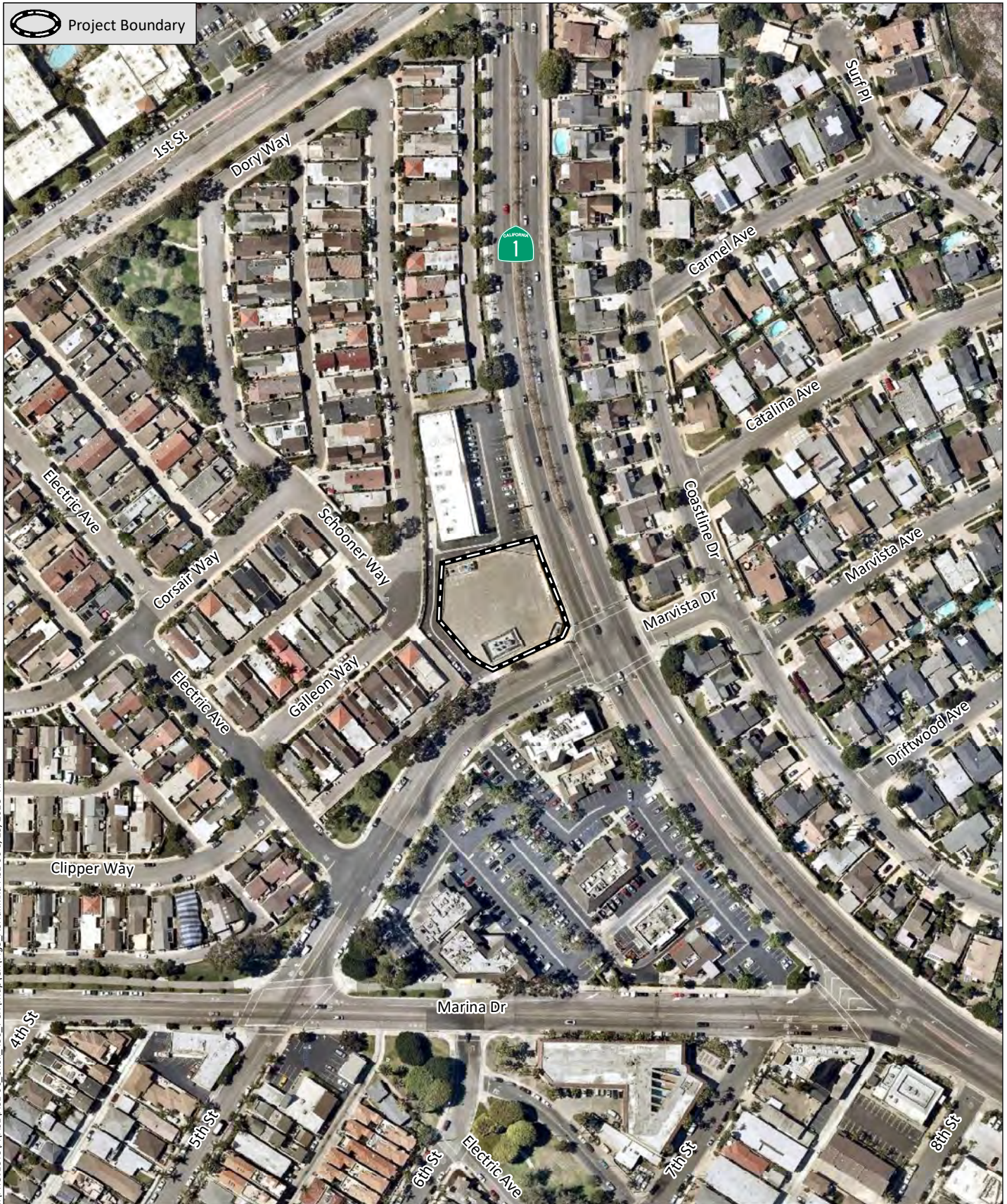


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Source: Seal Beach 7.5' Quad (USGS)



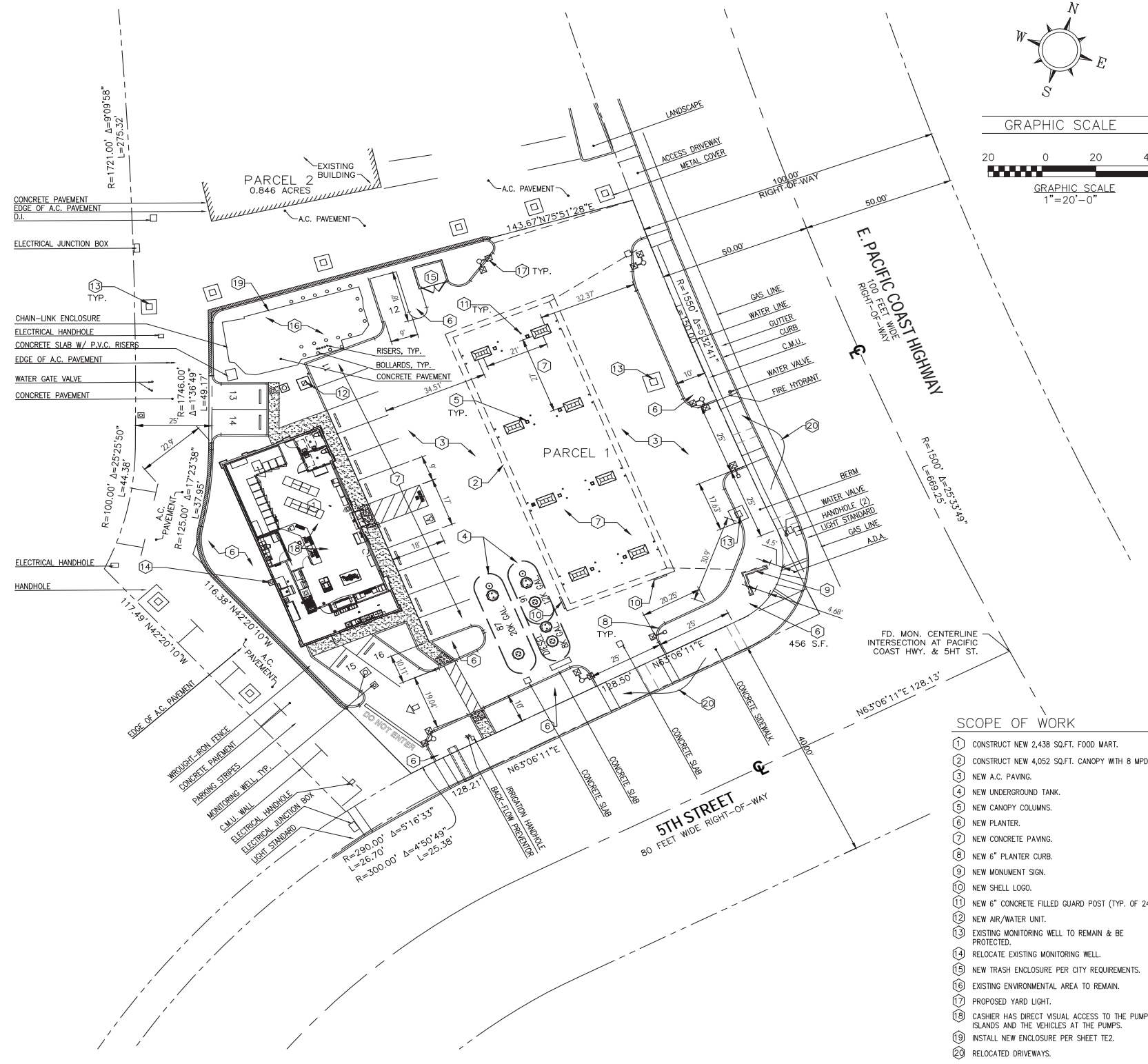
 Project Boundary



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Source: Aerial (Nearmap, 2018)



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Source: A & S Engineering, 2018

- D. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a “historical resource” for the purposes of CEQA at the discretion of the lead agency.

All resources that are eligible for listing in the NRHP or CRHR must have integrity, which is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination. Under Section 106 of the NHPA, actions that alter any of the characteristics that qualify a property for eligibility for listing in the NRHP “in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association” (36 CFR 800.5[a]) constitute an adverse effect to the historic property.

California State Assembly Bill (AB) 52 revised PRC Section 21074 to include Tribal Cultural Resources as an area of CEQA environmental impact analysis. Further, per new PRC Section 21080.3, a CEQA lead agency must consult with any California Native American tribe that requests consultation and that is traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies.

1.3.3 City of Seal Beach

The City’s General Plan recognizes the importance of cultural resources and includes a Cultural Resources Element. The Goal specified in the Cultural Resources Element of the General Plan is to “Preserve and protect historical, archaeological, and paleontological resources”. The Cultural Resources Element lays out the various regulatory requirements that must be adhered to, including CEQA, NHPA, and NAGPRA, as well as local guidance on the preservation of historic resources. Goals outlined within the plan include preserving and protecting historical, archaeological, and paleontological resources within City limits. The City’s goals include:

- Policy 1: Balance the benefits of development with the project’s potential impacts to existing cultural resources;
- Policy 2: Identify, designate, and protect sites and buildings of historic importance;
- Policy 3: Coordinate cultural resource programs and development project review with affected resource agencies and Native American representatives;
- Policy 4: Identify funding programs to assist private and public property owners in the preservation of buildings and sites of historic importance;

Policy 5: Assess development proposals for potential impacts to significant archaeological resources pursuant to the cultural resources requirements of the CEQA. Require a study by a professional archaeologist for all development proposals located in areas known to be sensitive for cultural resources.

In keeping with Policy 5, the current study is conducted to meet the requirements of CEQA, with a Registered Professional Archaeologist (RPA) as the Principal Investigator (PI).

1.3.4 Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCPs) in discussions of cultural resource management (CRM) performed under federal auspices and Tribal Cultural Resources (TCRs) under CEQA. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Cultural resources can include TCPs/TCRs, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts. Generally, a TCP or TCR may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

In California, the Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American Tribes during the project planning process, specifically before adopting or amending a General Plan or a Specific Plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. AB 52, effective July 1, 2015, introduced the TCR as a class of cultural resource and introduced additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described in PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

1.4 PROJECT PERSONNEL

A cultural resources survey was conducted by HELIX in 2018 to assess whether the project would have any effects on cultural resources. Mary Robbins-Wade, M.A., RPA, served as the PI and is the primary author of this technical report. Julie Roy, B.A., conducted the field survey. Dominique Diaz de Leon, B.A.,

served as report contributor. Resumes of key HELIX personnel are included as Appendix A. Mathew Teutimez, a Native American observer from the Gabrieleño Band of Mission Indians, Kizh Nation, participated in the survey. This report addresses the methods and results of the cultural resources survey, which included a records search and literature review, Sacred Land File search, Native American outreach, background research, and a pedestrian field survey.

2.0 PROJECT SETTING

2.1 NATURAL SETTING

The climate of Orange County is characterized as a semi-arid environment with low humidity and rainfall. Almost all rainfall occurs in the winter, with an average rainfall around 14 inches per year. The coolest month is December, and the hottest is August with occasional temperatures rising to over 100 degrees (National Oceanic and Atmospheric Administration [NOAA] 2014). Average temperatures in Seal Beach range from 70° Fahrenheit (F) in summer to 55° F in winter (City of Seal Beach, n.d.).

The project site is located in the coastal area approximately one-half mile from San Pedro Bay in the Pacific Ocean. Seal Beach National Wildlife Refuge is located to the east of the project area, with the Seal Beach coastline to its west and southwest, and the San Gabriel River less than one-half mile to its north. The source of the river is in the San Gabriel Mountains. After leaving the mountains, the San Gabriel divides into two branches near Whittier Narrows. The branch to the west is the Rio Hondo, which flows southwest to its junction with the Los Angeles River approximately six miles from the ocean. The eastern branch continues as the San Gabriel River and discharges into Alamitos Bay six miles east of the mouth of the Los Angeles River. The San Gabriel drains an area of 698 square miles, exclusive of the area tributary to the Rio Hondo.

Geologically, the project area is underlain by River Terrace deposits (Jennings 1962). The soil type mapped for the project area is Marina loamy sand, 2 to 9 percent slopes (Natural Resources Conservation Service 2018). The Marina Series is made up of somewhat excessively drained, very deep loamy coarse sands derived from weakly consolidated to noncoherent ferruginous eolian sand and supports a vegetation of chiefly chamise, sumac, black sagebrush, flattop buckwheat, and annual grasses and forbs (Bowman 1973). Plant species naturally occurring in the project area and vicinity prior to development are known to have been used by native populations for food, medicine, tools, ceremonial and other uses (Bean and Shipek 1978; Hedges and Beresford 1986; White 1963). Many of the animal species living within these communities (such as rabbits, deer, small mammals, and birds) would have been used by native inhabitants. Rabbits and rodents were very important to the prehistoric diet; deer were somewhat less significant for food, but were an important source of leather, bone, and antler.

2.2 CULTURAL SETTING

2.2.1 Prehistoric Period

Proposed dates for the earliest human occupation in California vary from around 20,000 years ago to 10,000 years ago. Several researchers have argued for the presence of Pleistocene humans in California much earlier than this (Carter 1957, 1978, 1980; Minshall 1976); however, these sites identified as "early man" are all controversial. The material from the sites is generally considered nonartifactual, and the investigative methodology is often questioned (Moratto 1984). The most widely recognized timeline for

the prehistory of Southern California was proposed by Wallace (1955) and divides the region's prehistory into four main periods, or "horizons": Early, Milling Stone (Archaic Period), Intermediate, and Late horizons.

The best example of Early Prehistoric Period archaeological evidence in Southern California is in the San Dieguito complex of San Diego County, dating to over 9,000 years ago (Warren 1967; Warren et al. 2004). The San Dieguito Tradition is thought by most researchers to have an emphasis on big game hunting and coastal resources (Warren 1967). The material culture of the San Dieguito complex consists primarily of scrapers, scraper planes, choppers, large blades, and large projectile points. In some areas of California, the Early Prehistoric Period is often referred to as the Paleo-Indian period and is associated with the last Ice Age occurring during the Terminal Pleistocene (pre-10,000 years ago) and the Early Holocene, beginning circa 10,000 years ago (Erlandson 1994, 1997).

The Millingstone Horizon, or Archaic Period, dates from 7,000-8,600 to 1,300-3,000 years ago and is generally consistent with the Oak Grove complex of Santa Barbara, the Topanga complex of Los Angeles, and the La Jolla complex of San Diego (Warren et al. 2004). The Millingstone Horizon is also referred to as the Encinitas Tradition (Warren 1968). The Encinitas tradition is generally "recognized by millingstone assemblages in shell middens, often near sloughs and lagoons" (Moratto 1984:147). According to Wallace, "a changeover from hunting to the collection of seed foods is clearly reflected in the archaeological record for the period between 6000 and 3000 B.C. The importance of seeds in the diet of the prehistoric peoples can be seen in the numbers of food-grinding implements present at their settlements" (Wallace 1978:28). Basin metates, manos, discoidals, a small number of Pinto series and Elko series points, and flexed burials are also characteristic. Most of the archaeological evidence for Archaic Period occupation in southern California is derived from sites located in near-coastal valleys, and around estuaries that are present along the San Diego coast (Warren et al. 2004).

Dates for the Intermediate Horizon vary by locale but can generally be dated to between 2,000 BC and AD 500 (Elsasser 1978). The Intermediate Horizon is consistent with the Hunting Culture of Santa Barbara County and is characterized by the presence of Pinto style points, named after the Pinto Basin in Riverside County, an increased use of the mortar and pestle, and the consumption of fleshier foods such as acorns as opposed to small, hard seeds (Stickel 1978). This change resulted in the adoption of a more sedentary lifestyle as seen in the presence of seasonal campsites (Van Horn 1980).

The Late Prehistoric period in southern California is characterized by the incursion of Uto-Aztecan - speaking people who occupied large portions of the Great Basin and an area stretching from southern Arizona and northwest and central Mexico into Nevada, Oregon, and Idaho (Miller 1986). The expansion of the Takic group into southern California is unrefined, but several scholars have hypothesized as to when and how the so-called "Uto-Aztecan wedge" occurred. Sutton (2009) argues that the Takic group expanded into southern California from the San Joaquin Valley about 3,500 years ago. Moratto (1984) also proposes that Takic expansion into the Southern Coast region correlates to the end of the Early Period (Late Archaic) ca. 3,200 to 3,500 years ago, while Golla (2007) suggests an expansion of Uto-Aztecan speakers into southern California at approximately 2,000 years ago. While the exact chronology of Takic-speaking groups' immigration to southern California remains uncertain, the beginning of the Late Prehistoric Period is marked by evidence of a number of new tool technologies and subsistence shifts in the archaeological record and is characterized by higher population densities and intensification of social, political, and technological systems. The changes include the production of pottery and the use of the bow and arrow for hunting instead of atlatl and dart, a reduction of shellfish gathering in some

areas, an increase in the storage of foodstuffs such as acorns, and new traits such as the cremation of the dead (Gallegos 2002; McDonald and Eighmey 2004).

Native American population figures in the region substantially increased toward the end of the Late Prehistoric Period. After AD 1600, a change occurred in settlement and subsistence patterns, and land use intensified region, which was reflected into the ethnohistoric period (Bean et al. 1991; Wilke 1974, 1978).

2.2.2 Ethnohistory

The project area is within what is considered to be the traditional territory of the Gabrielino people (also spelled Gabrieleno or Gabrieleño; some Gabrielino people refer to themselves as Tongva). Aliso Creek in southern Orange County is generally considered to be the traditional territorial divide between the Gabrielino-Tongva and the Juaneño-Acjachemen peoples (Bean and Shippek 1978; Bean and Smith 1978; Kroeber 1976 [1925]), but the vicinity of the project area is considered culturally important by the Juaneño-Acjachemen as well as the Gabrielino-Tongva. A representative of the Juaneño Band of Mission Indians - Acjachemen Nation indicated that the project area is definitely within the Tribe's territory.

2.2.2.1 Gabrielino

The Gabrielino traditionally occupied most of present-day Los Angeles and Orange Counties, extending along the coast from the southern portion of the Santa Monica Mountains to the northern portion of the Santa Ana Mountains and east along the watersheds of the Los Angeles, San Gabriel, and Santa Ana Rivers (Bean and Smith 1978). Additionally, the Gabrielino occupied several off-shore islands, including San Clemente, Santa Catalina, and San Nicolas. The name Gabrielino stems from one of the two major Spanish missions established in the Gabrielino territory, the San Gabriel Mission. The Gabrielino were among the most powerful and populous ethnic nationalities in California's prehistory, however the population was decimated by disease just before the Spanish arrived in earnest to establish Mission San Gabriel in 1771. The population and culture were further diminished after forced relocation to the missions; thus, ethnographic data is extremely limited (Bean and Smith 1978: 538).

At the time of Spanish explorer Juan Rodriguez Cabrillo's entrance into Gabrielino territory, it is estimated that their population may have reached nearly 5,000 people (Bean and Smith 1978; Shipley 1978). They were semi-nomadic and subsisted on a hunter-gatherer lifestyle in the rich landscape abundant in coastal resources, as well as acorns, pine nuts, and small game. The Gabrielino settlements were situated near water courses; permanent villages were always established "in the fertile lowlands along rivers and streams" (Bean and Smith 1978: 540). Both primary and subsistence villages were occupied continuously, with smaller gathering camps being intermittently occupied, depending on the season and resource. Gabrielino people maintained a rich material culture of varied and technical tools. They created wooden planked canoes, called *ti'ats*, which allowed them to populate and exploit the resources of the Southern Channel Islands (Welch 2006:3-4). Among these resources was steatite, a type of soapstone that was carved into vessels and ornaments and traded with neighboring tribes. The Gabrielino also created rock art and produced ceramic vessels. They used asphaltum, which occurs naturally in the area, both as a waterproof seal and as an adhesive to attach shell decorations to items. Other tools included portable mortars and metates, scrapers, knives, drills, paddles, wooden spoons and bowls, bone saws, needles, fishhooks, awls, slings, clubs, and baskets (Bean and Smith 1978). Their pre-contact and contact period burial practices included cremation and flexed burials (Moratto 1984).

The social structure and organization appear to have been typical of other indigenous groups in southern California. There was a hierarchy with three tiers composed of the ruling class and economically elite, the middle class, and the working class; class divisions were sharply observed, and wealth was considered familial and personal. Men and women both adorned their bodies with personalized tattoos, and private land was identified by marking boundary trees with these personal emblems. Little clothing was worn except in inclement weather, but flowers, shells, steatite ornaments, and bone pins were worn as decoration. Houses were constructed out of plant fibers in dome shapes that were large enough to house multiple families. Other structures were constructed for ceremonial purposes, including sweathouses, menstrual huts, and cultic enclosures called *yuva'r* (Bean and Smith 1978: 542). Rock and sand art were important in both life cycle ceremonies, such as coming of age parties and weddings, and supernatural ceremonies, such as those performed by shamans. Shamans were also responsible for memorizing heirloom stories and songs and composing new ones to commemorate important events (Welch 2006: 6). Upon death, an individual was usually buried, sometimes cremated and then buried, with their most prized possessions. Often a dog was buried above the body (Bean and Smith 1978: 538-547).

2.2.2.2 Juaneño-Acjachemen

The language, culture, and territory of the Juaneño people and their neighbors to the south and east, the Luiseño, are so closely related that the two have sometimes been considered to be a single ethnic nationality (Bean and Shipek 1978; White 1963). However, Luiseño and Juaneño individuals consider themselves to be separate tribes, and Cameron (1987:319-321) noted archaeological differences between the two peoples. Other ethnographers, such as Kroeber (1976 [1925]) recognize the two tribes as separate. The name “Juaneño” was applied by the Spanish to the people indigenous to the area of Mission San Juan Capistrano, from whence the name comes and is often used today, although tribal members prefer to identify themselves as Acjachemen (Juaneño Band of Mission Indians 2016). They spoke Juaneño, a Tadic language of the Uto-Aztecan language family closely related to Luiseño, Cahuilla, and Cupeño (The Regents of the University of California 2016). A thorough account of Juaneño life and especially ritual thought and practice was recorded in *Chinigchinich* by Father Geronimo Boscana, a Spanish Friar who lived at Mission San Juan Capistrano and wrote his account sometime between the Mission’s founding in 1776 and his death in 1831 (Boscana 1947 [1846]; Robinson 1947 [1846]). Subsequent examination of the linguistic evidence in this record suggests that it was heavily influenced by the Gabrielino to the north; however, whether this influence was due to precontact cultural transmission or author error is unknown (Kroeber 1976 [1925]: 636).

2.2.3 Historical Background

2.2.3.1 Spanish Period

Mission San Gabriel Arcángel was established by Father Junipero Serra in 1771. It was originally located near Whittier Narrows on the San Gabriel River but was flooded in 1776 and rebuilt in San Gabriel, where it stands today. Agriculture and animal husbandry were the main pursuits of the Mission, and Gabrielino-Tongva neophytes were forced to labor in these activities to make the Mission self-sufficient (McCawley 2006). Indian revolts were common at missions throughout the late 1770s; the most notable Gabrielino-Tongva revolt was led by Toypurina, a chief’s daughter, against Mission San Gabriel in 1785. It was unsuccessful (Bean and Smith 1978: 540-541). Throughout the Spanish Period, the influence of the Spanish progressively spread further from the coast and into the inland areas of southern California as Missions San Luis Rey and San Gabriel extended their influence into the surrounding regions and used

the lands for grazing cattle and other animals. Mexico won its independence from Spain in 1821, bringing an end to the Spanish Period in California.

2.2.3.2 Mexican Period

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities. Seal Beach is within the former Mexican land grant, Rancho Los Alamitos, one of five ranchos that resulted from the partitioning of the large Spanish land grant, Rancho Los Nietos, discussed in more detail below.

2.2.3.3 American Period

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican-American War. A great influx of settlers to California occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, and the availability of free land through passage of the Homestead Act. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions, and greatly increased the rate of population decline among Native American communities.

While the American system required that the newly acquired land be surveyed prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government. The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued throughout the following years. Under Spanish and Mexican ownership, what is now Orange County was dominated economically by cattle and sheep herding and by agriculture.

Initially southern California was divided into only two counties: Los Angeles and San Diego. In 1853, San Bernardino County was added, placing what is now Riverside County primarily within San Diego County and partially within San Bernardino County. Orange County divided from Los Angeles County in 1889.

Oil was first successfully extracted in the 1890s and became another important resource for Orange County throughout the first half of the 1900s. However, agriculture remained the primary economic resource throughout the American period, with Orange County producing up to one-sixth of the nation's Valencia oranges by the 1930s (Orange County Historical Society 2016). Increasing populations led to the development of the county's first master planned communities in the late 1950s and 1960s.

The San Gabriel River, located just north of the project site, was channelized as part of the massive Los Angeles County Drainage Area flood control program. Prior to river channelization efforts and dam construction, floods ravaged the Los Angeles Basin, bringing rock, gravel, and debris in addition to floodwaters.

The earliest recorded incident occurred in the winter of 1771, when the San Gabriel River overflowed its banks. The earliest record of flooding on the Los Angeles River was in 1811. In 1815, the Los Angeles

River changed its course, destroying the plaza and agricultural fields of Los Angeles Pueblo. In 1825, the river changed course again, approximating its present channel. Other major floods occurred in 1832, 1842, and 1859. During the winter of 1861-1862, a record-breaking flood devastated the state. Great rafts of drift wood flowed down the Arroyo Seco and formed dams in the Los Angeles River that forced the swelling current to cut new channels. The deposited driftwood provided fuel for the residents of Los Angeles for several years. The winter of 1867-1868 also saw major flooding. The San Gabriel River cut a new channel and emptied into Alamitos Bay. Formerly, the mouth of the San Gabriel River had been in San Pedro Bay. Other floods occurred in 1876, 1879, 1884, 1886, 1887, 1889, and 1890. In 1891, the San Gabriel again changed course, causing the Rio Hondo and Lexington Wash to become its major channels. Prior to the late 1880s, floods, although causing extensive damage, did not create a general demand for preventive measures. Limited development and subsequent low property values did not warrant the cost of a large-scale flood control project.

Between the late 1880s and 1920, accelerated development and growth in both rural and urban areas occurred throughout the Los Angeles Basin. Los Angeles County's population jumped from 101,454 in 1890 to 504,131 by 1910. By the end of the first decade of the twentieth century, growth of the metropolitan, industrial, and agricultural districts in the area had reached a point where floods were a serious problem and threatened the continued existence and further development of Los Angeles. Floods had become more frequent and destructive during the early years of the twentieth century as a result of increased development, which stripped the terrain of its natural vegetation, thereby increasing the velocity and destructiveness of flood waters. The winter of 1910-11 saw devastating floods along the San Gabriel River that destroyed bridges and inundated fertile farm land with sterile sand and silt [site record for Santa Fe Dam/Flood Control Basin].

The Los Angeles County Flood Control District was created by an act of the California State Legislature in June 1915, its purpose being "to provide for the control and conservation of flood, storm, and other waste waters and to conserve such waters for beneficial and useful purposes." "By December 1933, works of the Los Angeles County Flood Control District that had either been completed or were in progress included 16 reservoirs; 412 miles of regulated mountain and foothill watersheds; spreading grounds on Thompson Creek, Pacoima Wash, San Antonio Wash, and the San Gabriel River; and 132 miles of permanently improved drainage channels" (site record for Santa Fe Dam/Flood Control Basin). Although additional channel improvements were still needed throughout the Los Angeles Basin, the public voted down bond issues in 1926 and in the early 1930s; an appeal to the federal government for funds was also denied. Unfortunately, on New Year's Day 1934, floodwaters carrying tons of mud, rock, and debris inundated the communities of Glendale, Montrose, and La Crescenta, leaving 41 people dead and millions of dollars in property damage. Federal legislation in the mid- to late-1930s led to the Los Angeles County Drainage Area project undertaken by the US Army Corps of Engineers. Another flood in 1938, which left 100 people dead and \$35 million in damages, spurred on the flood control efforts; all the previously installed flood control facilities functioned properly, saving lives and preventing damage. A comprehensive plan for the Los Angeles County Drainage Area was completed in 1940.

For the Los Angeles River drainage, the project included Hansen, Sepulveda, and Lopez flood control basins; construction of debris basins at the mouth of 17 tributary canyons; improvement of 49.07 miles of main channel, and 53.42 miles of tributary channels; and the reconstruction of 109 bridges. For the San Gabriel River drainage, similar works were approved, including Santa Fe and Whittier Narrows flood control basins, debris basins on seven tributaries to the Rio Hondo; improvement of 35.6 miles of main channel and 69.16 miles of tributary channels on the San Gabriel, as well as an additional 9.76 miles of main channel and 35.23 miles of tributary channels on the Rio Hondo; and the reconstruction of

207 bridges. Improvements were also projected for Ballona Creek, consisting of debris basins in two tributary canyons, 2.3 miles of main channel improvement, 23.67 miles of tributary channel improvement, and reconstruction of 126 bridges [site record for Santa Fe Dam/Flood Control Basin].

2.2.4 Project Vicinity

The Gabrielino villages of *Ahwaanga*, *Motuucheyngna*, and *Puvungna* were located along the coast of Long Beach (Tongva People, n.d.); sites associated with *Puvungna* are located in Seal Beach as well. An archaeological site on the campus of California State University Long Beach (CA-LAN-234) was placed on the NRHP as the archaeological representation of the village; two other sites located just east of the campus, on the grounds of Rancho Los Alamitos (the site of the ranch house) were also placed on the NRHP. *Puvungna* is sacred to the Gabrielino and Acjachemen people as a place where *Chinigchinich* emerged and instructed the people. “Cindy Alvitre, an American Indian studies lecturer who is also of Tongva heritage, said that to followers of indigenous religions Puvungna’s significance was comparable to that of cities like Mecca, Jerusalem or Bethlehem. ‘A lot happened here in the creation narratives, and obviously the land changed with the Spanish colonization,’ she said” (Edwards 2017). Lillian Robles, an Acjachemen elder, noted that the name means “gathering place” and explained that “‘When Wiyot died, all of the creations gathered at Puvungna to mourn him and await his return. He had promised to return in three days. Instead, the being *Chinigchinich* emerged. *Chinigchinich* then created our people, the Native Americans, in the physical form we have today’ (Robles)” (Rigby 2012:71). Approximately 100 burials were excavated at Puvungna over several decades and were reburied in cooperation with Gabrielino-Tongva, Juaneño-Acjachemen and Chumash representatives in 2016. Hellman Ranch has been called by some Puvungna East and also includes habitation remains and human burials. The Gabrielino-Tongva community called Montuuchey (*Motuucheyngna* or El Piojo) is geographically associated with the historic Anaheim Landing. For the most part, archaeological resources within Seal Beach have been identified on Naval Weapons Station Seal Beach, at Hellman Ranch, and potentially within the Boeing property. These significant cultural areas are in relative proximity to the current project area.

Seal Beach is within the former Mexican land grant, Rancho Los Alamitos, one of five ranchos that resulted from the partitioning of the large Spanish land grant, Rancho Los Nietos. Rancho Los Nietos was granted to Jose Manuel Nieto by Governor Pedro Fages in 1784 and “took in all the land between the San Gabriel and Santa Ana rivers, from the foothills to the sea” (Orange County Recorder, n.d.). Upon Nieto’s death, his children petitioned to have the original land grant divided, and Rancho Los Alamitos was one of the five resulting partitions, as declared by Governor Jose Figueroa in 1834. The others were Ranchos Las Bolsas, Los Coyotes, Santa Gertrudes, and Los Cerritos. Rancho Los Alamitos was acquired in 1844 by Abel Stearns, one of the leading merchants and rancho owners of the time. The ranch supplied much of the beef for immigrants coming to California for the gold rush, and when California joined the Union in 1850, Rancho Los Alamitos was the headquarters of the largest cattle ranch in the United States at that time. However, vast numbers of cattle were lost to severe floods and droughts throughout the early 1860s, and the rancho was foreclosed in 1865 (Rancho Los Alamitos, n.d.). In 1881, it was purchased by a group that included John William Bixby and Isaias Hellman. They developed a small portion of the ranch as the town site of Alamitos, which was later subsumed by Long Beach; farm lots were leased farther from the beach.

In 1867, the founders of the colony of Anaheim utilized Anaheim Landing on San Pedro Bay as a port to off-load their goods. In 1901, John Ord became the first year-round permanent resident of the town, which was informally called Bay City. The town became a stop on the Pacific Electric Railway Company’s

Red Car line in 1904. While its popularity as a port diminished, its popularity as a recreation area grew, and in the early 1900s, Seal Beach moved from being a port city to a resort town. In 1903, the City was subdivided and renamed Bay City. A pier, roller coaster, bath house, and dancing pavilion were constructed along the waterfront and in 1915, Bay City was incorporated and renamed again, as Seal Beach. Through the 1920s, the resort community flourished and continued to grow until the onset of the Great Depression. The pier suffered damage during a 1939 hurricane and was rebuilt. World War II saw an influx of military presence in the region and the Navy base was built within the city limits. This brought a second construction boom and the town continued to expand into the 1950s. Few undeveloped areas remain in Seal Beach (City of Seal Beach, n.d.; Grobaty 2017; Kaiser 1995; Orange County Register 2005).

Known historic resources in Seal Beach include Anaheim Landing, the NRHP-listed “Old City Hall,” and locally listed historic structures, including the Krenwinckle House and the Proctor House.

3.0 ARCHIVAL RESEARCH AND NATIVE AMERICAN CONTACT PROGRAM

3.1 RECORDS SEARCH

HELIX conducted a one-mile radius records search at the South Central Coastal Information Center (SCCIC) on August 29, 2018. SCCIC is the California Historical Resources Information System (CHRIS) repository for Orange and Los Angeles Counties. The records search included archaeological and historical resources, locations and citations for previous cultural resources studies, and a review of the state Office of Historic Preservation (OHP) historic properties directory. The records search summary and map are included as Appendix B (Confidential Appendices, bound separately).

3.1.1 Previous Surveys

The records search results identified 65 cultural resources studies within a one-mile radius of the project, two of which cover the project survey area (Table 1, *Previous Studies within One Mile of the Project Area*). One of the studies mapped at SCCIC as including the project area is a cultural resources survey of the Los Angeles-Long Beach Harbor areas (Weinman and Stickel 1978). It is difficult to discern from the report whether the current project area was actually subject to a field survey, but the project site was already developed by the time of that survey. The second report is a research design for evaluating coastal archaeological sites in northern Orange County and did not include fieldwork (Mason 1987). Thus, the current project site does not appear to have been surveyed for cultural resources in the past.

Table 1
PREVIOUS STUDIES WITHIN ONE MILE OF THE PROJECT AREA

Report No. (LA-#)	Report Title	Author, Date	Report Type
01272	Archaeological Reconnaissance Report of Munz Lake Plantation Sites South of Lake Hughes on the Lake Hughes Truck Trail	Reponen, 1969	Archaeological Reconnaissance
01581	Cultural Resources Evaluation of the BKK Landfill Proposal, Los Angeles County, California	Bissell, 1986	Cultural Resources Assessment
02114	Archaeological Investigations of the Proposed California Shores Property, Long Beach, California.	McKenna, 1990	Archaeological Investigations
02399	Los Angeles-Long Beach Harbor Areas Cultural Resource Survey.	Weinman and Stickel, 1978	Cultural Resources Survey
03583	The Los Angeles Basin and Vicinity: A Gazetteer and Compilation of Archaeological Site Information	Bucknam, 1974	Archaeological Investigation
04034	Report of Initial Archaeological Study at Trancas Canyon Road, Malibu, California	King, 1998	Archaeological Investigation
04157	Cultural Resources Assessment for the Marketplace Restaurant and Retail Site, City of Long Beach, Los Angeles County, CA.	McLean, Strudwick, and McCawley, 1997	Cultural Resources Assessment
04266	A Deeply-Buried Human Skull and Recent Stratigraphy at the Present Mouth of the San Gabriel River, Seal Beach, California	Brooks, 1960	Archaeological Investigation
05890	Cultural Resource Survey of the Bixby Ranch Parcel Near Alamitos Bay, Los Angeles County, California	Strudwick, McCawley, McLean, and Strum, 1996	Cultural Resources Survey
06107	Phase I Cultural Resources Assessment: Los Alamitos Pump Station Project in Long Beach, Los Angeles County, and Seal Beach, Orange County, California	Shepard, 2003	Cultural Resources Assessment
08994	A Phase I Cultural Resource Survey for Property at 47th East and Avenue S, City of Palmdale, California	Hudlow, 2004	Cultural Resources Survey
10483	Cultural Resources Assessment for the Alamitos Bay Marina Rehabilitation Project, City of Long Beach, Los Angeles County, California	Fulton, 2009	Cultural Resources Assessment
10527	Los Angeles-Long Beach Harbor Areas Regional Cultural History, Los Angeles County, California	Weinman, 1978	Cultural Resources Assessment
11137	LOP Facsimile Transmittal SPL-2009-00807-PHT	Trinh, 2009	Cultural Resources Assessment

Table 1 (cont.)
PREVIOUS STUDIES WITHIN ONE MILE OF THE PROJECT AREA

Report No. (LA-#)	Report Title	Author, Date	Report Type
12808	Cultural Resources Study of the Wilmington Oil and Gas Field, Los Angeles County, California in Support of Analysis of Oil and Gas Well Stimulation Treatments in California Environmental Impact Report	Chasteen, Clark, Hanes and Mirro, 2014	Cultural Resources Assessment
12960	Cultural Resources Overview: The City of Long Beach Southeast Area Specific Plan, Los Angeles County, California	McKenna, 2016	Cultural Resources Assessment
Report No. (OR-#)	Report Title	Author, Date	Report Type
00481	Archaeological Survey Report: The 9 Acre L.A. Dept. of Water and Power Property Located at the Corner of 1st and Ocean Ave. in the City of Seal Beach	Van Horn, 1979	Archaeological Survey
00493	Archaeological Survey Report: The Hellman Property in Seal Beach	Anonymous, 1980	Archaeological Survey
00619	Field Assessment of CA-ORA-322; Naval Weapons Station, Seal Beach	Frierman, 1981	Field Assessment
00639	Archaeological Test Report on the Hellman Property Located in Seal Beach	Anonymous, 1981	Archaeological Test
00930	Survey of the Seal Beach Area, Orange County, California	Motkin, 1988	Archaeological Survey
01049	Landing Hill	Redwine, 1958	Unknown
01272	A Baseline Archaeological Study for the City of Seal Beach California	Stickel, 1991	Archaeological Study
01290	Cultural Resources Survey Report for the Unocal Property at 99 Marina Drive, Seal Beach, California	De Barros and Mason, 1993	Cultural Resources Survey
01296	Archaeological Testing and Significance Assessment of CA-ORA-1335, a Prehistoric Site Located on the Rancho Mission Viejo, Orange County, California	Brown, 1993	Archaeological Testing
01301	Historical Review and Archaeological Report for the Unocal On-shore Facility at 99 Marina Drive in Seal Beach California in Two Parts	Kelsey and Magalousis, 1993	Historical and Archaeological Assessment
01348	Addendum to Cultural Resources Survey Report for the Unocal Property at 99 Marina Drive Seal Beach, California	De Barros and Mason, 1993	Cultural Resources Survey: Addendum
01414	The 20+ Acre Site of Proposed New Residential Housing on the Naval Weapons Station, Seal Beach	Van Horn, 1981	Unknown

Table 1 (cont.)
PREVIOUS STUDIES WITHIN ONE MILE OF THE PROJECT AREA

Report No. (OR-#)	Report Title	Author, Date	Report Type
01482	Archaeological Resources Protection Plan for Installation Restoration Sites 4,8,9, SWMU 56 at Naval Weapons Station, Seal Beach, Orange County, California	Mason and Carbone, 1996	Archaeological Resources Protection Plan
01581	Cultural Resource Assessment of the Hellman Ranch, Seal Beach	Whitney-Desautels, 1997	Cultural Resource Assessment
01599	Archaeological, Historical, and Architectural Phase 1 Overview Survey, Phase II Evaluation Survey and Historic and Archaeological Resource Protection (HARP) Plan of Naval Weapons Station, Seal Beach, California	Clevenger, Crawford, and Pignolo, 1993	Archaeological, Historical, and Architectural Survey
01608	A Research Design and Investigation Program for Test Level Evaluations of Archaeological Sites Located on the Hellman Ranch, City of Seal Beach, California	Stickel, 1996	Research Design
01609	A Research Design for the Evaluation of Archaeological Sites Within the Hellman Ranch Specific Plan Area	York, Cleland, and Baksh, 1997	Research Design
01610	An Archaeological Site Survey of the Hellman Ranch, City of Seal Beach, California	Stickel, 1996	Archaeological Survey
01643	A Research Design for the Evaluation of Archaeological Sites Within the Hellman Ranch Specific Plan Area	York, Cleland, and Baksh, 1997	Research Design
01816	A Research Design and Investigation Program for Test Level Evaluations of Archaeological Sites Located on the Hellman Ranch, City of Seal Beach, California	Stickel, 1996	Research Design
01858	A Research Design for the Evaluation of Archaeological Sites Within the Hellman Ranch Specific Plan Area	York and Cleland, 1997	Research Design
01897	Historic Properties Overview and Evaluations on the Naval Weapons Station, Seal Beach	Unknown, 1997	Historic Assessment
01958	Phase I - Overview Survey and Phase II - Archaeological, Historical, and Architectural Eligibility Study of Cultural Resources on the Naval Weapons Station, Seal Beach	Clevenger and Crawford, 1995	Archaeological Survey

Table 1 (cont.)
PREVIOUS STUDIES WITHIN ONE MILE OF THE PROJECT AREA

Report No. (OR-#)	Report Title	Author, Date	Report Type
01960	Archaeological Resource Protection Plan for the Background Study Sampling Areas at Naval Weapons Station, Seal Beach, Orange County, California	Mason and Cerreto, 1995	Archaeological Resource Protection Plan
01969	Final Historic and Archaeological Resources Protection (HARP) Plan for the Naval Weapons Station, Seal Beach	Clevenger and Crawford, 1997	Historic and Archaeological Resources Protection
01989	Archaeological Resources Protection Plan for the Site Inspection Work Plan at the Research, Testing, and Evaluation Area, Naval Weapons Station, Seal Beach, Orange County, California	Berryman and Pettus, 1995	Archaeological Resources Protection Plan
02033	Research Design for Evaluation of Coastal Archaeological Sites in Northern Orange County, California	Mason, 1987	Research Design
02070	Archaeological Monitoring at Installation Restoration (IR) Site 73, Naval Weapon Station (NAVWPNSTA), Seal Beach, California (CH2M Hill Prime Contract No. N6871-96-D-2299)	Bissell, 2000	Archaeological Monitoring
02072	Archaeological Services at Naval Weapons Station (NAVWPNSTA), Seal Beach, California (CH2M Hill Prime Contract No. N6871-96-d-2299), Relative to Sampling at Installation Restoration (IR) Sites 12, 16, 25, 37, 38, 42, 44/45, AOC 6, SWMU 24, 56, 57, OSR, an	Bissell, 2000	Archaeological Services
02284	Archaeological Resources Protection Plan for Installation Restoration Sites 5, 8, 12, 16, 21, 40, 44, and 46 at Naval Weapons Station, Seal Beach Orange County, CA	Mason and Cerreto, 1995	Archaeological Resources Protection Plan
02604	Cultural Resource Assessment AT & T Wireless Services Facility No. 13001A Orange County, California	Duke, 2002	Cultural Resource Assessment
02774	Phase I Cultural Resources Assessment: Los Alamitos Pump Station Project in Long Beach, Los Angeles County, and Seal Beach, Orange County, California	Shepard, 2003	Cultural Resource Assessment

Table 1 (cont.)
PREVIOUS STUDIES WITHIN ONE MILE OF THE PROJECT AREA

Report No. (OR-#)	Report Title	Author, Date	Report Type
03172	Historic Resources Evaluation Report Seal Beach Bike Trail Project City of Seal Beach, Orange County 12-ORA-1-PM 31.11/32.72-KP 50.07/52.66 EA OC 3700	Tang and Tibbet, 2004	Historic Resources Evaluation
03174	Preliminary Draft Final Historic and Archaeological Resources Protection (HARP) Plan for the Naval Weapons Station, Seal Beach	Unknown, 1995	Historic and Archaeological Resources Protection Plan
03175	National Register of Historic Places Evaluation of Cold War-era Buildings and Structures Naval Weapons Station, Seal Beach, Orange County, California	Unknown, 1999	National Register of Historic Places Evaluation
03379	Final Archaeological Data Recovery Report for a Portion of Prehistoric Archaeological Site CA-ORA-322/1118 to Mitigate Impacts of Soil Removal Remediation	Chatters, 2003	Archaeological Data Recovery Report
03391	Mitigation Plan for Significant Cultural Resource Discoveries Hellman Ranch Specific Plan Area Seal Beach, California	York, Cleland, Willey, and Gross, 2003	Mitigation Plan
03562	Negative Archaeological Monitoring Report for the 400 Marina Drive Development Project, City of Seal Beach, CA	Strauss, 2009	Negative Archaeological Monitoring
03735	Due-diligence Historical Archaeological Resources Review, City of Seal Beach Sewer Capital Improvement Projects, City of Seal Beach, Orange County, California	Tang, 2008	Due-diligence Historical Archaeological Resources Review
03762	Negative Archaeological Monitoring Report for the Hellman Ranch Tank Farm Replacement Project, City of Seal Beach, California	Ehringer, 2009	Negative Archaeological Monitoring
03821	Identification and Evaluation of Historic Properties City of Seal Beach Sewer Capital Improvement Projects (Southern Portion/Downtown Area) City of Seal Beach, Orange County, California	Tang and Hogan, 2009	Historic Properties Assessment
03828	Piecing Together the Prehistory of Landing Hill: A Place Remembered	Cleland, York, and Willey, 2007	Cultural Assessment
04031	Subject: Phase I Archaeological Study Report for Alumni Center at the University of California Irvine Campus	Padon, 2011	Archaeological Study

Table 1 (cont.)
PREVIOUS STUDIES WITHIN ONE MILE OF THE PROJECT AREA

Report No. (OR-#)	Report Title	Author, Date	Report Type
04034	The Los Angeles Basin and Vicinity: A Gazetteer and Compilation of Archaeological Site Information	Bucknam, 1974	Archaeological Assessment
04035	Los Angeles-Long Beach Harbor Areas Cultural Resource Survey (Also listed as LA-2399)	Weinman and Stickel, 1978	Cultural Resource Survey
04047	Seal Beach Railroad Right of Way Property, Seal Beach Blvd. - 17th Street - 16th Street - Electric Ave., Seal Beach, CA	Lehman, 2007	Unknown
04105	Cultural Resources Records Search and Archaeological Survey Results for the proposed Clear Wireless, LLC, Site CA-ORC-5863A (OG03XC029C) located at 211 8th Street, Seal Beach, Orange County, California 90740	Wlodarski, 2010	Cultural Resources Records Search and Archaeological Survey
04143	Sprinkler System Replacement at CA-ORA-322/1118, Reference #5758 Ser. N45W/0153	Baillie, 2004	Unknown
04307	Re-evaluation of the National Register Eligibility Status of Naval Weapons Station Seal Beach, Orange County and Naval Weapons Station Seal Beach, Detachment Fallbrook, San Diego County	Baillie, 2003	Reevaluation of the National Register Eligibility Status

3.1.2 Previously Recorded Resources

The SCCIC has a record of 21 previously recorded cultural resources within a mile radius of the project (Table 2, *Previously Recorded Resources within One Mile of the Project Area*), including 12 prehistoric sites, eight historic resources, and one multicomponent site. No resources have been recorded within or immediately adjacent to the project site. Two resources are located within a quarter mile of the project site; these consist of a prehistoric shell deposit (CA-ORA-1473 [P-30-001473]), apparently related to other sites on the Hellman Ranch property, and the historic Seal Beach Red Car, No. 1734 (P-30-162293). In general, the prehistoric resources consist of shell midden and shell scatter sites, some of which include flaked stone and ground stone artifacts and midden soil, suggesting they represent habitation areas, some of them possibly seasonal. One site was recorded as a Native American trail. The historic resources include the Naval Weapons Station Seal Beach historic district and buildings within it; Seal Beach City Hall; Seal Beach Red Car; a single-family residence; a pump station; a landfill; and the site of Anaheim Landing. The multicomponent site includes a prehistoric habitation area and a complex of historic features, including a windmill, well, rock foundation, and domestic refuse.

Table 2
PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF THE PROJECT AREA

Resource Number (P-#)	Resource Number (Trinomial)	Age	Description	Recorder, Date
P-19-000271	CA-LAN-271	Prehistoric Site	Light shell midden with sparse lithic debitage and one ground stone artifact (hammerstone).	Dixon, 1959
P-19-001821	CA-LAN-1821	Prehistoric Site	Shell midden.	McKenna, 1990
P-19-004781	CA-LAN-4781H	Historic Site	Salvage Landfill #2. Consists of newspaper, plastic, metal, etc.	Fulton and Fulton, 2017
P-19-186926	--	Historic Structure	Utility structure consisting of a flood control pump station directly associated with the Los Alamitos Retarding Basin. Constructed in 1957.	Shepard, 2003
P-30-000256	CA-ORA-256	Prehistoric Site	Shell midden and lithic scatter suggesting an early occupation and seasonal campsite. Site was re-surveyed by Stickel and his team in 1996; Hellman Ranch.	McKinney, 1969; Stickel 1996
P-30-000257	CA-ORA-257	Prehistoric Site	Surface lithic scatter consisting of two hand stones, two milling stone fragments and two small worked fragments. Site was re-surveyed by Stickel and his team in 1996; Hellman Ranch.	McKinney, 1969; Stickel, 1996
P-30-000258	CA-ORA-258	Prehistoric Site	One possible feature with six associated "stones" with burnt shell and bone. Eighty-two surface artifacts consisting of ground stone, lithics, hammerstone, groove axe, milling slab. Site was re-surveyed by Stickel and his team in 1996; Hellman Ranch.	No recorder given, 1969; Stickel, 1996
P-30-000259	CA-ORA-259	Prehistoric Site	Thirty-two artifacts both surface and subsurface consisting of ground stone, hammerstone, and lithics. Dark midden soil marks the site. Site was re-surveyed by Stickel and his team in 1996; Hellman Ranch.	McKinney, 1969; Stickel, 1996
P-30-000260	CA-ORA-260	Prehistoric Site	One of a series of seasonal camp sites marked mainly by a dense shell midden and a scatter of ground stone fragments. This site was perhaps utilized to conduct ceremonial activities and may have been related to the Puvunga complex of sites. Site was re-surveyed by Stickel and his team in 1996; Hellman Ranch.	McKinney, 1969; Flaherty and Stickel, 1996

Table 2 (cont.)
PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF THE PROJECT AREA

Resource Number (P-#)	Resource Number (Trinomial)	Age	Description	Recorder, Date
P-30-000322	CA-ORA-322/1118	Multi-Component Site	Prehistoric: Habitation site with dense shell scatter, lithic scatter, one pottery fragment. Historic: Standing windmill with a brick lined well and associated water tank footings, a stacked rock foundation and associated domestic refuse.	Colegrove and Desautels, 1971; Bissell, 1988; Pigniolo, James, Campbell and Mealey, 1992; James, 1996; Bissell, 2000
P-30-000832	CA-ORA-832	Prehistoric Site	Originally recorded as a possible Aboriginal trail with associated cores but after McCoy and Phillips in 1980 examined the site, they reported finding only naturally fractured chert fragments. Cooley and Cottrell concurred with McCoy and Phillips findings in 1980.	Oxendine, 1979; Becker, 1994
P-30-000850	CA-ORA-850	Prehistoric Site	Shell scatter. This site was re-surveyed by Stickel and his team in 1996.	Colquehon, n.d.; Stickel, 1996
P-30-000851	CA-ORA-851	Prehistoric Site	Shell midden. This site was re-surveyed by Stickel and his team in 1996.	Colquehon, n.d.; Stickel, 1996
P-30-001473	CA-ORA-1473	Prehistoric Site	Shell midden that formed part of a much larger site which may have been related to the Puvunga complex of sites; Hellman Ranch.	Flaherty and Stickel, 1996
P-30-001544	--	Prehistoric Site	Shell scatter and one ground stone.	Underwood, 2000
P-30-156069	--	Historic Building	Old Seal Beach City Hall is a civic building constructed in 1929 in the Mediterranean Revival architectural style which exhibits a strong Spanish influence. It was placed on the National Register in 1983. The new city hall administrative building was constructed in 1969 and is attached to the old city hall.	Thomas, 1982; Johnson, 2010; Brunzell and Van Renssaier, 2015
P-30-162271	--	Historic Site	Anaheim Landing. Recorded as a California State Historical Landmark (No. 219). Anaheim Landing was established as a port of entry for the Santa Ana Valley by the Anaheim Landing Co. soon after the founding of the mother colony at Anaheim in 1857.	Reinhardt, 1959; Arbuckle, 1980
P-30-162293	--	Historic Structure	Seal Beach Red Car. The Red Car, No. 1734 was "...built in 1925 by the Pacific Electric Railway, as part of the Red Car system that served Southern California through the 1950s, it was originally used as a service car."	No recorder given, 1985

Table 2 (cont.)
PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF THE PROJECT AREA

Resource Number (P-#)	Resource Number (Trinomial)	Age	Description	Recorder, Date
P-30-176903	--	Historic Building	Ranch-style dwelling and single-family property with no significant association or design, or as a rare example of its type.	McElroy, 2000
P-30-179841	--	Historic Building	Naval Weapons Station, Seal Beach officer's quarters consisting of three buildings: 212, 217, and 218, designed by Edward H. Fickett, A.I.A (Los Angeles) and built in 1964.	Bunse and Rogers, 1998
P-30-179859	--	Historic District	Naval Weapons Station, Seal Beach historic district with 185 contributing elements (buildings) and 247 non-contributing elements (buildings and structures). Buildings mainly constructed in the Modern Movement architectural style with some Colonial Revival. Period of significance is 1940-1946.	Crawford, 1995

3.2 OTHER ARCHIVAL RESEARCH

Various archival sources were also consulted, including historic topographic maps and aerial imagery (NETR Online 2018) to identify historic structures and land use in the area. These include historic aerials available at historicaerials.com (NETR Online 2018) and historic USGS topographic maps: the 1901 and 1904 Southern California Sheet No. 1 (1:250,000 scale); the 1896 and 1943 Las Bolsas 15-minute quadrangles (1:62,500 scale); the 1935 Seal Beach topographic map (1:31,680 scale); and the 1950, 1965, 1972, 1974, and 1981 Seal Beach 7.5-minute (1:24,000 scale) topographic maps.

On the 1896 Las Bolsas map, as well as the 1901 and 1904 topographic maps, the project site is shown as a marshy area adjacent to the San Gabriel River, which meanders before emptying into Alamitos Bay. In the 1935 Seal Beach map (1:31,680 scale) and the 1941 and 1943 Las Bolsas 15-minute maps, the river is channelized, and the area south of the railway tracks (1935) and Bolsa Avenue (1941 and 1943) is developed. The project site and the surrounding area remain undeveloped on these maps. No buildings appear within or adjacent to the project area in any of the maps prior to 1965, although there are roads shown in the vicinity on all the historic topographic maps. By 1965, 5th Street, located immediately adjacent to and south of the project site, as well as residential development immediately adjacent to and north and west of the project site appears. In the 1974 Seal Beach topographic map, a building or structure appears within the project site.

Historic aerial photographs were examined from the years 1952, 1963, 1972, 1994, and 2012. No buildings or structures besides main roads are visible in the vicinity of the project on the aerial images from 1952 and 1963, with 5th Street appearing on the 1963 aerial. By 1972, residential development appears immediately adjacent to the north and west of the project area, as well as within the project area. Industrial uses can be seen in relative proximity to the project area but not within or immediately adjacent to it, and further commercial development south of 5th Street appears on the 1994 aerial. By

2012, the building or structure seen within the project area is no longer visible, revealing an empty and flat area (NETR Online 2018). This is in keeping with the known history of the project site having supported a gas station in the past, which was demolished in 2011.

3.3 NATIVE AMERICAN CONTACT PROGRAM

HELIX contacted the Native American Heritage Commission (NAHC) on August 29, 2018 for a Sacred Lands File search and list of Native American contacts for the project area. The NAHC indicated in a response dated September 4, 2018 that Native American cultural sites are present and to contact the Juaneño Band of Mission Indians. Letters were sent on September 24, 2018 to the eight tribal contacts provided by the NAHC, including four Juaneño contacts, two Gabrielino-Tongva contacts, one contact for Gabrieleno-Tongva San Gabriel Band of Mission Indians, and one contact for the Gabrieleño Band of Mission Indians, Kizh Nation. As of October 9, 2018, no responses have been received, except as noted below. When responses are received, they will be forwarded to City staff and to the applicant. Native American correspondence is included as Appendix C (Confidential Appendices, bound separately).

As previously noted, a tribal cultural monitor from the Gabrieleño Band of Mission Indians, Kizh Nation participated in the field survey. His recommendations regarding monitoring during construction are included in the recommended mitigation measures.

Per the recommendation of the NAHC, the PI spoke with Joyce Perry, the tribal manager of the Juaneño Band of Mission Indians Acjachemen Nation. (She was one of the contacts provided by the NAHC and an individual with whom the PI has worked in the past.) Via email and phone conversation, Ms. Perry reiterated that the area of the project is part of the Tribe's territory, and they wish to be included in the monitoring program. She indicated, "Puvungna is core to our culture" and noted that she was "one of many plaintiffs that fought to save our village" in lawsuits against California State University Long Beach over the destruction of that significant site (see Appendix C, Confidential Appendices).

Given the former marshy environment of the project site (as noted above), Ms. Perry suggested that the area may have been a traditional cultural property, such as a location where people went in order to gather plants and other important resources, with the habitation sites being located outside the marshy area. This fits with the pattern of known cultural resources in the vicinity, such as the Hellman Ranch/Landing Hill sites. Ms. Perry reiterated the importance of this area to the Juaneño-Acjachemen people and the Tribe's desire to consult on this project and to be kept updated on project progress, as well as being included in construction monitoring.

4.0 SURVEY METHODS AND RESULTS

A pedestrian survey of the project site was conducted on September 14, 2018 by HELIX field director Julie Roy, with tribal monitor Mathew Teutimez from the Gabrieleño Band of Mission Indians, Kizh Nation. The survey area was covered with pea gravel and large (up to 4-inch) rock. The outskirts of the project site, located north of the northern fenced tank area and inside the exterior fencing, consisted of sand and soils containing marine shell (Argopecten, Chione, Protothaca, oyster, moon snail and a possible Pismo clam). One possible quartzite flake was observed, however, due to the highly disturbed nature of the project property it was not confirmed as to whether the item was an artifact or a piece broken by machinery. The soils in which the shell was highly concentrated were medium brown in coloration and may have been redeposited onto the project site from elsewhere or brought up to the

surface during fencing or post placement; these soils did not appear to be fill, suggesting subsurface cultural material may be present. As previously noted, the project area was formerly developed as a gas station, including underground tanks, and thousands of tons of soil have been removed, due to contamination. Thus, the project site has been the subject of a great deal of past subsurface disturbance, and intact cultural deposits are considered unlikely. Views of the project site are shown in Plates 1 through 3.

As discussed in Chapter 3.1.2, Previously Recorded Resources, no resources have been recorded within or adjacent to the project site. The two resources recorded within a quarter mile consist of the historic Seal Beach Red Car, No. 1734 (P-30-162293) and a prehistoric shell deposit (CA-ORA-001473) that is one of the Hellman Ranch sites and “possibly associated with the Puvunga complex of sites” (site record, on file at SCCIC). Other sites on the Hellman Ranch property are located between one-fourth mile and over one mile from the project area.



Plate 1. Overview of project site, showing gravel and rock on surface.



Plate 2. Overview of project site, showing existing monitoring well.



Plate 3. Close view of existing soils and the observed shell.

5.0 SUMMARY OF EFFECTS AND MANAGEMENT RECOMMENDATIONS

A study was undertaken to identify cultural resources that are present in the 490 Pacific Coast Highway project area and to determine the effects of the project on historical resources/historic properties. The cultural resources survey did not identify any cultural resources within the project area, but some marine shell was observed that may be cultural in origin. The ground surface is covered with gravel, obscuring ground visibility; however, the project site has been subject to extreme disturbance from development of a previous gas station, including underground tanks, and the removal of thousands of tons of soil for remediation. Based on this, the potential for intact subsurface cultural resources is considered to be low, although there may be pockets of buried cultural material. The project is expected to have no effects to historical resources per CEQA and no effects to historic properties per the NHPA.

Although there are no archaeological sites recorded within or in the immediate vicinity of the project site, the general area is quite sensitive in terms of cultural resources. A series of archaeological sites on the nearby Hellman Ranch has been identified as significant, sometimes called Puvungna East, and a Gabrielino village was identified in the area of the historic Anaheim Landing. This village site would have encompassed the Hellman Ranch sites as well as the project area. In addition, the NAHC indicated that Native American cultural resources listed on the Sacred Lands File are present in the area, and Native American informants have reiterated the cultural significance of the area in which the project is located.

Based on these factors, it is recommended that ground-disturbing activity for the project be monitored by a qualified archaeologist and Native American monitors from both Gabrielino (Gabrieleno) and Juaneño tribes, as described below. In addition, should the project limits change to incorporate new areas of proposed disturbance, a cultural resources survey of these areas will be required.

The following measures are recommended:

- CUL-1** Prior to the commencement of any ground-disturbing activities for the project, a qualified archaeologist and Native American monitors from both Gabrielino (Gabrieleno) and Juaneño tribes shall conduct a Worker Environmental Awareness Program (WEAP) to present to City staff, the grading contractor, and any relevant subcontractors information regarding the cultural and archaeological sensitivity of the project area, as well as the requirements of the monitoring program. The WEAP can be presented at a pre-grading meeting or separately. If the WEAP is held separately, the qualified archaeologist and Native American monitors shall be present for a pre-grading meeting with the grading contractor to discuss project schedule, safety requirements, and monitoring protocols.
- CUL-2** Ground-disturbing activities during construction shall be monitored by a qualified archaeologist and Native American monitors from both Gabrielino (Gabrieleno) and Juaneño tribes. These activities include removal of existing gravel and other surface materials, grading, trenching, excavation, etc. If cultural material is encountered during monitoring, both the archaeologist and the Native American monitors would have the authority to temporarily halt or redirect activity in the area of the find while the cultural material is documented and a decision is made regarding the significance/eligibility of the find and whether additional excavation, analysis, or other mitigation measures are required. Determinations of significance will be made in consultation among the archaeological Principal Investigator, the Monitor Tribes, and City staff.

If it is determined that the potential for subsurface cultural material is too low to warrant fulltime monitoring, monitoring can be reduced to part-time or spot-checking, or can be discontinued. Such a decision would be made in consultation among the Native American monitors/Monitoring Tribes, the Principal Investigator, and City staff.

CUL-3 Following the conclusion of monitoring, a report shall be prepared documenting the methods and results of the monitoring program and submitted to the City and the SCCIC.

CUL-4 In the event that human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code Section 7050.5 and Public Resources Code Section 5097.98 shall be followed.

6.0 REFERENCES

Bean, Lowell John, and Florence C. Shipek

- 1978 Luiseño. In *California*, edited by Robert F. Heizer, pp. 550-563. Handbook of North American Indians, vol. 8. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, Lowell John and Charles R. Smith

- 1978 Gabrielino. In *California*, edited by Robert F. Heizer, pp. 538-549. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Bean, Lowell J., Sylvia B. Vane, and Jackson Young

- 1991 *The Cahuilla Landscape: The Santa Rosa and San Jacinto Mountains*. Ballena Press, Menlo Park, CA.

Boscana, Geronimo

- 1947 *Chinigchinich. A Historical Account of the Origin, Customs, and Traditions of the Indians at the Missionary Establishment of St. Juan Capistrano, Alta-California*. Translated by Alfred Robinson. Biobooks, Oakland. Originally published in 1846.

Bowman, Roy H.

- 1973 Soil Survey of the San Diego Area, California. US Department of Agriculture, Soil Conservation Service and Forest Service.

Cameron, Constance

- 1987 *Archaeological Investigations on the Rancho San Clemente, Orange County, California*. Archaeological Research Facility California State University, Fullerton.

Carter, George F.

- 1957 *Pleistocene Man at San Diego*. Johns Hopkins Press, Baltimore.
- 1978 An American Lower Paleolithic. *Anthropological Journal of Canada* 16:2-38.
- 1980 *Earlier Than You Think: A Personal View of Man in America*. Texas A&M University Press, College Station.

City of Seal Beach

- n.d. About the City of Seal Beach. Electronic document available at <http://www.sealbeachca.gov/About>. Accessed on October 7, 2018.

Edwards, Andrew

- 2017 Ceremony memorializes reburial of indigenous people's remains at Cal State Long Beach. Inland Valley Daily Bulletin, published September 22, 2016, updated September 1, 2017. Electronic document available at <https://www.presstelegram.com/2016/09/22/ceremony-memorializes-reburial-of-indigenous-peoples-remains-at-cal-state-long-beach/>. Accessed on October 8, 2018.

- Elsasser, A.B.
1978 Development of Regional Prehistoric Cultures. In *California*, edited by Robert F. Heizer, pp. 37-57. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Erlandson, Jon M.
1994 *Early Hunter-Gatherers of the California Coast*. New York, Plenum Press.

1997 The Middle Holocene along the California Coast. In *Archaeology of the California Coast during the Middle Holocene*, edited by J.M. Erlandson and M.A. Glassow. pp. 61–72. Perspectives in California Archaeology, Vol. 4, J.E. Arnold, series editor. Institute of Archaeology, University of California, Los Angeles.
- Gallegos, Dennis R.
2002 Southern California in Transition. In *Catalysts to Complexity: Late Holocene Societies of the Southern California Coast*, edited by J. M. Erlandson and T. L. Jones, pp. 27–40. Perspectives in California Archaeology, Vol. 6, J. E. Arnold, series editor. Institute of Archaeology, University of California, Los Angeles.
- Golla, Victor
2007 Linguistic Prehistory. In *California Prehistory: Colonization, Culture, and Complexity*, edited by T. L. Jones, and K. A. Klar, pp. 71–82. AltaMira Press, New York.
- Grobaty, Tim
2017 Seal Beach: Seals brought a new name to Bay City 100 years ago. Press-Telegram, published July 15, 2013, updated September 1, 2017. Electronic document available at <https://www.presstelegram.com/2013/07/15/seal-beach-seals-brought-a-new-name-to-bay-city-100-years-ago/>. Accessed on October 7, 2018.
- Hedges, Ken, and Christina Beresford
1986 *Santa Ysabel Ethnobotany*. San Diego Museum of Man Ethnic Technology Notes No. 20.
- Jennings, Charles W.
1962 California Geological Survey, Geologic Atlas of California Map No. 007, 1:250,000 scale. Electronic document available at <http://www.quake.ca.gov/gmaps/GAM/longbeach/longbeach.html>. Accessed on September 28, 2018.
- Juaneño Band of Mission Indians
2016 The Tribe. *Juaneño Band of Mission Indians Acjachemen Nation*. Electronic document available at <http://www.juaneno.com/>, accessed on June 23, 2016.
- Kaiser, Dennis
1995 Seal Beach History. Sun Newspaper, Vol. 29, No. 26, October 26, 1995. Electronic document available at http://www.kastner.us/seal_beach_history.html. Accessed on October 7, 2018.

- Kroeber, A.L.
1976 *Handbook of California Indians*. Dover, New York. Originally published 1925 as *Bulletin 78* of the Bureau of American Ethnology of the Smithsonian Institution.
- Mason, Roger
1987 *Research Design for Evaluation of Coastal Archaeological Sites in Northern Orange County, California*. Scientific Resource Surveys, Inc. Report on file at South Central Coastal Information Center, California State University Fullerton.
- McCawley, William
2006 *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki Museum Press and Ballena Press, Banning and Novato, CA. Found in "Mission San Gabriel Arcángel" Wikipedia. Electronic document available at: http://en.wikipedia.org/wiki/Mission_San_Gabriel_Arc%C3%A1ngel. Accessed June 1, 2015.
- McDonald, Meg, and James D. Eighmey
2004 Late Period Prehistory in San Diego. In *Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study*. Prepared for the Metropolitan Wastewater Department, City of San Diego. ASM Affiliates, Encinitas, CA.
- Miller, Wick R.
1986 Numic Languages. In *Great Basin*, edited by W. L. D'Azevedo, pp. 98–112. Handbook of North American Indians, Vol. 11. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Minshall, Herbert L.
1976 *The Broken Stones*. Copley Books, San Diego.
- Moratto, Michael J.
1984 *California Archaeology*. Academic Press, Orlando.
- National Oceanic and Atmospheric Administration (NOAA)
2014 Electronic document available at <http://forecast.weather.gov/MapClick.php?zoneid=CAZ048#.VGlzkP0tA1U>.
- Natural Resources Conservation Service
2018 Web Soil Survey. Electronic document available at <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.
- NETR Online
2018 *Historic Aerials*. Nationwide Environmental Title Research, LLC. Electronic document available at: <http://www.historicaerials.com>.
- Orange County Historical Society
2016 A Brief History of Orange County California. Electronic document available at <http://www.orangecountyhistory.org/history-brief.html>, accessed on June 28, 2016.

Orange County Recorder

- n.d. Spanish and Mexican Ranchos of Orange County. Orange County Recorder Archives. Electronic document available at <https://web.archive.org/web/20070812214402/http://www.ocrecorder.com/Archives/forms/Spanish%20and%20Mexican%20Ranchos.pdf>. Accessed on October 7, 2018.

Orange County Register

- 2005 History of Seal Beach. Electronic document available at <https://www.ocregister.com/2005/10/05/history-of-seal-beach/>. Accessed on October 7, 2018.

Parker, Patricia L. and Thomas F. King

- 1998 *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. National Park Service, Washington, D.C.

Rancho Los Alamitos

- n.d. The Rancho Los Alamitos; Ownership and Occupancy. Electronic document available at <https://www.ranchosalamitos.com/aboutus/ownership.html>. Accessed on October 7, 2018.

Rigby, Julia Edith

- 2012 *A Celebration of Ceremony Among the Juaneño Band of Mission Indians, Acjachemen Nation*. Scripps Senior Theses. Paper 78. Electronic document available at https://scholarship.claremont.edu/scripps_theses/78/. Accessed on October 8, 2018.

Robinson, Alfred

- 1947 *Life in California*. Biobooks, Oakland. Originally published in 1846.

Shiple, William F.

- 1978 Native Languages of California. In *California*, edited by Robert F. Heizer, pp. 80-90. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Stickel, E. Gary

- 1978 *Los Angeles-Long Beach Harbor Areas Prehistory and Early History, Los Angeles County, California*. U.S. Army Corps of Engineers, Los Angeles District.

Stantec Consulting Services, Inc.

- 2018 Third Quarter 2018 Quarterly Groundwater Monitoring and Remediation System Operations Status Report, Tesoro Refining & Marketing Company LLC, Tesoro No. 97610-6066, 490 Pacific Coast Highway, Seal Beach California. OCHCA Case No. 86UT206. Stantec Consulting Services, Inc., Long Beach, CA. Report submitted to Orange County Health Care Agency, Santa Ana, CA.

Sutton, Mark Q.

- 2009 People and Language: Defining the Tatic Expansion into Southern California. *Pacific Coast Archaeological Society Quarterly* 41(2&3):31-93.

The Regents of the University of California

- 2016 Juaneño. *Survey of California and Other Indian Languages*. Linguistics Department. University of California Berkeley. Electronic document available at <http://linguistics.berkeley.edu/~survey/languages/juaneno.php>. Accessed on June 23, 2016.

Tongva People

- n.d. Tongva People. A dynamic study of the Villages and Locations of the Gabrielino-Tongva Indians. Electronic document available at <http://www.tongvapeople.org/>

Van Horn, David M.

- 1980 *Archaeological Survey Report: The 2,575-Acre Tres Hermanos Ranch in San Bernardino and Los Angeles Counties, California*. Archaeological Associates, Costa Mesa. Report on file at the South Central Coastal Information Center. California State University, Fullerton.

Wallace, William J.

- 1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.
- 1978 Post-Pleistocene Archeology, 9000 to 2000 B.C. In *California*, edited by Robert F. Heizer, pp. 25-36. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Warren, Claude N.

- 1967 The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32:168-185.
- 1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams, pp. 1–14. Eastern New Mexico Contributions in Anthropology 1(3). Portales, New Mexico.

Warren, C.N., G. Siegler, and F. Dittmer

- 2004 Paleoindian and Early Archaic Periods. In *Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study*. Prepared for the Metropolitan Wastewater Department, City of San Diego. ASM Affiliates, Encinitas, California.

Weinman, Lois J., and E. Gary Stickel

- 1978 *Los Angeles-Long Beach Harbor Areas Prehistory and Early History, Los Angeles County, California*. U.S. Army Corps of Engineers, Los Angeles District. Report on file at South Central Coastal Information Center, California State University Fullerton.

Welch, Rosanne

- 2006 *A Brief History of the Tongva Tribe: The Native Inhabitants of the Lands of the Puente Hills Preserve*. Unpublished Master's Thesis. Department of History, Claremont Graduate University, Claremont, California.

White, Raymond C.

1963 Luiseño Social Organization. *University of California Publications in American Archaeology and Ethnology* 48(2):91-194.

Wilke, Philip

1974 Settlement and Subsistence at Perris Reservoir: A Summary of Archaeological Investigations. In *Perris Reservoir Archaeology*, edited by J.F. O'Connell, P.J. Wilke, T.F. King, and C.L. Mix, pp. 20–30. California Department of Parks and Recreation Reports No. 14. Sacramento.

Appendix A

Resumes

Summary of Qualifications

Ms. Robbins-Wade has over 35 years of experience in both archaeological research and general environmental studies. She oversees the management of all of HELIX's archaeological, historic, and interpretive projects; prepares and administers budgets and contracts; designs research programs; supervises personnel; and writes reports. Ms. Robbins-Wade has managed or participated in hundreds of projects under the California Environmental Quality Act (CEQA), as well as numerous archaeological studies under various federal jurisdictions, addressing Section 106 compliance and National Environmental Policy Act (NEPA) issues. She has an excellent relationship with the local Native American community and the Native American Heritage Commission (NAHC). Ms. Robbins-Wade has worked in Southern California archaeology for most of her robust career. Her clients regularly include numerous government agencies, including the counties of San Diego, Imperial, Riverside, Orange, and Los Angeles and the cities of San Diego, Vista, Oceanside, Chula Vista, Carlsbad, La Mesa, Poway, Santee, Escondido, and others. She has conducted studies for many water districts/water agencies, Caltrans, SANDAG, U.S. Navy, SDG&E, UC San Diego, San Diego Community College District, various non-profits, and a variety of other entities. Although Ms. Robbins-Wade has extensive experience with public sector projects, most of her work has been for private developers. She has managed projects from monitoring of single-family home remodels to survey and data recovery programs for Specific Plan areas, large residential developments, and a variety of commercial projects. Work for public projects has ranged from constraints studies for pipeline alternatives to survey, testing, and monitoring programs for public projects, such as parks, roadways, and various utilities. Ms. Robbins-Wade has also managed a range of monitoring projects in the public sector, including the installation of a manhole in Old Town State Historic Park, an emergency pipeline repair in a culturally sensitive area, monitoring improvements to Highway 76 along the San Luis Rey River, and lengthy monitoring programs for sewer/water/storm water projects.

Selected Project Experience

Moulton Niguel Water District Regional Lift Force Main Replacement (2017 - 2018). Cultural Resources Task Lead for the replacement of a regional lift station force main operated by Moulton Niguel Water District (MNWD). The project comprises an approximately 9,200 linear foot alignment within Laguna Niguel Regional Park in Orange County, in an area that is quite sensitive in terms of cultural resources. HELIX is supporting Tetra Tech throughout the preliminary design, environmental review (CEQA), and final design, including permitting with applicable state and federal regulatory agencies. The cultural resources survey will inform project design, in order to avoid or minimize potential impacts to cultural resources. Overseeing background research and constraints analysis, Native American

Education

Master of Arts,
Anthropology, San
Diego State
University, California,
1990
Bachelor of Arts,
Anthropology,
University of
California, Santa
Barbara, 1981

Registrations/ Certifications

Register of
Professional
Archaeologists
#10294, 1991
County of San Diego,
Approved CEQA
Consultant for
Archaeological
Resources
Orange County
Approved
Archaeologist, 2016
Riverside County
Approved Cultural
Resources
Consultant, 2017
NCTD, Roadway
Worker ID #C02943,
2015

Professional Affiliations

Society for American
Archaeology

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coordination, cultural resources survey, coordination with MNWD and Tetra Tech, and report preparation. Work performed for MNWD, as a subconsultant to Tetra Tech.

Moulton Niguel Water Dis Pipeline Align (2017 - 2018). Cultural Resources Task Lead for the replacement of existing potable water (PW) and recycled water (RW) pipelines by Moulton Niguel Water District (MNWD). The study area is situated within the Mission Viejo Country Club on the east side of the I-5 and MNWD's Wastewater Plant 3A in the western portions. The general area is sensitive for cultural resources. Overseeing background research and constraints analysis, Native American coordination, cultural resources survey, coordination with MNWD and Tetra Tech, and report preparation. Work pas a subconsultant to GHD, with MNWD as the lead agency.

Orange County Sanitation District Newhope-Placentia TSR, No. 2-72 B (2016). Cultural Resources Task Leader/Principal Investigator for the cultural resources study for this sewer replacement project in Anaheim. The cultural resources study included a records search/literature review, field visit, Native American outreach, and preparation of a report. Work performed as a subconsultant to Lee & Ro, Inc., with Orange County Sanitation District as the lead agency.

Santa Margarita Water District 3A Water Reclamation Plant Tertiary Treatment Expansion (2016). Cultural Resources Task Leader/Principal Investigator for the cultural resources study for proposed improvements to an existing water reclamation facility in Mission Viejo. The cultural resources study included a records search/literature review, Native American Heritage Commission correspondence, preparation of a report, and assisting the District with Native American outreach.

Euclid and Broadway Project (2016). Project Manager/Principal Investigator for the cultural resources study for the redevelopment of a commercial property into residential uses in the City of Anaheim. The cultural resources study included a records search and literature review, historic evaluation, Native American outreach, field visit, and preparation of a report. Work performed for KB Home.

Orange County Sanitation District Newhope-Placentia Trunk Sewer Replacement, No. 2-72A (2015 - 2016). Cultural Resources Task Leader/Principal Investigator for the cultural resources study for this sewer replacement project in Fullerton and Anaheim. The cultural resources study included a records search/literature review, field visit, Native American outreach, and preparation of a report. Work performed as a subconsultant to Lee & Ro, Inc., with Orange County Sanitation District as the lead agency.

28th Street between Island Avenue and Clay Avenue Archaeological Monitoring (2014 - 2018). Project Manager/Principal Investigator for a utilities undergrounding project in a historic neighborhood of East San Diego. Responsible for project management; coordination of archaeological and Native American monitors; coordination with forensic anthropologist, Native American representative/Most Likely Descendent, and City staff regarding treatment of possible

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human remains; oversaw identification of artifacts and cultural features, report preparation, and resource documentation. Work performed for the City of San Diego.

30th St Pipeline Replacement (2014 - 2015). Project Manager/Principal Investigator for a 3.4-mile City of San Diego pipeline replacement project that traverses several historic neighborhoods in North Park, South Park, Golden Hill, and Southeastern San Diego. Oversaw background research and report preparation. Work performed for Rick Engineering.

Balboa Station Specific Plan Area First Screencheck PEIR (2016 - 2017). Cultural Resources Task Manager for a Specific Plan that would provide the policy framework to establish transit-oriented development and multi-modal improvements within the Specific Plan area. One of the main objectives of the Specific Plan is to improve access to existing and future transit facilities. Oversaw background research, Native American outreach, cultural resources survey, and technical report in support of the PEIR. Work performed for RRM Design Group, with City of San Diego as the lead agency.

Buena Sanitation District Green Oak Sewer Replacement Project (2016 - 2017). Project Manager/Principal Investigator for a cultural resources testing program in conjunction with a proposed sewer replacement project for the City of Vista. Oversaw background research, fieldwork, site record update, Native American coordination, and report preparation. Work performed for Harris & Associates, Inc.

El Camino Real Road Widening-Archaeological Monitoring (2015 - 2016). Project Manager/Principal Investigator for an archaeological monitoring project for the City of Carlsbad in a culturally sensitive area. Project requires close coordination with Native American representatives, City staff, construction crews, and another cultural resources firm to ensure that there are no impacts to significant cultural resources. Work performed for the City of Carlsbad.

Heritage Bluffs II (2014 - 2015). Project Manager/Principal Investigator for a cultural resources survey of approximately 170 acres and testing program at two archaeological sites, for a proposed residential development in the City of San Diego. Worked with project applicant and Red Tail on project design that would avoid impacts to a site area with cultural features and cremated human remains. Much of the work was completed prior to coming to HELIX, between 2007 and 2014. Work performed for Project Design Consultants.

Lake Wohlford Dam (2015 - 2015). Project Manager/Principal Investigator for a cultural resources survey for proposed dam replacement for the City of Escondido. Oversaw background research; field survey; recording eight previously undocumented sites and five isolates, as well as updating 14 previously recorded sites; report preparation; and Native American outreach. Provided input for location of

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staging areas and access routes. Coordinating with City, engineering consultant, and environmental consultant. Work performed for AECOM.

Lilac Hills Ranch (2014 - 2017). Project Manager/Principal Investigator of a cultural resources survey and testing program for an approximately 608-acre mixed-use development in the Valley Center area. Oversaw background research, field survey, testing, recording of archaeological sites and historic structures, and report preparation. Responsible for development of the research design and data recovery program, preparation of the preservation plan, and Native American outreach and coordination. The proposed Specific Plan includes residential and commercial use, Town Center, park and private recreation areas, senior center, school site, waste recycling facility, wastewater reclamation facility, active orchards, and other supporting infrastructure. The project also included recording historic structures, development of a research design and data recovery program for a significant archaeological site, and coordination with the Native American community and the client to develop a preservation plan for a significant cultural resource. The project changed over time, so additional survey areas were included, and a variety of off-site improvement alternatives were addressed. Work performed for Accretive Investments, Inc. with County of San Diego as the lead agency.

Southwest Sewer Realignment Project - Monitoring Services (2016 - 2018). Project Manager/Principal Investigator for cultural resources monitoring during construction of a sewer realignment project in western Escondido, adjacent to an ethnohistoric village site. The project is located in an area that is sensitive to both the Kumeyaay and Luiseño people, requiring close coordination with Native American monitors from both groups. Oversaw monitoring program; responsible for Native American outreach/ coordination, site record updates to reflect the finding of additional bedrock milling features, and report preparation. Work performed for the City of Escondido

SR-76 East Mitigation Monitoring - Cultural Monitoring (2015 - 2018). Project Manager/Principal Investigator for a cultural resources monitoring project for roadway improvements at the SR-76/I-15 Interchange and on SR-76 along the San Luis Rey River in the Bonsall area of San Diego County. The area along the San Luis Rey River is quite sensitive in terms of cultural resources. Overseeing field monitoring, report preparation, and monitor coordination with Caltrans field staff. Responsible for Native American coordination and coordination with Caltrans cultural resources staff. Work is being conducted for Caltrans and SANDAG.

Summary of Qualifications

Ms. Roy has over 20 years of experience as an archaeologist, field lead, and supervisor on more than 130 projects throughout California, Nevada, Arizona, and Guam. Conducted archaeological studies for a wide variety of development and resource management projects including work on military installations, energy and transmission projects, commercial and residential developments, historic archaeology projects, and water projects. Competent in all areas of archaeology and efficient in report preparation for a range of cultural resource studies including monitoring projects and archaeological Phase I, II, and III studies. Ms. Roy is proficient in laboratory activities including artifact preparation, cataloging, identification, and illustration. Accomplished in the initiation, coordination and completion of field assignments including survey, site testing, dry and wet screening, and data recovery projects. She is also knowledgeable in the preparation of proposals and report writing and research, client, contractor and subcontractor correspondence, laboratory, computer software including Microsoft, Adobe, GIS/ArcView, CADD, GPS and total-station operations, as well as in the illustration of archaeological features, artifacts, and burials.

Ms. Roy is established as a qualified archaeological monitor for the City and the County of San Diego. Her experience includes working closely with representatives of San Diego County Parks and Recreation for the past 10 years and she has received accolades from numerous county representatives for her work at park facilities. For the past 4 four years, she has served as the monitoring coordinator for the San Diego Gas & Electric Company (SDG&E) Fire Resource Mitigation Initiative (FiRM) project, where she regularly provided effective communication between field monitors, construction managers/foremen, and Principal Investigators for construction projects and assisted in scheduling and tracking of project progress.

Selected Project Experience

Bouquet Canyon Road Project (2018 - 2018). Field Director for cultural resources survey for a proposed residential development project in the City of Santa Clarita in Los Angeles County. Duties included conducting a pedestrian survey, coordination with a Native American monitor, and completion of site forms. Work performed for Integral Communities. City of Santa Clarita is the lead agency.

Padre Dam Municipal Water District East County Advanced Water Purification Program Year 2 (2018 - 2018).Field Director for cultural resources survey of the East County Advanced Water Purification project, which proposes to increase the region's supply of potable water. Duties included conducting a pedestrian survey, coordination with a Native American monitor, completion of site forms, and assistance in the preparation of a technical report. Work performed for Kennedy/Jenks Consultants, Inc., with Padre Dam Municipal Water District as the

Education

Associate of Science, Psychology, San Diego City College, San Diego, CA, 2000
Bachelor of Arts, Anthropological Archaeology, University of California San Diego, 2002
Master of Arts, MA in Progress, University of Leicester, England, 2015

Registrations/ Certifications

, ,

Professional Affiliations

Society for California Archaeology
Society for American Archaeology
Association of Environmental Professionals

Julie Roy

Archaeological Field Director

lead agency and Helix Water District, the County of San Diego, and the City of El Cajon as participating agencies.

Kelly Drive and Park Drive Road Diet and Multi-Use Trail Project (2018 - 2018). Field Director for the Multi-Use Trail project that proposes to create a balanced multi-modal transportation network, providing trail linkage from El Camino Real to Agua Hedionda Lagoon in coordination with the City of Carlsbad Trails system. Duties included field direction of a testing program and preparation assistance of a survey and assessment report. Work performed GHD, Inc., with the City of Carlsbad as the lead agency.

Previous Project Experience

Hellman Ranch Housing Project (2003 - 2005). Field/Laboratory Crew Member on this project, which focused on data recovery for a major prehistoric site. Duties included archaeological grading monitoring, data recovery excavation, water screening, and artifact sorting, Native American burial excavation, repatriation, and the excavation of a large cremation feature. In addition, Ms. Roy prepared artifact and feature illustrations for the project. The site included numerous prehistoric activity areas within the 12-acre archaeological site that was situated within one-mile of the Pacific Ocean. Archaeological monitoring was conducted until all subsurface activities ceased. The guidelines for Phase III recovery were set down by court recommended mitigation in accordance with State laws and the California Coastal Commission. Work performed for the City of Seal Beach.

Crystal Cove Historic District (2001 - 2003). Archaeological Monitor for the monitoring and detailed documentation of a variety of historic structures within Crystal Cove State Park located in Orange County California. The project was focused on historic registry building documentation to architectural standards and protection. Work performed for California State Parks.

Archaeological Survey and Testing, US Navy, Naval Weapon Station, Seal Beach - Fallbrook Annex (2005). Archaeologist on this project that included an archaeological survey and testing projects to determine the effects of road use and new road construction on previously recorded sites, in compliance with NEPA. Testing included the excavation of shovel test pits in previously recorded archaeological sites and additional archaeological survey located at the Fallbrook Naval Weapons Station.

Archaeological Survey and Data Recovery, Pacific Highlands Ranch (2006). Archaeologist for an archaeological survey and data recovery excavations at a variety of prehistoric sites for a proposed commercial development in Del Mar, California. The archaeological survey and data recovery program were conducted in compliance with CEQA.

Appendix D

HVAC Specifications

50PG03-14

Ultra High Efficiency Single Package Electric Cooling with
Optional Electric Heat Commercial Rooftop Units with Puron®
(R-410A) Refrigerant, Optional EnergyX™ (Energy Recovery
Ventilator)
2 to 12.5 Nominal Tons



Product Data



AHRI* CAPACITY RATINGS

50PG03-14

UNIT 50PG	NOMINAL CAPACITY (Tons)	NET COOLING CAPACITY (Btuh)	TOTAL POWER (kW)	SEER	EER†	SOUND RATING (dB)	IEER
03	2.0	24,000	2.1	14.1	11.5	75	—
04	3.0	35,800	3.1	14.1	11.7	73	—
05	4.0	47,500	4.0	15.0	12.2	72	—
06	5.0	58,500	4.9	14.8	12.2	78	—
07	6.0	69,000	5.8	—	12.2	78	13.0
08	7.5	88,000	7.0	—	12.7	80	13.5
09	8.5	102,000	8.4	—	12.4	80	13.4
12	10.0	119,000	9.9	—	12.2	80	13.0
14	12.5	150,000	13.2	—	11.5	83	11.6

LEGEND

EER – Energy Efficiency Ratio

SEER – Seasonal Energy Efficiency Ratio

*Air Conditioning, Heating and Refrigeration Institute.

† AHRI does not require EER ratings for units with capacity below 65,000 Btuh.

NOTES:

1. Tested in accordance with AHRI Standards 210–94 (sizes 03–12), 360–93 (size 14).

2. Ratings are net values, reflecting the effects of circulating fan heat.

3. Ratings are based on:

Cooling Standard: 80°F db, 67°F wb indoor entering–air temperature and 95°F db air entering outdoor unit.

IPLV Standard: 80°F db, 67°F wb indoor entering–air temperature and 80°F db outdoor entering–air temperature.

4. All 50PG units are in compliance with Energy Star® and ASHRAE 90.1 2010 Energy Standard for minimum SEER and EER requirements.

5. Units are rated in accordance with AHRI sound standards 270 or 370.

6. Per AHRI, Integrated Energy Efficiency Ratio (IEER) became effective beginning January 1, 2010. Integrated Part–Load Value (IPLV) was superseded by IEER on January 1, 2010. IEER is intended to be a measure of merit for the part load performance of the unit. Each building may have different part load performance due to local occupancy schedules, building construction, building location and ventilation requirements. For specific building energy analysis, an hour–by–hour analysis program should be used.



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

Appendix E

Traffic Impact Study



Traffic Impact Study

For:

490 Pacific Coast Highway Project
In the City of Seal Beach

Prepared for:
A & S Engineering, Inc.

December, 2017

Kimley»»Horn

TRAFFIC IMPACT STUDY
FOR 490 PACIFIC COAST HIGHWAY PROJECT
IN THE CITY OF SEAL BEACH

Prepared for:

A & S Engineering, Inc.

Prepared by:

Kimley-Horn and Associates, Inc.
765 The City Drive, Suite 200
Orange, California 92868

December, 2017

TRAFFIC IMPACT STUDY
FOR 490 PACIFIC COAST HIGHWAY PROJECT
IN THE CITY OF SEAL BEACH

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EXECUTIVE SUMMARY

This traffic impact study has been prepared to evaluate the project-related traffic impacts associated with the proposed development of a gas station and convenience store located at 490 Pacific Coast Highway in the City of Seal Beach, California. The project is estimated to generate 3,286 daily trips, 200 morning peak hour trips, and 224 evening peak hour trips. After applying pass-by reductions, the development is projected to generate a net of 2,300 daily trips, 140 morning peak hour trips, and 157 evening peak hour trips.

Existing traffic volumes for study intersections were collected in November 2017. Existing volumes, along with existing lane geometrics and traffic control at each intersection, were used in conducting peak hour Level of Service (LOS) analyses. Under Existing Conditions, all the study intersections and roadways are currently operating at LOS C or better.

Near-term future traffic forecasts have been developed to evaluate Cumulative Conditions for the anticipated project opening year. The Opening Year is estimated to be Year 2019. The Opening Year 2019 scenario includes a 1% annual growth rate over a two-year period to 2019, applied to Existing traffic volumes. Additionally, traffic from cumulative projects located in the City of Seal Beach and in the City of Long Beach were added to the study area. This scenario was analyzed both with and without the project, and all study intersections and roadways will operate at LOS D or better.

To derive the Future Build-Out 2039 volumes, the Orange County Transportation Analysis Model (OCTAM) was used as a basis to develop an annual growth rate to apply to Existing traffic volumes. Based on the growth anticipated between Existing and Build-Out years shown in the model, a growth rate of 0.5 percent per year was applied over a 22-year period to grow Existing traffic volumes to the Future Build-Out 2039 scenario. This scenario was analyzed both with and without the project, and all study intersections and roadways will operate at LOS D or better.

The intersection of Pacific Coast Highway at Marvista Drive/5th Street, which is controlled by Caltrans, will experience a significant impact based on the City of Seal Beach guidelines. Although the intersection operates at an acceptable Level of Service D or better in all study scenarios, the project impact exceeds the threshold established in the City's guidelines. However, it should be noted that the intersection will operate at a LOS B based on the HCM delay methodology used by Caltrans, and the project does not cause an impact per Caltrans guidelines.

The following measure would mitigate the impact from a City perspective:

- Restripe the eastbound approach to provide a left-turn lane, a shared left-through lane, and a right-turn lane. The traffic signal will need to be modified to provide split phasing in the east-west direction.

It is recommended that the necessity of such an improvement be coordinated between Caltrans and the City of Seal Beach staff.

TRAFFIC IMPACT STUDY
FOR 490 PACIFIC COAST HIGHWAY PROJECT
IN THE CITY OF SEAL BEACH

INTRODUCTION

This traffic impact study has been prepared to evaluate the project-related traffic impacts associated with the proposed development of a gas station and convenience store located at 490 Pacific Coast Highway in the City of Seal Beach, California. The project site is located on the northwest corner of the intersection of Pacific Coast Highway and Marvista Drive/5th Street. The study assesses the project impact by providing an analysis of existing and future conditions, with and without project traffic. This Traffic Impact Analysis (TIA) document follows the assumptions established during discussions with the City of Seal Beach staff and the approved Scope of Study Form. The approved Scope of Study form is provided in Appendix A.

This report has been prepared in accordance with the City of Seal Beach Traffic Impact Study Guidelines, dated March 2010.

AREA DEVELOPMENT

There are existing retail and residential developments in the vicinity of the project site. The project site is bounded to the north by a retail plaza, to the east by Pacific Coast Highway, to the south by 5th Street, and to the west by residential housing. Currently, the project site is fenced-off and vacant; however, the vacant lot shares access with an existing and operational retail plaza.

PROJECT DESCRIPTION

The proposed project will be developed on the northwest corner of Pacific Coast Highway and Marvista Drive/5th Street in the City of Seal Beach. The project site location is shown in its regional setting on Figure 1. The proposed project will include the development of a 16-pump gas station with a 2,400 square-foot building consisting of a convenience store. Ingress and egress to the site will be provided via four unsignalized driveways: two driveways along Pacific Coast Highway and two driveways along 5th Street. The project site plan is shown on Figure 2.

The project site is in a General Commercial Zone (CG) per the City of Seal Beach Municipal Code. Per Section 11.2.10.010 of the Municipal Code, automobile service stations are allowed in CG zones subject to the approval of a conditional use permit.

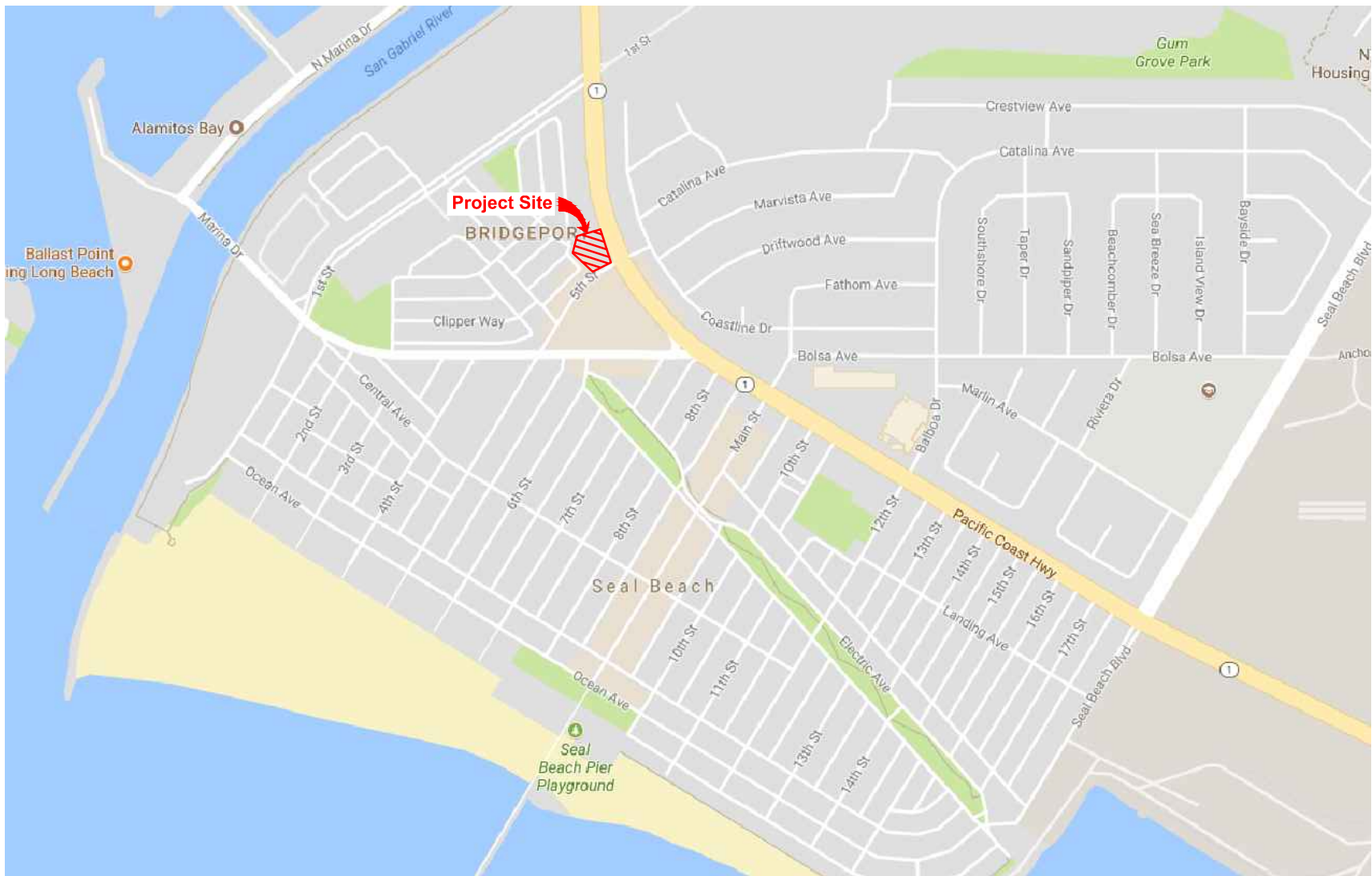
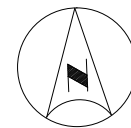


FIGURE 1
VICINITY MAP



NOT TO SCALE



ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

Based on the City's guidelines, this traffic study provides an evaluation of project-related impacts for the following analysis scenarios:

- Existing Conditions
- Existing Plus Project
- Opening Year 2019 Without Project
- Opening Year 2019 With Project
- Future Build-Out 2039 Without Project
- Future Build-Out 2039 Cumulative Base With Project

Any mitigation measures for the future conditions will be identified, if necessary.

The study area was determined with input from City Staff through the scoping process. A copy of the approved Scope of Study is provided in *Appendix A*. The following study intersections were identified for evaluation:

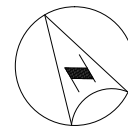
1. Pacific Coast Highway at 1st Street*
2. Pacific Coast Highway at Marvista Drive/5th Street*
3. Pacific Coast Highway at Bolsa Avenue/Main Street*
4. Pacific Coast Highway at Balboa Drive/12th Street*
5. 1st Street at Marina Drive
6. 5th Street at Marina Drive

*Caltrans Intersection

Moreover, the following roadway segments were identified for evaluation:



1. Pacific Coast Highway between 1st Street and Marvista Drive/5th Street
2. Pacific Coast Highway between Marvista Drive/5th Street and Bolsa Avenue/Main Street
3. Pacific Coast Highway between Bolsa Avenue/Main Street and Balboa Drive/12th Street
4. Pacific Coast Highway between Balboa Drive/12th Street and Seal Beach Boulevard
5. 5th Street between Pacific Coast Highway and Marina Drive

The location of the study intersections and segments are shown on Figure 3.



NOT TO SCALE

LEGEND:

-  Study Intersection
-  Study Roadway

**FIGURE 3
STUDY AREA**

ANALYSIS METHODOLOGY

Intersection Capacity Utilization (ICU) Methodology

Peak hour operating conditions at signalized intersections are evaluated using the Intersection Capacity Utilization (ICU) methodology, in accordance with the City of Seal Beach guidelines. The ICU methodology provides a comparison of the number of vehicles passing through an intersection to the theoretical hourly vehicular capacity of that intersection during a given hour.

The ICU calculation assumes a per-lane capacity of 1,700 vehicles per hour (vph) for each through and right-turn lane, and a capacity of 1,600 vph for each left-turn and shared lane. A separate “unofficial” de facto right-turn lane is assumed where there is no separately striped right-turn lane, if the width of the outside through lane is 19 feet or more, and parking is prohibited during the peak period. A clearance factor of 0.10 (10%) of the total intersection capacity is included in the ICU calculation to account for the effect of the yellow and all-red phases of the signal cycle.

The ICU calculation returns a volume-to-capacity (V/C) ratio that translates into a corresponding Level of Service (LOS) measure, ranging from LOS A, representing uncongested, free-flowing conditions; to LOS F, representing over-capacity conditions. A summary description of each Level of Service and the corresponding V/C ratio is provided on the chart on the following page.

LEVEL OF SERVICE DESCRIPTIONS: ICU METHODOLOGY		
Level of Service	ICU Value	Description
A	0.00 - 0.60	EXCELLENT – No vehicle waits longer than one red light and no approach phase is fully used.
B	0.61 - 0.70	VERY GOOD – An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.71 - 0.80	GOOD – Occasionally drivers may have to wait through more than one red light; back-ups may develop behind turning vehicles.
D	0.81 - 0.90	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 back-ups.
E	0.91 - 1.00	POOR – Represents the most vehicles that the intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.00	FAILURE – Back-ups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Long delays with continuously increasing queue lengths.

Highway Capacity Manual (HCM) Methodology

Peak hour operating conditions at the unsignalized project driveway intersections and at intersections that are under Caltrans' jurisdiction are analyzed using the Highway Capacity Manual (HCM) delay methodology in accordance with the Caltrans Guide for the Preparation of Traffic Impact Studies. Pacific Coast Highway is a Caltrans facility; therefore, all intersections along Pacific Coast Highway will also be analyzed using the HCM methodology.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, taking into account a number of factors, including number of lanes, volume of traffic, and signal timing and phasing.

For unsignalized intersections, the HCM methodology analysis determines the average delay for each vehicle making any movement from the stop-controlled minor street, as well as left turns from the major street. Delay values are calculated based on the relationship between the traffic on the major street and the availability of acceptable gaps in the traffic stream through which conflicting traffic movements can be made.

The HCM delay values translate to Level of Service designations, also ranging from LOS A to LOS F. A summary of the delay ranges for each Level of Service is provided in the following chart.

HCM-BASED LEVEL OF SERVICE AND DELAY RANGES FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service	Signalized Intersection (Average delay per vehicle, in seconds) ¹	Unsignalized Intersections (Average delay per vehicle, in seconds) ²
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

¹ Source: Highway Capacity Manual (HCM 2010), Exhibit 18-4.

² Source: Highway Capacity Manual (HCM 2010), Exhibits 19-1 and 20-2.

For roadway segments between intersections, Level of Service is calculated using the HCM Methodology, per the City's Traffic Impact Study Guidelines, via the Highway Capacity Software (HCS). Basic input data for conducting the roadway segment analysis include roadway lane geometry and peak hour volumes. For purposes of this study, LOS D is considered satisfactory on all study area roadway segments.

Traffic Impact Criteria

A significant impact at a study intersection, according to the City of Seal Beach guidelines, will occur when the addition of project-related trips causes the volume-to-capacity ratio (V/C) at an intersection to increase by the thresholds indicated on the table below. Mitigation measures must be identified for intersections that show significant project impact based on the thresholds in the table below.

Existing V/C	V/C Difference
0.00-0.69	0.06
0.70-0.79	0.04
0.80-0.89	0.02
0.90+	0.01

For Caltrans intersections, Level of Service standards and impact criteria specified by Caltrans will apply. The Caltrans Guide for the Preparation of Traffic Impact Studies states that “Caltrans endeavors to maintain a target Level of Service at the transition between LOS C and LOS D on State highway facilities. If an existing State highway facility is operating at less than the target LOS, the existing Level of Service is to be maintained.”

EXISTING STREET SYSTEM

Roadway System

Regional access to the project site is provided by Pacific Coast Highway (SR-1), which is oriented in an east-west direction through the City of Seal Beach and runs directly adjacent to the project site. Pacific Coast Highway serves as the main thoroughfare that connects the various beach cities in Orange County.

Local access to the project vicinity is provided by several roadways. Roadway classifications were taken from the City of Seal Beach General Plan Circulation Element. These roadway classifications are shown on Figure 4.

Pacific Coast Highway (SR-1) is a four-lane divided roadway with two lanes in each direction and raised median. There are existing bike lanes to the north of 5th Street. On-street parking is allowed to the south of 5th Street. Pacific Coast Highway has a right-of-way width of 100 feet and a curb-to-curb width of 84 feet in the study area. The posted speed limit is 40 miles per hour. Moreover, Pacific Coast Highway is identified as a City truck route. The street traverses the City of Seal Beach in the east-west direction and is classified as a Primary Arterial in the City of Seal Beach Circulation Element.

1st Street is a four-lane divided roadway with two lanes in each direction and raised median. On-street parking is allowed in both directions. 1st Street has a right-of-way width of 100 feet and a curb-to-curb width of 80 feet in the study area. The posted speed limit is 30 miles per hour. The street traverses the

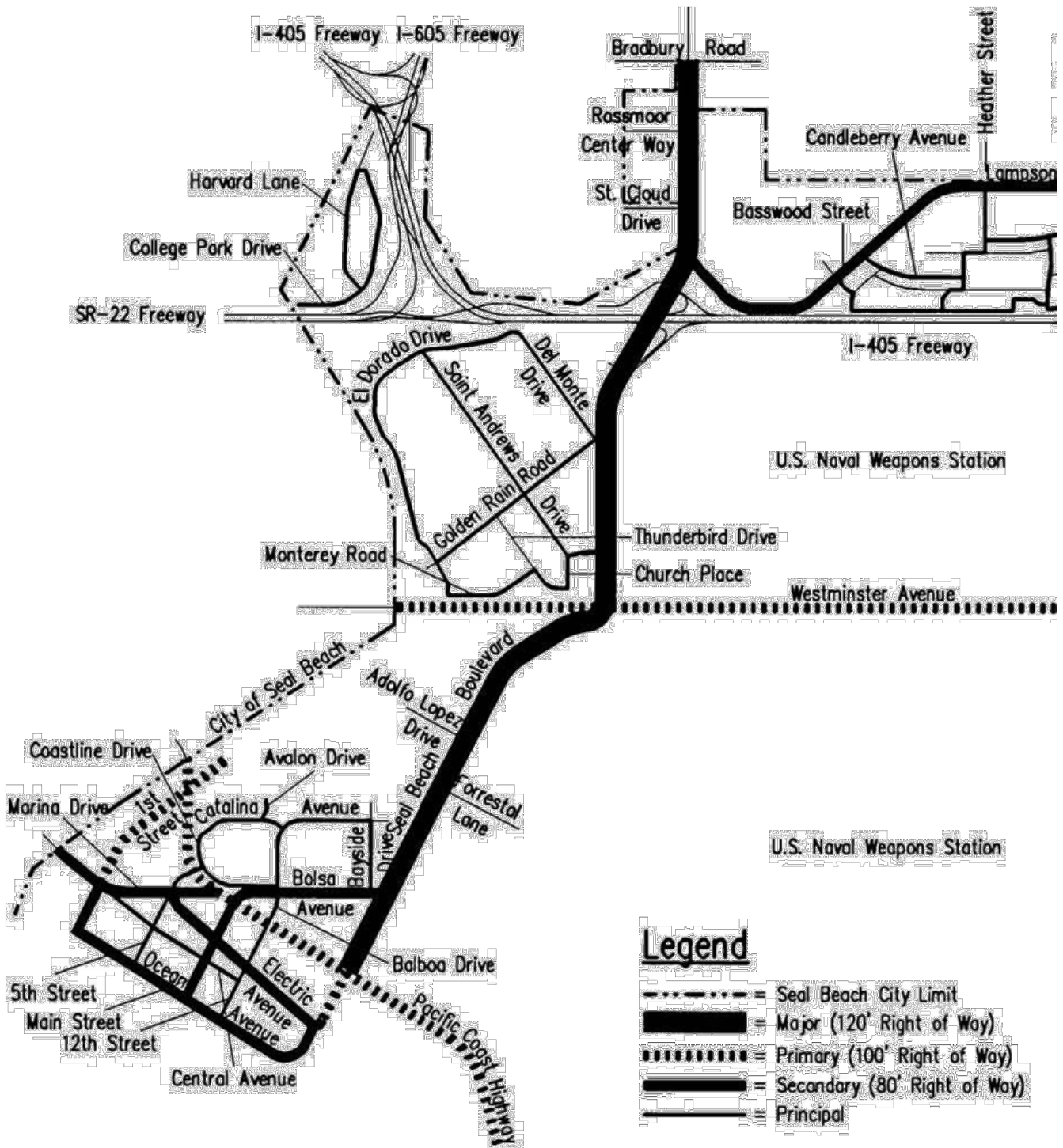
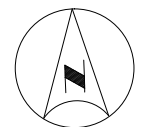


FIGURE 4
ROADWAY NETWORK



NOT TO SCALE

City of Seal Beach in the north-south direction and is classified as a Primary Arterial in the City of Seal Beach Circulation Element.

5th Street is a four-lane undivided roadway with two lanes in each direction in the project vicinity. On-street parking is allowed in both directions. 5th Street has a right-of-way width of 76 feet and a curb-to-curb width of 64 feet in the study area. The posted speed limit is 30 miles per hour. The street traverses the City of Seal Beach in the north-south direction and is classified as a Principal Arterial in the City of Seal Beach Circulation Element.

Main Street is a two-lane undivided roadway with one lane in each direction. Main Street serves as the primary access to the City's downtown area to the south of Pacific Coast Highway, and continues south to the beach and the pier. There is diagonal on-street parking on both sides of the street. The posted speed limit is 30 miles per hour. Main Street is identified as a Secondary Arterial in the City of Seal Beach Circulation Element, with 80 feet of right-of-way width and 54 feet of curb-to-curb width.

12th Street is a two-lane undivided roadway with one lane in each direction. On-street parking is allowed on both sides of the street. 12th Street has a right-of-way width of 60 feet and a curb-to-curb width of 40 feet. The posted speed limit is 25 miles per hour. The street traverses the City of Seal Beach in the north-south direction and is classified as a Principal Arterial in the City of Seal Beach Circulation Element.

Marina Drive is a two-lane undivided roadway with one lane in each direction. There is an existing bike lane adjacent to the travel lane, and adequate roadway width between the bike lane and curb for on-street parking in both directions. Marina Drive has a right-of-way width of 86 feet and a curb-to-curb width of 46 feet. The street traverses the City of Seal Beach in the east-west direction and is classified as a Secondary Arterial in the City of Seal Beach Circulation Element.

Existing Transit Services

There are three bus routes that run along Pacific Coast Highway: OCTA Route 1, Long Beach Transit Route 131, and Long Beach Transit Route 171. These routes run along the coast, between Long Beach and Seal Beach. OCTA Route 1 extends further south to San Clemente.

Accident History Assessment

As required by the City of Seal Beach, analysis of intersections and roadways having five or more reported accidents within the most recent 12-month period are to be analyzed and mitigated, if necessary. The figure of five accidents is a generalized figure used by the City.

Accident data was obtained from the California Highway Patrol Statewide Integrated Traffic Records System (SWITRS) for 2016 and 2017. Accident report data from SWITRS is included in Appendix B.

Location	2016	2017
Pacific Coast Highway at 1 st Street	3	4
Pacific Coast Highway at Marvista Drive/5 th Street	3	4
Pacific Coast Highway at Bolsa Avenue/Main Street	4	5
Pacific Coast Highway at Balboa Drive/12 th Street	3	0
1 st Street at Marina Drive	0	0
5 th Street at Marina Drive	0	2

One study intersection, Pacific Coast Highway at Bolsa Avenue/Main Street, experienced five accidents in 2017. Based on an assessment of the accident reports, more than half of these five accidents are a result of parties driving at unsafe speeds along Pacific Coast Highway, either causing sideswipes or rear-end collisions.

Existing Traffic Volumes

Existing morning peak period (7:00 to 9:00 AM) and evening peak period (4:00 to 6:00 PM) turning movement counts were collected for all study intersections. The counts were completed in November 2017, when area schools were in session.

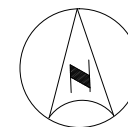
The existing lane configurations and traffic control at the study intersections are shown in Figure 5. Existing peak hour turning movement volumes at the study intersections are shown in Figure 6. Peak hour intersection traffic count worksheets are provided in *Appendix C*.

Intersection Analysis – Existing Conditions

Existing intersection operations were evaluated using the ICU and HCM methodologies described earlier. The results of the analysis are summarized on Table 1. Intersection analysis worksheets are provided in Appendix D. Review of Table 1 indicates that all study intersections currently operate at an acceptable Level of Service C or better during both peak hours.



1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

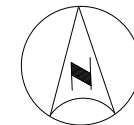
LEGEND:

- Study Intersection
- Traffic Signal
- Stop Sign
- OVL Right-Turn Overlap
- D Defacto Right Turn

FIGURE 5
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

**FIGURE 6
EXISTING TRAFFIC VOLUMES**

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Control	AM Peak Hour			PM Peak Hour		
			Delay/ICU	LOS		Delay/ICU	LOS	
1	Pacific Coast Highway at 1st Street	S	0.711	v/c	C	0.681	v/c	B
		S	14.2	sec/veh	B	13.0	sec/veh	B
2	Pacific Coast Highway at Marvista Drive/5th Street	S	0.745	v/c	C	0.698	v/c	B
		S	11.9	sec/veh	B	14.5	sec/veh	B
3	Pacific Coast Highway at Bolsa Avenue/Main Street	S	0.687	v/c	B	0.643	v/c	B
		S	18.6	sec/veh	B	20.6	sec/veh	C
4	Pacific Coast Highway at Balboa Drive/12th Street	S	0.729	v/c	C	0.685	v/c	B
		S	18.5	sec/veh	B	20.2	sec/veh	C
5	1st Street at Marina Drive	S	0.251	v/c	A	0.319	v/c	A
6	5th Street at Marina Drive	AWSC	8.1	sec/veh	A	9.0	sec/veh	A

S = Signalized, AWSC = All-Way Stop Control

Intersection operation is expressed in average seconds of delay per vehicle (sec/veh) during the peak hour for the HCM Methodology and is expressed in volume-to-capacity (v/c) ratio for the ICU Methodology.

LOS shown in Bold indicates unacceptable Level of Service.

Roadway Segment Analysis – Existing Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. Analysis worksheets are provided in Appendix E. The Existing Conditions analysis results and Level of Service for the study roadway segments are presented in Table 2. As review of this table shows, all study roadway segments are currently operating at LOS C or better under Existing Conditions.

PROJECT TRAFFIC

Trip Generation

The trips expected to be generated by the project were calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition (2017). Trip rates are based on ITE Land Use Category 945 – Gas Station with Convenience Market.

It is recognized that not all inbound and outbound trips to the proposed project will be “new” trips on the roadway system in the vicinity of the proposed project. Some trips to the project site will consist of “pass-by” trips -- motorists who are already traveling on the surrounding roadways from one place to another. Common pass-by trips for a gas station or donut shop would be individuals who stop at the project site on the way to work or school.

For the proposed site components, a pass-by rate of 30% was applied to the morning peak hour and evening peak hour. This pass-by rate was determined through consultation with City Staff, and the trip generation assumptions were approved in the Scope of Study.

Daily, morning peak hour, and evening peak hour trip generation estimates are summarized on Table 3. The project is estimated to generate 3,286 daily trips, 200 morning peak hour trips, and 224 evening peak hour trips. After applying pass-by reductions, the development is projected to generate a net of 2,300 daily trips, 140 morning peak hour trips, and 157 evening peak hour trips.

Trip Distribution and Assignment

Project trip distribution and assignment assumptions for the proposed project were developed with approval from the City Staff. The distribution and assignment assumptions took into account existing traffic patterns and likely paths of travel within the vicinity. Trip distribution assumptions are shown on Figure 7. Based on the proposed project trip distribution, project trips were assigned through the study intersections. The resulting project-related traffic volumes at each study intersection and roadway are shown on Figure 8. Pass-by trips were added to the study intersection of Pacific Coast Highway and Marvista Drive/5th Street due to the intersection’s proximity to the project site. However, pass-by trips are considered part of the existing traffic stream and are therefore not added to the other study intersections.

TABLE 2
SUMMARY OF ROADWAY OPERATIONS
EXISTING CONDITIONS

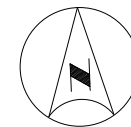
Roadway Segment	Roadway Classification	Direction	AM Peak			PM Peak		
			Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	45	24.4	C	45	21.1	C
		SB	45	25.0	C	45	23.1	C
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	45	25.3	C	45	22.7	C
		WB	45	24.2	C	45	21.4	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	45	24.3	C	45	20.6	C
		WB	45	23.8	C	45	21.1	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	45	24.7	C	45	20.5	C
		WB	45	23.1	C	45	20.3	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	30	1.9	A	30	2.5	A
		SB	30	1.0	A	30	2.4	A

TABLE 3
SUMMARY OF PROJECT TRIP GENERATION

Land Use	ITE Code	Unit	Trip Generation Rates ¹						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline Station w/ Convenience Market	945	Fueling Position	205.360	6.360	6.110	12.47	7.135	6.855	13.99
Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline Station w/ Convenience Market	16	Fueling Position	3,286	102	98	200	114	110	224
- Pass-by Trips (30%) ²			-986	-31	-29	-60	-34	-33	-67
Total Proposed Project Trips			2,300	71	69	140	80	77	157
¹ Source: Institute of Transportation Engineers (ITE) <i>Trip Generation Manual</i> , 10th Edition ² Source: City of Seal Beach staff									



FIGURE 7
TRIP DISTRIBUTION ASSUMPTIONS



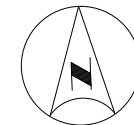
NOT TO SCALE

LEGEND:
 XX% Trip Distribution Percentage





1. PCH at 1st Street	* 2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

* Trips at this intersection also include pass-by trips

**FIGURE 8
PROJECT-RELATED TRAFFIC**

EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project analysis scenario is a hypothetical scenario that assumes completion of the project and full absorption of the project traffic on the surrounding street network at the current time, with no other changes in traffic conditions.

Intersection Analysis – Existing Plus Project Conditions

The project-related peak hour trips were added to the existing peak hour volumes to evaluate Existing Plus Project conditions. Existing Plus Project traffic volumes are shown on Figure 9. Intersection Level of Service worksheets are provided in *Appendix D*. Existing Plus Project intersection results are shown on Table 4. As this table indicates, with the addition of project traffic, all study intersections would continue to operate at an acceptable Level of Service D or better. While these intersections are still acceptable, the intersection of Pacific Coast Highway at Marvista Drive/5th Street would experience a significant impact per the City's significance thresholds, which indicate a V/C increase of more than 0.04 is considered significant.

Roadway Segment Analysis – Existing Plus Project Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. Analysis worksheets are provided in Appendix E. The Existing Plus Project analysis results and Level of Service for the study roadway segments are presented in Table 5. As shown in this table, all study roadway segments would operate at LOS C or better.

FUTURE CONDITIONS

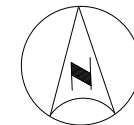
Opening Year 2019 Without Project

Near-term future traffic forecasts have been developed to evaluate Cumulative Conditions for the anticipated project opening year. The Opening Year is estimated to be Year 2019. The surrounding transportation network, intersection lane configurations, and traffic control are assumed to be the same as existing. Near-Term traffic forecast volumes were developed using the "build-up" process, starting with existing traffic volumes, and adding a background growth factor and traffic from cumulative projects. Per concurrence with City Staff, an ambient growth of 1% per year was applied to Existing traffic volumes at the study intersections to develop Opening Year 2019 Without Project traffic.

Information about cumulative projects (approved and pending projects) was obtained from the City of Seal Beach Community Development Department and the City of Long Beach. Two cumulative projects near the project site were identified. The cumulative projects are listed on Table 6, along with approved/proposed land uses, and estimated peak hour trips. The cumulative projects locations are shown on Figure 10. Cumulative project turning movement volumes at the study intersections are shown on Figure 11. Opening Year 2019 Without Project traffic volumes are shown on Figure 12.



1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

FIGURE 9
EXISTING PLUS PROJECT TRAFFIC VOLUMES

TABLE 4
SUMMARY OF INTERSECTION OPERATIONS
EXISTING PLUS PROJECT CONDITIONS

Int. #	Intersection	Control	Existing						Existing Plus Project						Impact		
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			Increase		Significant Impact
			Delay / ICU	LOS		Delay / ICU	LOS		Delay / ICU	LOS		Delay / ICU	LOS		AM	PM	
1	Pacific Coast Highway at 1st Street	S	0.711	v/c	C	0.681	v/c	B	0.719	v/c	C	0.689	v/c	B	0.008	0.008	No
		S	14.2	sec/veh	B	13.0	sec/veh	B	14.5	sec/veh	B	13.2	sec/veh	B	0.3	0.2	No
2	Pacific Coast Highway at Marvista Drive/5th Street	S	0.745	v/c	C	0.698	v/c	B	0.807	v/c	D	0.767	v/c	C	0.062	0.069	Yes
		S	11.9	sec/veh	B	14.5	sec/veh	B	17.6	sec/veh	B	20.7	sec/veh	C	5.7	6.2	No
3	Pacific Coast Highway at Bolsa Avenue/Main Street	S	0.687	v/c	B	0.643	v/c	B	0.695	v/c	B	0.652	v/c	B	0.008	0.009	No
		S	18.6	sec/veh	B	20.6	sec/veh	C	18.9	sec/veh	B	20.9	sec/veh	C	0.3	0.3	No
4	Pacific Coast Highway at Balboa Drive/12th Street	S	0.729	v/c	C	0.685	v/c	B	0.736	v/c	C	0.694	v/c	B	0.007	0.009	No
		S	18.5	sec/veh	B	20.2	sec/veh	C	18.7	sec/veh	B	20.4	sec/veh	C	0.2	0.2	No
5	1st Street at Marina Drive	S	0.251	v/c	A	0.319	v/c	A	0.253	v/c	A	0.321	v/c	A	0.002	0.002	No
6	5th Street at Marina Drive	AWSC	8.1	sec/veh	A	9.0	sec/veh	A	8.2	sec/veh	A	9.2	sec/veh	A	0.1	0.2	No

S = Signalized, AWSC = All-Way Stop Control

Intersection operation is expressed in average seconds of delay per vehicle (sec/veh) during the peak hour for the HCM Methodology and is expressed in volume-to-capacity (v/c) ratio for the ICU Methodology.

LOS shown in Bold indicates unacceptable Level of Service.

TABLE 5
SUMMARY OF ROADWAY OPERATIONS
EXISTING PLUS PROJECT

Roadway Segment	Roadway Classification	Direction	Existing Conditions						Existing Plus Project					
			AM Peak			PM Peak			AM Peak			PM Peak		
			Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	45	24.4	C	45	21.1	C	45	25.0	C	45	21.7	C
		SB	45	25.0	C	45	23.1	C	45	25.5	C	45	23.7	C
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	45	25.3	C	45	22.7	C	45	25.7	C	45	23.0	C
		WB	45	24.2	C	45	21.4	C	45	24.5	C	45	21.8	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	45	24.3	C	45	20.6	C	45	24.7	C	45	21.0	C
		WB	45	23.8	C	45	21.1	C	45	24.2	C	45	21.6	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	45	24.7	C	45	20.5	C	45	25.1	C	45	20.9	C
		WB	45	23.1	C	45	20.3	C	45	23.4	C	45	20.7	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	30	1.9	A	30	2.5	A	30	2.5	A	30	3.2	A
		SB	30	1.0	A	30	2.4	A	30	1.7	A	30	3.2	A

TABLE 6
SUMMARY OF CUMULATIVE PROJECTS

Proj. No.	Project Name	Project Address	Land Use	Project Trips			
				AM Peak Hour		PM Peak Hour	
				In	Out	In	Out
City of Seal Beach							
1	Tentative Tract Map 17425 ¹	1st Street and Marina Drive	30-Unit Single Family Residential	6	17	19	11
City of Long Beach							
2	2nd + PCH Project ²	6400 E. Pacific Coast Highway	Demolition of Existing Hotel, Construction of Retail and Restaurant Uses	236	176	426	366
Total Trips				242	193	445	377
¹ Source: Institute of Transportation Engineers (ITE) <i>Trip Generation</i> , 10th Edition ² Source: <i>2nd + PCH Traffic Impact Analysis</i> (Linscott, Law & Greenspan), 2017							

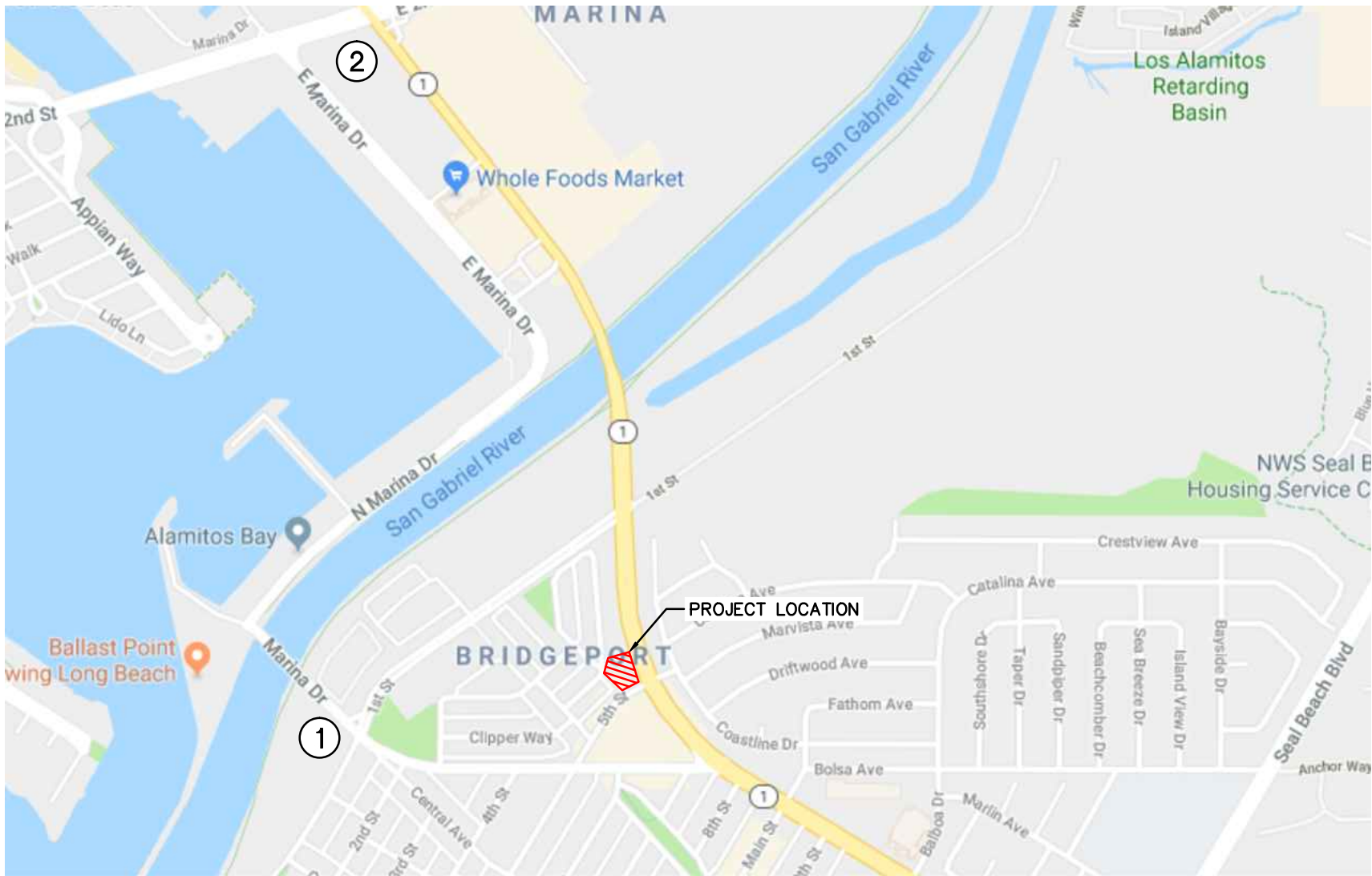
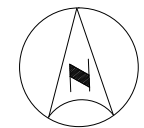


FIGURE 10
LOCATION OF CUMULATIVE PROJECTS

LEGEND:

(X) Cumulative Project

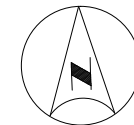


NOT TO SCALE





1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

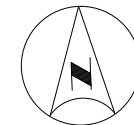
LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

FIGURE 11
CUMULATIVE PROJECT TRAFFIC VOLUMES



1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

FIGURE 12
OPENING YEAR 2019 WITHOUT PROJECT TRAFFIC VOLUMES

Intersection Analysis – Opening Year 2019 Without Project Conditions

The study intersections were analyzed with the ambient growth. Intersection Level of Service worksheets are provided in *Appendix D*. The Opening Year 2019 Without Project analysis results and Level of Service for the study intersections are presented in Table 7. Review of this table shows that, with the addition of ambient growth and cumulative project traffic, all study intersections would continue to operate at LOS C or better during both peak periods.

Roadway Segment Analysis – Opening Year 2019 Without Project Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. Analysis worksheets are provided in *Appendix E*. The Opening Year 2019 Without Project analysis results and Level of Service for the study roadway segments are presented in Table 8. As shown in this table, all study roadway segments would operate at LOS C or better.

Opening Year 2019 With Project Conditions

Project-related traffic was added to the Opening Year 2019 Without Project traffic volumes. Opening Year 2019 With Project traffic volumes at study intersections are shown in Figure 13.

Intersection Analysis – Opening Year 2019 With Project Conditions

The study intersections were analyzed in accordance with the analysis methodology described earlier in this report. Intersection Level of Service worksheets are provided in *Appendix D*. The Opening Year 2019 With Project analysis results and Level of Service for the study intersections are presented in Table 9. Review of this table shows that, with the addition of project traffic, all study intersections would continue to operate at LOS D or better during both peak periods. While these intersections are still acceptable, the intersection of Pacific Coast Highway at Marvista Drive/5th Street would experience a significant impact per the City's significance thresholds, which indicate a V/C increase of more than 0.04 is considered significant.

Roadway Segment Analysis – Opening Year 2019 With Project Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. Analysis worksheets are provided in *Appendix E*. The Opening Year 2019 With Project analysis results and Level of Service for the study roadway segments are presented in Table 10. As shown in this table, all study roadway segments would operate at LOS D or better under Opening Year 2019 With Project Conditions.

Future Build-Out 2039 Without Project

To derive the Future Build-Out 2039 Without Project intersection turning movement volumes, the Orange County Transportation Analysis Model (OCTAM) was used as a basis to develop an annual growth rate to apply to Existing traffic volumes. Based on the growth anticipated between Existing and Build-Out years shown in the model, a growth rate of 0.5 percent per year was applied over a 22-year period to grow Existing traffic volumes to the Future Build-Out 2039 Without Project scenario. The OCTAM plots are provided in *Appendix E*. The resulting traffic volumes for Future Build-Out 2035

TABLE 7

SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2019 WITHOUT PROJECT

Int. #	Intersection	Control	AM Peak Hour			PM Peak Hour		
			Delay/ICU	LOS		Delay/ICU	LOS	
1	Pacific Coast Highway at 1st Street	S	0.744	v/c	C	0.730	v/c	C
		S	15.8	sec/veh	B	14.8	sec/veh	B
2	Pacific Coast Highway at Marvista Drive/5th Street	S	0.772	v/c	C	0.738	v/c	C
		S	12.6	sec/veh	B	15.3	sec/veh	B
3	Pacific Coast Highway at Bolsa Avenue/Main Street	S	0.723	v/c	C	0.698	v/c	B
		S	20.0	sec/veh	B	22.3	sec/veh	C
4	Pacific Coast Highway at Balboa Drive/12th Street	S	0.755	v/c	C	0.721	v/c	C
		S	19.2	sec/veh	B	21.2	sec/veh	C
5	1st Street at Marina Drive	S	0.252	v/c	A	0.328	v/c	A
6	5th Street at Marina Drive	AWSC	8.2	sec/veh	A	9.2	sec/veh	A

S = Signalized, AWSC = All-Way Stop Control

Intersection operation is expressed in average seconds of delay per vehicle (sec/veh) during the peak hour for the HCM Methodology and is expressed in volume-to-capacity (v/c) ratio for the ICU Methodology.

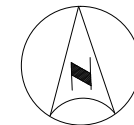
LOS shown in Bold indicates unacceptable Level of Service.

TABLE 8
SUMMARY OF ROADWAY OPERATIONS
OPENING YEAR 2019 WITHOUT PROJECT

Roadway Segment	Roadway Classification	Direction	AM Peak			PM Peak		
			Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	45	25.5	C	45	22.6	C
		SB	45	26.1	D	45	24.8	C
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	45	26.6	D	45	24.4	C
		WB	45	25.4	C	45	23.1	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	45	25.3	C	45	21.9	C
		WB	45	24.9	C	45	22.7	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	45	25.8	C	45	21.8	C
		WB	45	24.1	C	45	21.9	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	30	1.9	A	30	2.6	A
		SB	30	1.1	A	30	2.5	A



1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

FIGURE 13
OPENING YEAR 2019 WITH PROJECT TRAFFIC VOLUMES

TABLE 9
SUMMARY OF INTERSECTION OPERATIONS
OPENING YEAR 2019 WITH PROJECT

Int. #	Intersection	Control	Opening Year 2019 Without Project						Opening Year 2019 With Project						Impact		
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			Increase		Significant Impact
			Delay / ICU	LOS		Delay / ICU	LOS		Delay / ICU	LOS		Delay / ICU	LOS		AM	PM	
1	Pacific Coast Highway at 1st Street	S	0.744	v/c	C	0.730	v/c	C	0.752	v/c	C	0.738	v/c	C	0.008	0.008	No
		S	15.8	sec/veh	B	14.8	sec/veh	B	16.2	sec/veh	B	15.1	sec/veh	B	0.4	0.3	No
2	Pacific Coast Highway at Marvista Drive/5th Street	S	0.772	v/c	C	0.738	v/c	C	0.834	v/c	D	0.807	v/c	D	0.062	0.069	Yes
		S	12.6	sec/veh	B	15.3	sec/veh	B	18.7	sec/veh	B	22.1	sec/veh	C	6.1	6.8	No
3	Pacific Coast Highway at Bolsa Avenue/Main Street	S	0.723	v/c	C	0.698	v/c	B	0.731	v/c	C	0.706	v/c	C	0.008	0.008	No
		S	20.0	sec/veh	B	22.3	sec/veh	C	20.3	sec/veh	C	22.6	sec/veh	C	0.3	0.3	No
4	Pacific Coast Highway at Balboa Drive/12th Street	S	0.755	v/c	C	0.721	v/c	C	0.762	v/c	C	0.730	v/c	C	0.007	0.009	No
		S	19.2	sec/veh	B	21.2	sec/veh	C	19.5	sec/veh	B	21.5	sec/veh	C	0.3	0.3	No
5	1st Street at Marina Drive	S	0.252	v/c	A	0.328	v/c	A	0.254	v/c	A	0.331	v/c	A	0.002	0.003	No
6	5th Street at Marina Drive	AWSC	8.2	sec/veh	A	9.2	sec/veh	A	8.3	sec/veh	A	9.4	sec/veh	A	0.1	0.2	No

S = Signalized, AWSC = All-Way Stop Control

Intersection operation is expressed in average seconds of delay per vehicle (sec/veh) during the peak hour for the HCM Methodology and is expressed in volume-to-capacity (v/c) ratio for the ICU Methodology.

LOS shown in Bold indicates unacceptable Level of Service.

TABLE 10
SUMMARY OF ROADWAY OPERATIONS
OPENING YEAR 2019 WITH PROJECT

Roadway Segment	Roadway Classification	Direction	Opening Year 2019 Without Project						Opening Year 2019 With Project					
			AM Peak			PM Peak			AM Peak			PM Peak		
			Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	45	25.5	C	45	22.6	C	45	26.1	D	45	23.2	C
		SB	45	26.1	D	45	24.8	C	45	26.7	D	45	25.4	C
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	45	26.6	D	45	24.4	C	45	26.9	D	45	24.8	C
		WB	45	25.4	C	45	23.1	C	45	25.7	C	45	23.5	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	45	25.3	C	45	21.9	C	45	25.7	C	45	22.3	C
		WB	45	24.9	C	45	22.7	C	45	25.3	C	45	23.1	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	45	25.8	C	45	21.8	C	45	26.1	D	45	22.2	C
		WB	45	24.1	C	45	21.9	C	45	24.5	C	45	22.3	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	30	1.9	A	30	2.6	A	30	2.6	A	30	3.3	A
		SB	30	1.1	A	30	2.5	A	30	1.7	A	30	3.2	A

Without Project scenario are shown on Figure 14. Lane geometrics for the study intersections are assumed to be the same as Existing Conditions, previously shown on Figure 5. There are no improvements to this area indicated in the City's Circulation Element.

Intersection Analysis – Future Build-Out 2039 Without Project Conditions

Intersection Level of Service worksheets are provided in *Appendix D*. Future Build-Out 2039 Without Project peak hour intersection operations are summarized on Table 11. Review of this table shows that all study intersections would operate at LOS D or better during both peak periods under the Future Build-Out 2039 Without Project Conditions.

Roadway Segment Analysis – Future Build-Out 2039 Without Project Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. Analysis worksheets are provided in *Appendix E*. The Future Build-Out 2039 Without Project analysis results and Level of Service for the study roadway segments are presented in Table 12. As shown in this table, all study roadway segments would operate at LOS D or better under Future Build-Out 2039 Without Project Conditions.

Future Build-Out 2039 With Project Conditions

Project-related traffic was added to the Future Build-Out 2039 Without Project traffic volumes. Future Build-out 2039 With Project peak hour turning movement volumes at study intersections and daily volumes on study roadways are shown on Figure 15.

Intersection Analysis – Future Build-Out 2039 With Project Conditions

Future Build-Out 2039 With Project peak hour intersection operations are summarized on Table 13, shown previously. With the addition of project traffic, all study intersections will continue to operate at LOS D or better.

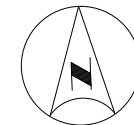
The intersection of Pacific Coast Highway at Marvista Drive/5th Street would experience a significant impact per the City's significance thresholds, which indicate a V/C increase of more than 0.04 is considered significant.

Roadway Segment Analysis – Future Build-Out 2039 With Project Conditions

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. The Future Build-Out 2039 With Project analysis results and Level of Service for the study roadway segments are presented in Table 14. As shown in this table, all study roadway segments would operate at LOS D or better under Future Build-Out 2039 With Project Conditions.



1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
<p> 56(139) 1895(1694) 0(6) </p> <p> 1(1) 2(0) </p> <p> 184(160) 58(41) </p> <p> 21(39) 1865(1627) </p>	<p> 48(126) 1888(1597) 16(80) </p> <p> 76(49) 18(21) 11(11) </p> <p> 100(126) 13(27) 28(37) </p> <p> 12(35) 1730(1472) 1(6) </p>	<p> 129(177) 41(48) 18(23) </p> <p> 8(26) 1712(1417) 46(103) </p> <p> 102(125) 1810(1533) 66(113) </p> <p> 48(78) 38(56) 51(77) </p>
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive
<p> 32(28) 29(71) 44(46) </p> <p> 6(20) 1773(1538) 23(30) </p> <p> 40(48) 1847(1506) 12(52) </p> <p> 55(86) 62(50) 41(47) </p>	<p> 18(16) 19(31) 33(47) </p> <p> 69(74) 122(202) 9(8) </p> <p> 10(27) 84(160) 27(89) </p> <p> 51(74) 39(64) 8(11) </p>	<p> 19(45) 38(57) 21(36) </p> <p> 67(67) 127(184) 12(36) </p> <p> 13(30) 87(142) 7(9) </p> <p> 1(7) 39(33) 19(21) </p>



NOT TO SCALE

LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

FIGURE 14
FUTURE BUILD-OUT 2039 WITHOUT PROJECT TRAFFIC VOLUMES

TABLE 11
SUMMARY OF INTERSECTION OPERATION
FUTURE BUILD-OUT 2039 WITHOUT PROJECT

Int. #	Intersection	Control	AM Peak Hour			PM Peak Hour		
			Delay/ICU	LOS		Delay/ICU	LOS	
1	Pacific Coast Highway at 1st Street	S	0.782	v/c	C	0.748	v/c	C
		S	18.2	sec/veh	B	15.7	sec/veh	B
2	Pacific Coast Highway at Marvista Drive/5th Street	S	0.820	v/c	D	0.768	v/c	C
		S	15.0	sec/veh	B	17.1	sec/veh	B
3	Pacific Coast Highway at Bolsa Avenue/Main Street	S	0.755	v/c	C	0.706	v/c	C
		S	21.8	sec/veh	C	23.1	sec/veh	C
4	Pacific Coast Highway at Balboa Drive/12th Street	S	0.801	v/c	D	0.753	v/c	C
		S	21.2	sec/veh	C	22.3	sec/veh	C
5	1st Street at Marina Drive	S	0.263	v/c	A	0.344	v/c	A
6	5th Street at Marina Drive	AWSC	8.3	sec/veh	A	9.5	sec/veh	A

S = Signalized, AWSC = All-Way Stop Control

Intersection operation is expressed in average seconds of delay per vehicle (sec/veh) during the peak hour for the HCM Methodology and is expressed in volume-to-capacity (v/c) ratio for the ICU Methodology.

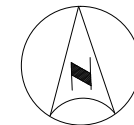
LOS shown in Bold indicates unacceptable Level of Service.

TABLE 12
SUMMARY OF ROADWAY OPERATIONS
FUTURE BUILD-OUT 2039 WITHOUT PROJECT

Roadway Segment	Roadway Classification	Direction	AM Peak			PM Peak		
			Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	45	27.2	D	45	23.5	C
		SB	45	27.9	D	45	25.8	C
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	45	28.3	D	45	25.3	C
		WB	45	27.0	D	45	23.9	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	45	27.1	D	45	22.9	C
		WB	45	26.6	D	45	23.6	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	45	27.6	D	45	22.8	C
		WB	45	25.7	C	45	22.7	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	30	2.1	A	30	2.8	A
		SB	30	1.2	A	30	2.7	A



1. PCH at 1st Street	2. PCH at Marvista Drive/5th Street	3. PCH at Bolsa Avenue/Main Street
4. PCH at Balboa Drive/12th Street	5. 1st Street at Marina Drive	6. 5th Street at Marina Drive



NOT TO SCALE

LEGEND:

- Study Intersection
- XX(YY) AM(PM) Peak Hour Turning Movement Volume

FIGURE 15
FUTURE BUILD-OUT 2039 WITH PROJECT TRAFFIC VOLUMES

TABLE 13
SUMMARY OF INTERSECTION OPERATIONS
FUTURE BUILD-OUT 2039 WITH PROJECT

Int. #	Intersection	Control	Future Build-Out Without Project						Future Build-Out With Project						Impact		
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			Increase		Significant Impact
			Delay / ICU	LOS		Delay / ICU	LOS		Delay / ICU	LOS		Delay / ICU	LOS		AM	PM	
1	Pacific Coast Highway at 1st Street	S	0.782	v/c	C	0.748	v/c	C	0.790	v/c	C	0.757	v/c	C	0.008	0.009	No
		S	18.2	sec/veh	B	15.7	sec/veh	B	18.8	sec/veh	B	16.1	sec/veh	B	0.6	0.4	No
2	Pacific Coast Highway at Marvista Drive/5th Street	S	0.820	v/c	D	0.768	v/c	C	0.882	v/c	D	0.836	v/c	D	0.062	0.068	Yes
		S	15.0	sec/veh	B	17.1	sec/veh	B	22.4	sec/veh	C	24.6	sec/veh	C	7.4	7.5	No
3	Pacific Coast Highway at Bolsa Avenue/Main Street	S	0.755	v/c	C	0.706	v/c	C	0.763	v/c	C	0.715	v/c	C	0.008	0.009	No
		S	21.8	sec/veh	C	23.1	sec/veh	C	22.2	sec/veh	C	23.4	sec/veh	C	0.4	0.3	No
4	Pacific Coast Highway at Balboa Drive/12th Street	S	0.801	v/c	D	0.753	v/c	C	0.809	v/c	D	0.762	v/c	C	0.008	0.009	No
		S	21.2	sec/veh	C	22.3	sec/veh	C	21.6	sec/veh	C	22.7	sec/veh	C	0.4	0.4	No
5	1st Street at Marina Drive	S	0.263	v/c	A	0.344	v/c	A	0.265	v/c	A	0.347	v/c	A	0.002	0.003	No
6	5th Street at Marina Drive	AWSC	8.3	sec/veh	A	9.5	sec/veh	A	8.4	sec/veh	A	9.7	sec/veh	A	0.1	0.2	No

S = Signalized, AWSC = All-Way Stop Control

Intersection operation is expressed in average seconds of delay per vehicle (sec/veh) during the peak hour for the HCM Methodology and is expressed in volume-to-capacity (v/c) ratio for the ICU Methodology.

LOS shown in Bold indicates unacceptable Level of Service.

TABLE 14
SUMMARY OF ROADWAY OPERATIONS
FUTURE BUILD-OUT 2039 WITH PROJECT

Roadway Segment	Roadway Classification	Direction	Future Build-Out Without Project						Future Build-Out With Project					
			AM Peak			PM Peak			AM Peak			PM Peak		
			Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS	Speed (mi/h)	Density (pc/mi/ln)	LOS
Pacific Coast Highway: 1st Street to Marvista Drive/5th Street	4-Lane Divided	NB	45	27.2	D	45	23.5	C	45	27.8	D	45	24.1	C
		SB	45	27.9	D	45	25.8	C	45	28.4	D	45	26.4	D
Pacific Coast Highway: Marvista Drive/5th Street to Bolsa Avenue/Main Street	4-Lane Divided	EB	45	28.3	D	45	25.3	C	45	28.6	D	45	25.7	C
		WB	45	27.0	D	45	23.9	C	45	27.3	D	45	24.3	C
Pacific Coast Highway: Bolsa Avenue/Main Street to Balboa Drive/12th Street	4-Lane Divided	EB	45	27.1	D	45	22.9	C	45	27.5	D	45	23.3	C
		WB	45	26.6	D	45	23.6	C	45	26.9	D	45	24.0	C
Pacific Coast Highway: Balboa Drive/12th Street to Seal Beach Boulevard	4-Lane Divided	EB	45	27.6	D	45	22.8	C	45	28.0	D	45	23.2	C
		WB	45	25.7	C	45	22.7	C	45	26.1	D	45	23.1	C
5th Street: Pacific Coast Highway to Marina Drive	4-Lane Undivided	NB	30	2.1	A	30	2.8	A	30	2.7	A	30	3.5	A
		SB	30	1.2	A	30	2.7	A	30	1.8	A	30	3.5	A

MITIGATION MEASURES

The intersection of Pacific Coast Highway at Marvista Drive/5th Street will experience a significant impact based on the City of Seal Beach guidelines. Although the intersection operates at an acceptable Level of Service D or better in all study scenarios, the project impact exceeds the threshold established in the City's guidelines. However, it should be noted that the intersection will operate at a LOS B based on the delay methodology used by Caltrans, and the project does not cause an impact per Caltrans guidelines.

The following measure would mitigate the impact from a City perspective:

- Restripe the eastbound approach to provide a left-turn lane, a shared left-through lane, and a right-turn lane. The traffic signal will need to be modified to provide split phasing in the east-west direction.

While this improvement would increase the left-turn capacity of the intersection for a critical movement and mitigate the project impact, the introduction of split phasing on the minor approach may not be preferred from an operational standpoint. It is recommended that the necessity of such an improvement be coordinated between Caltrans and the City of Seal Beach staff.

SITE PARKING AND CIRCULATION

The required on-site parking is established via Section 11.4.20.015 of the City of Seal Beach Municipal Code. The City code indicates that an Automobile Service Station shall require 1 space per 300 square feet of any convenience store plus 1 space per service bay if repair occurs on-site (in addition to spaces at pumps, queuing areas for pumps, and areas for self-service water and air areas). Based on the proposed site plan, the project will include a 2,438-square-foot convenience store and 16 fueling positions. The requirement would be 9 parking spaces for the site. The project will provide 13 parking spaces, including 1 ADA space, and therefore satisfies the City code, with a surplus of 4 parking spaces.

The project will feature four unsignalized driveways – two along Pacific Coast Highway and two along 5th Street. The northern driveway along Pacific Coast Highway will be shared with the existing retail development to the north. Likewise, the western driveway on 5th Street is also shared with the existing development. The two driveways on Pacific Coast Highway are restricted to right-in/right-out movements due to the raised median along Pacific Coast Highway. The two driveways on 5th Street are full-movement. Patrons can use any driveway to access the site, but will need to egress off 5th Street and make an eastbound left-turn maneuver if they intend to travel northbound on Pacific Coast Highway due to the raised median.

TRUCK SERVICE IMPACTS

Truck deliveries are anticipated to originate from Pacific Coast Highway, a designated truck route. As shown on Figure 16, the underground fuel storage tanks are located at the southwest quadrant of the site. A fuel truck along Pacific Coast Highway would access the site by traveling southbound and making a right-turn movement at 5th Street, and by using the eastern driveway along 5th Street to maneuver into position. From there, a fuel truck can circulate counterclockwise to exit via the western driveway on 5th Street, and return to Pacific Coast Highway. Likewise, a delivery truck to the convenience store component can utilize this same path without causing major disruptions to operations at the fuel pumps.

If a delivery truck approaches from Pacific Coast Highway to the south, the truck can proceed to make a northbound left-turn at 5th Street, and use the same driveway ingress and egress circulation to return to Pacific Coast Highway.

CONSTRUCTION PERIOD IMPACTS

The proposed site will utilize existing driveways and is not anticipated to cause any lane closures along Pacific Coast Highway or 5th Street during construction. As such, all lanes on arterial roads will remain open during construction and no construction issues are expected off-site.

FINDINGS AND CONCLUSIONS

This traffic impact study has been prepared to evaluate the project-related traffic impacts associated with the proposed development of a gas station and convenience store located at 490 Pacific Coast Highway in the City of Seal Beach, California. The project is estimated to generate 3,286 daily trips, 200 morning peak hour trips, and 224 evening peak hour trips. After applying pass-by reductions, the development is projected to generate a net of 2,300 daily trips, 140 morning peak hour trips, and 157 evening peak hour trips.

Existing traffic volumes for study intersections were collected in November 2017. Existing volumes, along with existing lane geometrics and traffic control at each intersection, were used in conducting peak hour Level of Service (LOS) analyses. Under Existing Conditions, all the study intersections and roadways are currently operating at LOS C or better.

Near-term future traffic forecasts have been developed to evaluate Cumulative Conditions for the anticipated project opening year. The Opening Year is estimated to be Year 2019. The Opening Year 2019 scenario includes a 1% annual growth rate over a two-year period to 2019, applied to Existing traffic volumes. Additionally, traffic from cumulative projects located in the City of Seal Beach and in the City of Long Beach were added to the study area. This scenario was analyzed both with and without the project, and all study intersections and roadways will operate at LOS D or better.

To derive the Future Build-Out 2039 volumes, the Orange County Transportation Analysis Model

(OCTAM) was used as a basis to develop an annual growth rate to apply to Existing traffic volumes. Based on the growth anticipated between Existing and Build-Out years shown in the model, a growth rate of 0.5 percent per year was applied over a 22-year period to grow Existing traffic volumes to the Future Build-Out 2039 scenario. This scenario was analyzed both with and without the project, and all study intersections and roadways will operate at LOS D or better.

The intersection of Pacific Coast Highway at Marvista Drive/5th Street, which is controlled by Caltrans, will experience a significant impact based on the City of Seal Beach guidelines. Although the intersection operates at an acceptable Level of Service D or better in all study scenarios, the project impact exceeds the threshold established in the City's guidelines. However, it should be noted that the intersection will operate at a LOS B based on the HCM delay methodology used by Caltrans, and the project does not cause an impact per Caltrans guidelines.

The following measure would mitigate the impact from a City perspective:

- Restripe the eastbound approach to provide a left-turn lane, a shared left-through lane, and a right-turn lane. The traffic signal will need to be modified to provide split phasing in the east-west direction.

While this improvement would increase the left-turn capacity of the intersection for a critical movement and mitigate the project impact, the introduction of split phasing on the minor approach may not be preferred from an operational standpoint. It is recommended that the necessity of such an improvement be coordinated between Caltrans and the City of Seal Beach staff.

APPENDIX A

APPROVED SCOPE OF STUDY FORM

Scope of Work

The traffic impact analysis for the proposed gas station at 490 Pacific Coast Highway will satisfy the City of Seal Beach's Traffic Impact Study Guidelines, dated March 2010. The project proposes the development of a gas station with 16 fueling positions and a convenience market.

Study Area

The following study intersections and roadways are proposed. Traffic counts will be conducted at the following intersections and roadway segments. Intersections will be counted on a typical weekday, during the morning and evening peak hours.

Study Intersections

1. Pacific Coast Highway and 12th Street/Balboa Drive
2. Pacific Coast Highway and Main Street
3. Pacific Coast Highway and Marvista Drive/5th Street
4. Pacific Coast Highway and 1st Street
5. 5th Street and Marina Drive
6. 1st Street and Marina Drive

Roadways

1. 5th Street Between Pacific Coast Highway and Marina Drive
2. Pacific Coast Highway between 1st Street and 5th Street
3. Pacific Coast Highway Between 5th Street and Main street
4. Pacific Coast Highway Between Main and 12th St
5. Pacific Coast Highway Between 12th and Seal Beach Blvd



The following scenarios will be studied, per City Guidelines:

- Existing
- Opening Year 2019 With and Without Project
- General Plan Target Year 2039 With and Without Project

For the Opening Year scenario, we will grow volumes at 1% per year to the opening year, and will take into consideration cumulative projects from the City of Long Beach and the City of Seal Beach within the vicinity of the project site. For the General Plan analysis, OCTAM base and build-out model volumes will be used to factor existing count volumes.

Trip Generation Forecast

The following trip generation forecasts, based on the latest ITE Trip Generation rates, will be utilized for the purpose of addressing project-related traffic.

TABLE 1 SUMMARY OF PROJECT TRIP GENERATION									
Land Use	ITE Code	Unit	Trip Generation Rates ¹						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline Station w/ Convenience Market	945	Fueling Position	205.360	6.360	6.110	12.47	7.135	6.855	13.99
Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline Station w/ Convenience Market	16	Fueling Position	3,286	102	98	200	114	110	224
- Pass-by Trips (30%) ²			-127	-31	-29	-60	-34	-33	-67
Total Proposed Project Trips			3,159	71	69	140	80	77	157
¹ Source: Institute of Transportation Engineers (ITE) <i>Trip Generation Manual</i> , 10th Edition ² Source: City of Seal Beach staff									

Trip Distribution Assumptions (SEE PAGE 3)

Analysis Assumptions

Intersection analysis at the study intersections will be conducted per the ICU methodology according to the City guidelines. Roadway analysis will be conducted at the study roadways based on the HCM methodology.

On-Site Parking and Circulation

The traffic study will discuss proposed circulation, and will assess access points, turn prohibitions, etc. Additionally, the site’s interaction with the existing circulation of the adjacent shopping center will be discussed.

Truck Service Impact

Fuel and supply truck circulation will be evaluated. Truck turns will be shown on the site to determine any site circulation constraints.

Construction Period Impacts

APPENDIX **B**

SWITRS ACCIDENT DATA



REPORT 8 - TOTAL COLLISIONS

01/01/2016 thru 12/31/2016

Total Count: 191

Jurisdiction(s): Seal Beach

Include State Highways cases

Report Run On: 11/10/2017

Primary Rd 1 POWER SPUR		Distance (ft) 0	Direction	Secondary Rd ST CLOUD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20160916	Time 1544	Day FRI																
Primary Collision Factor R-O-W PED		Violation 21950A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20161007																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PED	Lighting DAYLIGHT	Ped Action X-WLK AT	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	49	F	W	HNBD	RGT TURN	E	A	0700	INFIN	2013	A	-	N	-	M	G								
2	PED	89	M	W	HNBD	PROC ST	N	N	6000	-	-	-	N	-	P	-		PED	COMP PN 89	M	1	0	P	-	
Primary Rd 10TH ST		Distance (ft) 335	Direction S	Secondary Rd RT 1	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist Beat 241	Type 0	CalTrans	Badge 251	Collision Date 20160926	Time 1958	Day MON																
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20161108																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	64	M	W	HNBD	RGT TURN	N	A	0000	HYUND	2016	-	-	-	-	G	-								
2	PRKD	998	-	-	HNBD	PARKED	N	A	0000	MERCE	2013	-	-	-	-	-	-								
Primary Rd 13TH ST		Distance (ft) 50	Direction N	Secondary Rd OCEAN AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist Beat 241	Type 0	CalTrans	Badge 368	Collision Date 20161202	Time 1753	Day THU																
Primary Collision Factor OTHER IMPROV DRV		Violation	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170110																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	OTHR	998	-	-	IMP UNK	IMP UNK	PROC ST	N	A	0100	FORD	2001	-	-	O	-	-	-							
2	PRKD	998	-	-	-	-	PARKED	S	A	0100	FIAT	2015	-	-	N	-	-	-							
3	PRKD	998	-	-	-	-	PARKED	S	A	0100	MITSU	2009	-	-	N	-	-	-							
Primary Rd 17TH ST		Distance (ft) 254	Direction N	Secondary Rd ELECTRIC AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist Beat 241	Type 0	CalTrans	Badge 251	Collision Date 20161117	Time 1836	Day THU																
Primary Collision Factor STRTNG BCKNG		Violation 22106	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20161207																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV	Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																		
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	64	M	W	HNBD	BACKING	S	A	0000	HONDA	2007	-	-	A	22350	-	G	-							
2	PRKD	998	-	-	-	-	PARKED	-	A	0000	FORD	2002	-	-	-	-	-	-							
3	PRKD	998	-	-	-	-	PARKED	-	A	0000	HONDA	2010	-	-	-	-	-	-							

Primary Rd 1ST ST		Distance (ft) 14	Direction S	Secondary Rd OCEAN AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy	
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 365	Collision Date 20160212	Time 0313	Day FRI		
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160315				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0							
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int					
Party Info										Victim Info		
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F DRVR 30 F H HBD-UI U-TURN S A 0000 CHEVR 2006 - - A 22107 - G -												
Primary Rd 6TH ST		Distance (ft) 0	Direction	Secondary Rd OCEAN AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy	
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 317	Collision Date 20161016	Time 1538	Day SUN		
Primary Collision Factor R-O-W AUTO		Violation 21802A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161220				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0							
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int					
Party Info										Victim Info		
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F DRVR 20 M H HNBD STOPPED S A 0000 HONDA 2006 - - N - M -	PASS		21	F	3	0	G	-				
2 DRVR 27 F A HNBD PROC ST - A 0000 HONDA 2010 - - N - M -	PASS		27	M	3	0	G	-				
Primary Rd 7TH ST		Distance (ft) 150	Direction S	Secondary Rd ELECTRIC		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy	
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat PATRO	Type 0	CalTrans	Badge 314	Collision Date 20160626	Time 1729	Day SUN		
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160830				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0							
Hit and Run		Motor Vehicle Involved With NON-CLSN	Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int					
Party Info										Victim Info		
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F DRVR 57 M W HBD-UNK PROC ST S A 0000 FIAT 2012 - - - - G -												
2 PRKD 998 - - - - S - 0000 VOLKS 2011 - - N - - -												
3 PRKD 998 - - - - null S - 0000 CHEVR 2014 - - - - - -												
Primary Rd ALLEY		Distance (ft) 0	Direction N	Secondary Rd MAIN ST 308		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy	
City Seal Beach	County Orange	Population 4	Rpt Dist 3020	Beat SOUTH	Type 0	CalTrans	Badge 429	Collision Date 20160110	Time 1227	Day SUN		
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160324				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0							
Hit and Run		MSDMNR	Motor Vehicle Involved With FIXED OBJ	Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int				
Party Info										Victim Info		
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F DRVR 57 F W HBD-UI RGT TURN E D 2200 CHEVR 2006 - - A 22107 - M G												
Primary Rd ALLEY		Distance (ft) 7	Direction S	Secondary Rd RT 1		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy	
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 940	Type 0	CalTrans	Badge 251	Collision Date 20160807	Time 1705	Day SUN		
Primary Collision Factor NOT STATED		Violation	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20161215				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0							
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int					
Party Info										Victim Info		
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F DRVR 48 M W HNBD LFT TURN N A 0000 CHEVR 2015 - - - - G -												

Primary Rd ANDERSON Distance (ft) 161 Direction S Secondary Rd RT 1 NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 31.111 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans 12 Badge 251 Collision Date 20161025 Time 2147 Day TUE Primary Collision Factor STOP SGN SIG Violation 22450A Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170227 Weather1 CLEAR Weather2 RDWY SURFACE DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 NO UNUSL CND Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action NO Cntrl Dev FUNCTNG Loc Type I Ramp/Int 6																									
Party Info										Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	M	W	HBD-UI		PROC ST	W	A	0000	MITSU	2002	-	A	22350	-	G	-							
Primary Rd BALBOA DR Distance (ft) 0 Direction S Secondary Rd COASTLINE DR NCIC 3020 State Hwy? N Route 1 Postmile Prefix - Postmile 31.111 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans 12 Badge 368 Collision Date 20160306 Time 0422 Day SUN Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160413 Weather1 RAINING Weather2 RDWY SURFACE WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 NO UNUSL CND Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action NO Cntrl Dev NT PRS/FCTR Loc Type I Ramp/Int 6																									
Party Info										Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	W	HNBD		PROC ST	S	A	0100	HONDA	2011	-	3	E	-	M	G							
Primary Rd BAYSIDE DR Distance (ft) 132 Direction S Secondary Rd CORAL PL NCIC 3020 State Hwy? N Route 1 Postmile Prefix - Postmile 31.111 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans 12 Badge 431 Collision Date 20160429 Time 0003 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160601 Weather1 CLEAR Weather2 RDWY SURFACE DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 NO UNUSL CND Spec Cond 0 Hit and Run Motor Vehicle Involved With PKD MV Lighting DARK - ST Ped Action NO Cntrl Dev FUNCTNG Loc Type I Ramp/Int 6																									
Party Info										Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	29	F	W		FATG	PROC ST	N	-	0000	TOYOT	2001	A	-	F	-	G	-							
2	PRKD	998	-	-	-	-	PARKED	-	-	0000	TOYOT	2013	-	-	-	-	-	-							
Primary Rd BOLSA Distance (ft) 30 Direction W Secondary Rd SILVER SHOALS NCIC 3020 State Hwy? N Route 1 Postmile Prefix - Postmile 31.111 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat PATRO Type 0 CalTrans 12 Badge 314 Collision Date 20160626 Time 2256 Day SUN Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type OVERTURNED Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160817 Weather1 CLEAR Weather2 RDWY SURFACE DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 NO UNUSL CND Spec Cond 0 Hit and Run Motor Vehicle Involved With NON-CLSN Lighting DARK - ST Ped Action NO Cntrl Dev FUNCTNG Loc Type I Ramp/Int 6																									
Party Info										Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	28	M	W	HBD-UNK		PROC ST	N	-	0000	HARLE	1990	-	2	A	-	W	-	DRVR	SEVERE	28	M	1	1	W
Primary Rd BOLSA AV Distance (ft) 17 Direction W Secondary Rd ISLAND VIEW DR NCIC 3020 State Hwy? N Route 1 Postmile Prefix - Postmile 31.111 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans 12 Badge 246 Collision Date 20160422 Time 1404 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160531 Weather1 CLEAR Weather2 RDWY SURFACE DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 NO UNUSL CND Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action NO Cntrl Dev FUNCTNG Loc Type I Ramp/Int 6																									
Party Info										Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	F	W	HNBD		PROC ST	E	A	0100	KIA	2014	-	3	N	-	M	G							
2	DRVR	69	F	W	HNBD		STOPPED	E	A	0100	HONDA	2007	-	3	N	-	M	G							

Primary Rd		CANDLEBERRY AV		Distance (ft)	752	Direction	E	Secondary Rd		FUCHSIA ST		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	3	Beat	NORTH	Type	0	CalTrans	Badge	313	Collision Date	20160716	Time	0400	Day	SAT			
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20160816								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With				PKD MV		Lighting	DARK - ST	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int							
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	M	A	HBD-UI		PROC ST	E	A	0000	HONDA	2013	-	-	N	-	G	-	DRVR	COMP PN 25	M	1	0	G	-
2	PRKD	998	-			null		-	-	0000	CHEVR	2010	-	-	-	-	-	-							
Primary Rd		CENTRAL AV		Distance (ft)	0	Direction		Secondary Rd		7TH ST		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat	002	Type	0	CalTrans	Badge	362	Collision Date	20160115	Time	2025	Day	FRI			
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160325								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run		MSDMNR		Motor Vehicle Involved With				PKD MV		Lighting	DARK - ST	Ped Action		Cntrl Dev	FNCTNG	Loc Type		Ramp/Int							
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	M	W	HNBD		RGT TURN	W	A	0700	CHEVR	2015	-	3	N	-	M	G							
2	PRKD	998	-		HNBD		PARKED	-	D	2200	TOYOT	2002	-	3	N	-	-	-							
Primary Rd		CENTRAL AV		Distance (ft)	33	Direction	E	Secondary Rd		7TH ST		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans	Badge	246	Collision Date	20160905	Time	1524	Day	MON			
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20161011								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run		MSDMNR		Motor Vehicle Involved With				PKD MV		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int							
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	H	HBD-UNK		UNS TURN	W	A	0100	HONDA	2010	-	1	N	-	M	G							
2	PRKD	998	-				PARKED	W	D	2200	TOYOT	2002	-	-	-	-	-	-							
Primary Rd		COASTLINE DR		Distance (ft)	122	Direction	W	Secondary Rd		MARVISTA AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	7	Beat	007	Type	0	CalTrans	Badge	174	Collision Date	20160612	Time	2310	Day	SUN			
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160721								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With				PKD MV		Lighting	DARK - ST	Ped Action		Cntrl Dev	FNCTNG	Loc Type		Ramp/Int							
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	M	W	HBD-UI		LFT TURN	S	A	0100	FORD	2013	-	-	A	22350	-	G	-						
2	PRKD	998	-				PARKED	-	A	0100	LEXUS	2004	-	-	N	-	-	-							
3	PRKD	998	-				PARKED	-	A	0100	INFIN	2013	-	-	N	-	-	-							
Primary Rd		COLLEGE PARK DR		Distance (ft)	0	Direction		Secondary Rd		COLLEGE PARK		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans	Badge	246	Collision Date	20161102	Time	1122	Day	WED			
Primary Collision Factor		NOT DRIVER		Violation		Collision Type	OTHER	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20161212								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With				OTHER OBJ		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int							
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	OTHR	998	-		HNBD		OTHER	W	A	0100	HYUND	2002	-	3	O	-	-	-	OTHR	COMP PN 83	F	0	0	-	-

Primary Rd ELDORADO Distance (ft) 265 Direction N Secondary Rd CANOE BROOK NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160114 Time 1556 Day THU																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type OVERTURNED Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160317																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	72	F	W	HNBD	FATG	PROC ST	S	A	0100	HONDA	2003	- 3	A	N	L	G								
Primary Rd ELECTRIC AV Distance (ft) 78 Direction E Secondary Rd 12TH ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist 4 Beat 007 Type 0 CalTrans Badge 174 Collision Date 20160610 Time 2114 Day FRI																									
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160817																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	H			DRUG RAN OFF RD	E	A	0000	HONDA	1994	- -	A	22107	-	B -	DRVR	COMP PN	18	M	1	0	B	-
Primary Rd ELECTRIC AV Distance (ft) 158 Direction W Secondary Rd MAIN ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 304 Collision Date 20160721 Time 1206 Day THU																									
Primary Collision Factor STRNG BCKNG Violation 22106 Collision Type OTHER Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161010																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	52	F	W	HNBD		BACKING	E	A	0000	VOLVO	2006	- -	F	-	M -									
2	DRVR	46	M	W	HNBD		RGT TURN	S	A	0000	TOYOT	2016	- -	N	-	M -		PASS		38	M	6	0	G	-
Primary Rd FORRESTAL LN Distance (ft) 444 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20161204 Time 1908 Day SUN																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170110																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run MSDMNR Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	M	W	HBD-UI		PROC ST	E	A	0000	INFIN	2004	- -	A	20002	-	G -								
Primary Rd GOLDEN RAIN Distance (ft) 0 Direction Secondary Rd CANOE BROOK NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160229 Time 0114 Day MON																									
Primary Collision Factor OTHER IMPROP DRV Violation Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160413																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With PKD MV Lighting DARK - NO Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	56	M	W	HBD-UI		PROC ST	S	A	0100	TOYOT	2008	- 3	N	-	M	G								
2	PRKD	998	-		HNBD		PARKED	S	A	0100	NISSA	2009	- 3	N	-	-	-								

Include State Highways cases

Primary Rd HEATHER ST Distance (ft) 0 Direction Secondary Rd HEATHER ST 3960 NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160422 Time 0847 Day FRI																											
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160531																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	46	M	H	HNBD		BACKING	E	I	1100	ISUZU	2005	-	3	N	-	M	G									
Primary Rd LAMPSON Distance (ft) 108 Direction E Secondary Rd BASSWOOD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 361 Collision Date 20160708 Time 1336 Day FRI																											
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160816																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With BICYCLE Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	49	M	H	HNBD		RGT TURN	E	D	0000	CHEVR	1992	-	-	-	-	G	-									
2	BICY	59	F	W	HNBD		RAN OFF RD	E	L	0000	-	-	-	-	-	-	-	BICY	OTH VIS	59	-	9	3	-	-		
Primary Rd LAMPSON Distance (ft) 1164 Direction E Secondary Rd OLD RANCH PLZ NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist 3020 Beat NORTH Type 0 CalTrans Badge 429 Collision Date 20160112 Time 0722 Day TUE																											
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160323																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	25	M	W	HNBD		PROC ST	W	A	0100	MAZDA	2012	A	-	F	-	M	G									
2	DRVR	29	M	H	HNBD		PROC ST	W	F	2600	OTHER	2002	A	-	N	-	M	G									
Primary Rd LAMPSON AV Distance (ft) 74 Direction W Secondary Rd BASSWOOD ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 432 Collision Date 20161017 Time 0715 Day MON																											
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																											
Weather1 RAINING Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	16	M	A	HNBD		LFT TURN	W	A	0700	CHEVR	2004	-	3	N	-	M	G									
Primary Rd LAMPSON AV Distance (ft) 0 Direction Secondary Rd CANDLEBERRY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160115 Time 1110 Day FRI																											
Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160323																											
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	21	M	H	HNBD		PROC ST	-	I	1100	ISUZU	2014	-	1	A	23123	-	M	G	PASS		29	M	2	0	M	G
2	DRVR	78	F	W	HNBD		LFT TURN	-	A	0100	LEXUS	2005	-	3	N	-	M	G	PASS		28	M	3	0	M	G	

Primary Rd LAMPSON AV Distance (ft) 238 Direction W Secondary Rd CANDLEBERRY AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 141 Type 0 CalTrans Badge 251 Collision Date 20160520 Time 1456 Day FRI																										
Primary Collision Factor UNKNOWN Violation Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160719																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	60	F	A	IMP UNK	IMP UNK	PROC ST	E	A	0000	TOYOT	2009	-	-	-	-	G	-	DRVR	SEVERE	60	F	1	0	L	-
Primary Rd LAMPSON AV Distance (ft) 1174 Direction W Secondary Rd HEATHER NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 141 Type 0 CalTrans Badge 251 Collision Date 20160527 Time 0657 Day FRI																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160719																										
Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F	H	HNBD		PROC ST	W	A	0000	VOLKS	2002	-	-	-	-	L	-								
Primary Rd LAMPSON AV Distance (ft) 0 Direction Secondary Rd HEATHER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist 20 Beat 006 Type 0 CalTrans Badge 174 Collision Date 20160123 Time 1617 Day SAT																										
Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160322																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	43	M	W	HNBD		U-TURN	W	A	0000	JEEP	2013	-	-	N	-	G	-								
2	DRVR	69	F	W	HNBD		PROC ST	E	A	0000	SUBAR	2015	-	-	N	-	G	-	DRVR	COMP PN	69	F	1	0	G	-
Primary Rd LAMPSON AV Distance (ft) 38 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20160809 Time 1807 Day TUE																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20161010																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With BICYCLE Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	53	M	W	HNBD		RGT TURN	E	-	0000	-	-	-	N	-	W	-	DRVR	OTH VIS	53	M	1	1	W	-	
2	DRVR	30	M	O	HNBD		RGT TURN	E	-	0000	AUDI	2013	-	-	N	-	G	-								
Primary Rd MAIN ST Distance (ft) 0 Direction Secondary Rd CENTRAL AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 362 Collision Date 20160307 Time 1219 Day MON																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160412																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With BICYCLE Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	68	F	W	HNBD		PARKING	-	A	0700	CHEVR	2012	-	3	N	-	M	G								
2	BICY	69	M	O	HNBD		PROC ST	-	L	0400	-	-	3	A	21755	N	-	-	BICY	OTH VIS	69	-	1	1	P	V

Primary Rd MAIN ST Distance (ft) 0 Direction Secondary Rd MAIN ST 215 NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20160720 Time 1132 Day WED Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160909 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int														
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected 1F DRVR 47 M W HNBD BACKING E A 0700 TOYOT 1997 - 3 N - M G PASS 58 F 3 0 G - 2 DRVR 55 M W HNBD STOPPED S I 0900 FREIG 2005 - 3 N - M G PASS 30 M 3 0 G -														
Primary Rd MAIN ST Distance (ft) 400 Direction S Secondary Rd PACIFIC COAST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20161223 Time 1251 Day FRI Primary Collision Factor UNKNOWN Violation Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170127 Weather1 CLOUDY Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int														
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected 1 DRVR 27 F W HNBD LFT TURN N A 0000 KIA 2012 - - N - G - PASS 58 F 3 0 G - 2 DRVR 30 M W HNBD RGT TURN S A 0000 VOLKS 2012 - - N - G - PASS 30 M 3 0 G - PASS 28 F 5 0 G -														
Primary Rd MAIN ST Distance (ft) 238 Direction W Secondary Rd RT 1 NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.191 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist 2 Beat 007 Type 0 CalTrans 12 Badge 174 Collision Date 20160821 Time 1943 Day SUN Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20170218 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With BICYCLE Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type I Ramp/Int 6														
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected 1F DRVR 58 M H HNBD RGT TURN N A 0000 TOYOT 2011 - - N - G - PASS 25 M 4 0 G - 2 BICY 51 M H HNBD PROC ST N - 0000 - - - N - - - PASS 60 M 6 0 G - PASS COMP PN 9 M 4 0 Y -														
Primary Rd MARINA DR Distance (ft) 5 Direction S Secondary Rd RT 1 NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.281 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans 12 Badge 178 Collision Date 20160229 Time 1746 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20170216 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type I Ramp/Int 6														
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected 1F DRVR 48 M W HNBD PROC ST N I 0000 OTHER 2008 - - N - G - DRVR 51 - 1 0 G - 2 DRVR 51 F W HNBD STOPPED N A 0000 INFIN 2015 - - N - G -														
Primary Rd N BOUND SEAL Distance (ft) 273 Direction S Secondary Rd PACIFIC COAST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 300 Collision Date 20161003 Time 0240 Day MON Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161219 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int														
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected 1F DRVR 29 F HBD-UI PROC ST N A 0000 HYUND 2014 - - A 22350 - G -														

Primary Rd NORTH GATE RD		Distance (ft) 0	Direction	Secondary Rd NORTH GATE RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20160714	Time 1637	Day THU															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160816																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																			
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	75	M	W	HNBD		PROC ST	W	A	0000	FORD	2012	-	-	N	-	G	-	-	-	-	-	-	-	-
2	DRVR	62	M	W	HNBD		LFT TURN	W	A	0000	CHEVR	2006	-	-	N	-	G	-	-	-	-	-	-	-	-
Primary Rd OCEAN ALLEY		Distance (ft) 122	Direction N	Secondary Rd OCEAN AV	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20161019	Time 2329	Day WED															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type OTHER	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161208																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With PKD MV		Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																			
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	37	F	H	HBD-UI		BACKING	E	A	0000	CHRY	2001	-	-	N	-	G	-	-	-	-	-	-	-	-
2	PRKD	998	-	-	-		PARKED	E	A	0000	INFIN	2005	-	-	N	-	-	-	-	-	-	-	-	-	-
Primary Rd OCEAN AV		Distance (ft) 102	Direction E	Secondary Rd DOLPHIN	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat PATRO	Type 0	CalTrans	Badge 314	Collision Date 20161227	Time 0330	Day TUE															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170317																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With PKD MV		Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																			
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	30	M	H	HBD-UI		PROC ST	E	A	0000	TOYOT	2009	-	-	A	22350	-	G	-	-	-	-	-	-	-
2	PRKD	998	-	-	-		PARKED	E	A	0000	TOYOT	2005	-	-	-	-	-	-	-	-	-	-	-	-	-
3	PRKD	998	-	-	-		PARKED	E	A	0000	BMW	2008	-	-	-	-	-	-	-	-	-	-	-	-	-
Primary Rd OLD RANCH PKY		Distance (ft) 0	Direction	Secondary Rd OLD RANCH PKWY	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20161126	Time 1622	Day SAT															
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170118																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DUSK/DAWN	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																			
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	M	B	HNBD		LFT TURN	W	A	0000	MERCE	2013	-	-	N	-	M	-	-	-	-	-	-	-	-
2	DRVR	37	F	H	HNBD		PROC ST	E	A	0000	HONDA	2007	-	-	N	-	M	-	-	-	-	-	-	-	-
Primary Rd PACIFIC COAST		Distance (ft) 0	Direction	Secondary Rd 12TH ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix	Postmile 33.021	Side of Hwy N															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans	Badge 362	Collision Date 20160120	Time 0743	Day WED															
Primary Collision Factor R-O-W PED		Violation 21950A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170211																	
Weather1 CLOUDY		Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With BICYCLE		Lighting DUSK/DAWN	Ped Action	Cntrl Dev FNCTNG	Loc Type I	Ramp/Int 5																			
Party Info											Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	F	H	HNBD		LFT TURN	W	A	0100	HONDA	2002	-	3	N	-	M	G	-	-	-	-	-	-	-
2	BICY	6	F	W	HNBD		PROC ST	-	L	0400	-	-	-	3	N	-	-	-	BICY	COMP PN 6	F	1	0	P	W

Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd	12TH ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	30.01	Side of Hwy	N					
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	362	Collision Date	20160322		Time	1200	Day	TUE				
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170211									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type	H		Ramp/Int -									
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	86	F	W	HNBD			PROC ST	N	A	0100	TOYOT	2002	-	2	N	-	M	G								
2	DRVR	49	M	W	HNBD			STOPPED	-	A	0100	HYUND	2016	-	3	N	-	M	G								
Primary Rd		PACIFIC COAST		Distance (ft)	187	Direction	W	Secondary Rd	12TH ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.06	Side of Hwy	S					
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	298	Collision Date	20161230		Time	0938	Day	FRI				
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	HIT OBJECT		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170302									
Weather1		RAINING		Weather2		Rdwy Surface	WET		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With	FIXED OBJ		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type	H		Ramp/Int -									
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	30	F	W	HNBD			SLOWING	E	C	0000	YAMAHA	2014	-	-	N	-	-	W	DRVR	OTH VIS	30	F	1	0	-	W
Primary Rd		PACIFIC COAST		Distance (ft)	122	Direction	W	Secondary Rd	16TH ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.8	Side of Hwy	S					
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	423	Collision Date	20161231		Time	1346	Day	SAT				
Primary Collision Factor		R-O-W AUTO		Violation	21801A	Collision Type	BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?		Process Date	20170306									
Weather1		CLOUDY		Weather2		Rdwy Surface	WET		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type	H		Ramp/Int -									
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	58	F	A	HNBD			LFT TURN	S	A	0000	TOYOT	2013	-	-	A	22107	-	G	-							
2	DRVR	61	M	W	HNBD			PROC ST	E	A	0000	TOYOT	2014	-	-	N	-	G	-	PASS		17	F	3	0	G	-
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd	1ST ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	3.63	Side of Hwy	S					
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	362	Collision Date	20160202		Time	0727	Day	TUE				
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170218									
Weather1		CLEAR		Weather2		Rdwy Surface			Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With			Lighting	DUSK/DAWN		Ped Action		Cntrl Dev			Loc Type	H		Ramp/Int -									
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F	O	HNBD			PROC ST	N	A	0100	TOYOT	2008	-	3	N	-	L	A								
2	DRVR	67	F	W	HNBD			STOPPED	S	A	0700	ACURA	2004	-	3	N	-	M	G								
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd	1ST ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.621	Side of Hwy	S					
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	298	Collision Date	20161231		Time	1244	Day	SAT				
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	SIDESWIPE		Severity	INJURY	#Killed	0	#Injured	3	Tow Away?	Y	Process Date	20170329									
Weather1		CLOUDY		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run				Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type	I		Ramp/Int 5									
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	55	M	W	HBD-UNK			PROC ST	E	A	0000	TOYOT	2006	-	-	A	-	G	-	DRVR	COMP PN	55	M	1	0	G	-
2	DRVR	46	M	W	HNBD			PROC ST	W	A	0000	PORSC	2006	-	-	N	-	G	-	DRVR	COMP PN	46	M	1	0	G	-
3	DRVR	57	F	W	HNBD			LFT TURN	E	A	0000	TOYOT	2004	-	-	N	-	G	-	PASS	COMP PN	84	M	3	0	G	-
																			PASS		56	M	4	0	G	-	

Primary Rd		PACIFIC COAST		Distance (ft)	140	Direction	W	Secondary Rd	ANDERSON	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	31.14	Side of Hwy	S						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	298	Collision Date	20161216	Time	0853	Day	FRI						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	HEAD-ON	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170302										
Weather1		CLOUDY		Weather2	RAINING	Rdwy Surface	WET	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0														
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H	Ramp/Int -											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	22	M	H	HNBD		PROC ST	E	A	0000	TOYOT	2007	-	-	N	-	-	G	DRVR	COMP PN 22	22	M	1	0	-	G	
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd	KITTS HWY	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.4	Side of Hwy	N						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	422	Collision Date	20160724	Time	0355	Day	SUN						
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type	SIDESWIPE	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170303										
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0														
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting	DARK - ST	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H	Ramp/Int -											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	25	M	H	HBD-UI		PROC ST	N	A	0000	VOLKS	2015	-	-	A	22350	F	G	M	PASS	SEVERE	20	M	3	0	G	
Primary Rd		PACIFIC COAST		Distance (ft)	48	Direction	E	Secondary Rd	MAIN ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.18	Side of Hwy	S						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	257	Collision Date	20160103	Time	1839	Day	SUN						
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20170216										
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0														
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DARK - ST	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H	Ramp/Int -											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	22	F	W	HBD-UI		PROC ST	-	A	0100	HONDA	2001	-	3	A	23152	-	L	G	DRVR	COMP PN 22	22	F	1	0	L	G
2	DRVR	58	M	W	HNBD		PROC ST	-	I	1200	OTHER	2001	-	3	N	-	P	G	PASS	COMP PN 67	67	F	9	0	P	-	
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd	MAIN ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.191	Side of Hwy	S						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	368	Collision Date	20160109	Time	1932	Day	SAT						
Primary Collision Factor		R-O-W PED		Violation	21950A	Collision Type	AUTO/PED	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170216										
Weather1		CLEAR		Weather2	CLOUDY	Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0														
Hit and Run				Motor Vehicle Involved With		PED		Lighting	DARK - ST	Ped Action	X-WLK AT	Cntrl Dev	FUNCTNG	Loc Type	I	Ramp/Int 5											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	29	F	W	HNBD		LFT TURN	S	A	0100	FORD	2015	-	3	-	-	M	G									
2	PED	34	M	W	HBD-UI		PROC ST	N	N	6000	-	-	-	3	-	-	-	-	PED	COMP PN 34	34	M	9	3	-	-	
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd	MAIN ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	.033	Side of Hwy	S						
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	12	Badge	257	Collision Date	20160622	Time	1003	Day	WED						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170214										
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0														
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	I	Ramp/Int 5											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	59	M	W	HNBD		PROC ST	S	D	2200	FORD	2002	-	3	N	-	M	G									
2	DRVR	32	M	W	HNBD		STOPPED	S	A	0100	FORD	2016	-	3	J	-	M	G									

Primary Rd		PACIFIC COAST		Distance (ft)	78	Direction	W	Secondary Rd		MAIN ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.2	Side of Hwy	S			
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	298	Collision Date	20161119		Time	0725	Day	SAT			
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170304							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT			
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	W	HBD-UI		PROC ST	E	-	0000	TOYOT	1997	A	-	N	-	G	DRVR	OTH VIS	53	F	1	0	G	-	
2	DRVR	28	M	H	HNBD		STOPPED	E	-	0000	TOYOT	1988	-	D	-	-	G									
3	DRVR	50	F		HNBD		STOPPED	E	-	0000	TOYOT	2006	-	-	-	-	G									
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd		MARINA DR		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.281	Side of Hwy	N			
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		SOUTH	Type	0	CalTrans	12	Badge	422	Collision Date	20161008		Time	0532	Day	SAT		
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	HEAD-ON		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170227							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run	MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting	DARK - ST	
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	H	HNBD		OPPOS LN	W	A	0000	HONDA	1995	-	-	A	-	G									
Primary Rd		PACIFIC COAST		Distance (ft)	38	Direction	N	Secondary Rd		RT 1		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.721	Side of Hwy	N			
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		SOUTH	Type	0	CalTrans	12	Badge	431	Collision Date	20160516		Time	1147	Day	MON		
Primary Collision Factor		R-O-W AUTO		Violation	21800A	Collision Type	HEAD-ON		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170213							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	CONS ZONE		Rdwy Cond2		Spec Cond	0		Hit and Run	MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT	
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	31	F	W	HNBD		PROC ST	N	A	0000	TOYOT	2012	-	-	N	-	G									
2	DRVR	76	F	H	HNBD		PROC ST	S	A	0000	HONDA	2008	-	-	N	-	G									
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.73	Side of Hwy	S			
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	362	Collision Date	20160314		Time	1623	Day	MON			
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170211							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT			
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	M	H	HNBD		PROC ST	S	A	0100	AUDI	2003	-	3	N	-	L	G								
2	DRVR	48	M	H	HNBD		STOPPED	S	A	0100	HONDA	2001	-	3	N	-	M	G								
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.73	Side of Hwy	S			
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	362	Collision Date	20160314		Time	0806	Day	MON			
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170216							
Weather1		RAINING		Weather2		Rdwy Surface	WET		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0		Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT			
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	32	M	W	HNBD		PROC ST	-	A	0700	JEEP	1994	-	3	N	-	M	G	PASS		29	F	3	0	M	G
2	DRVR	59	M	W	HNBD		STOPPED	-	A	0100	VOLKS		-	3	N	-	M	G	DRVR	COMP PN	59	M	1	0	M	G

Primary Rd		PACIFIC COAST		Distance (ft)	600	Direction	S	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.61	Side of Hwy	N				
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat 002	Type	0	CalTrans	12	Badge	362	Collision Date	20160321	Time	1729	Day	MON				
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?		Process Date	20170216								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run											
Hit and Run				Motor Vehicle Involved With		Lighting	DUSK/DAWN	Ped Action		Cntrl Dev		Loc Type	H	Ramp/Int											
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	38	M	O	HNBD		PROC ST	N	A	0700	TOYOT	2005	- 3	N	-	L	G	PASS		11	M	6	0	M	G
2	DRVR	24	F	O	HNBD		STOPPED	-	A	0700	BMW	2006	- 3	N	-	L	G	PASS	COMP PN	18	F	3	0	L	G
																		PASS		12	M	4	0	M	G
																		PASS		12	M	3	0	M	G
3	DRVR	41	M	W	HNBD		STOPPED	-	A	0100	AUDI	2011	- 3	N	-	M	G								

Primary Rd		PCH		Distance (ft)	0	Direction		Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.721	Side of Hwy	N				
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat 00S	Type	0	CalTrans	12	Badge	152	Collision Date	20160508	Time	0652	Day	SUN				
Primary Collision Factor		UNKNOWN		Violation		Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170213								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run											
Hit and Run				Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG	Loc Type	I	Ramp/Int	5									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	25	M	W	HNBD		PROC ST	E	A	0100	TOYOT	2007	- 3	N	-	L	G								
2	DRVR	65	F	W	HNBD		PROC ST	N	-	0000	GMC	2002	- 3	N	-	L	G								

Primary Rd		ROSSMOOR		Distance (ft)	60	Direction	W	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy					
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans		Badge	298	Collision Date	20161021	Time	1446	Day	FRI				
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	HEAD-ON	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20161207								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run											
Hit and Run				Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG	Loc Type		Ramp/Int										
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	89	F	W	HNBD		RGT TURN	W	A	0000	TOYOT	2001	- -	N	-	H	-	DRVR	OTH VIS	89	F	1	0	H	-
2	DRVR	54	F	B	HNBD		PROC ST	E	A	0000	CADIL	2012	- -	N	-	G	-								

Primary Rd		RT 1		Distance (ft)	20	Direction	S	Secondary Rd	10TH	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.14	Side of Hwy	S				
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat SOUTH	Type	0	CalTrans	12	Badge	246	Collision Date	20160714	Time	1116	Day	THU				
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170303								
Weather1		CLEAR		Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0	Hit and Run											
Hit and Run				Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG	Loc Type	H	Ramp/Int										
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	A	HNBD		PROC ST	E	D	2200	NISSA	2015	- -	N	-	L	-	PASS		18	M	3	0	L	-
																		PASS		18	M	4	0	L	-
																		PASS		17	M	6	0	L	-
2	DRVR	36	M	H	HNBD		SLOWING	N	A	0100	ACURA	2014	- -	N	-	L	-	DRVR	COMP PN	36	M	1	0	L	-

Primary Rd	RT 1	Distance (ft)	172	Direction	S	Secondary Rd	10TH ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	30.33	Side of Hwy	S	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	12	Badge	246	Collision Date	20161129	Time	0720	Day	TUE
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170222			
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0						
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H		Ramp/Int -			

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	39	M	W	HNBD		PROC ST	S	A	0100	NISSA	2015	- 3	N	-	L	G								
2	DRVR	29	M	W	HNBD		STOPPED	S	A	0700	JEEP	1996	- 3	N	-	M	G								
3	DRVR	31	F	W	HNBD		STOPPED	S	A	0100	TOYOT	2012	- 3	N	-	M	G								

Primary Rd	RT 1	Distance (ft)	0	Direction		Secondary Rd	13TH ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.971	Side of Hwy	N		
City	Seal Beach	County	Orange	Population	4	Rpt Dist	6	Beat	007	Type	0	CalTrans	12	Badge	174	Collision Date	20161021	Time	1839	Day	FRI
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170216			
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0							
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DUSK/DAWN		Ped Action		Cntrl Dev	FUNCTNG	Loc Type	I		Ramp/Int 5				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	F	W	HNBD		SLOWING	N	A	0000	NISSA	2010	- -	N	-	G	-	DRVR	COMP PN	44	F	1	0	G	-
2	DRVR	44	F	W	HNBD		STOPPED	N	A	0000	DODGE	2013	- -	N	-	G	-								

Primary Rd	RT 1	Distance (ft)	40	Direction	E	Secondary Rd	14TH ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.91	Side of Hwy	S		
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans	12	Badge	361	Collision Date	20160804	Time	1512	Day	THU
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170218				
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0							
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	H		Ramp/Int -				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	27	M	W			PROC ST	E	A	0000	HYUND	2010	- -	-	-	G	-								
2	DRVR	26	M	W			SLOWING	E	A	0000	SUBAR	2016	- -	-	-	G	-								
3	DRVR	83	M	W			SLOWING	E	A	0000	GMC	2002	- -	-	-	G	-								

Primary Rd	RT 1	Distance (ft)	33	Direction	E	Secondary Rd	14TH ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.91	Side of Hwy	N		
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	PATRO	Type	0	CalTrans	12	Badge	314	Collision Date	20161126	Time	1915	Day	SAT
Primary Collision Factor	R-O-W AUTO		Violation	21804A	Collision Type			Severity	INJURY		#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20170215			
Weather1	RAINING		Weather2		Rdwy Surface	WET		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0							
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DARK - ST		Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	H		Ramp/Int -				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	53	M	W	HBD-NUI		ENT TRAF	N	A	0000	HONDA	2016	- -	H	-	-	G	PASS		45	F	3	0	-	G
2	DRVR	34	F	O	HNBD		PROC ST	E	A	0000	TOYOT	2013	- -	N	-	G	L	DRVR	OTH VIS	34	F	1	0	-	G
																		PASS	OTH VIS	32	M	3	0	-	G

Primary Rd	RT 1	Distance (ft)	0	Direction		Secondary Rd	15TH ST	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	30.601	Side of Hwy	N		
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans	12	Badge	246	Collision Date	20161227	Time	1556	Day	TUE
Primary Collision Factor	R-O-W AUTO		Violation	21801A	Collision Type	BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170306				
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0							
Hit and Run	Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	I		Ramp/Int 5				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	63	M	W	HNBD		LFT TURN	N	A	0100	FORD	2008	- 3	N	-	M	G								
2	DRVR	34	M	W	HNBD		PROC ST	E	A	0100	FORD	2011	- 3	N	-	M	G	PASS		28	F	4	0	P	G

PASS	0	F	6	0	P	Q
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Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd 16TH ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.821 Side of Hwy S
 City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans 12 Badge 178 Collision Date 20160209 Time 1809 Day TUE
 Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170216
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev NT PRS/FCTR Loc Type I Ramp/Int 5

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	24	F	W	HNBD		LFT TURN	N	A	0000	HONDA	2001	-	-	N	-	G	PASS		5	M	4	0	-	Q
																		PASS		4	F	6	0	-	Q
2	DRVR	42	F	W	HNBD		PROC ST	S	A	0000	FORD	2014	-	-	N	-	G	DRVR	COMP PN	42	F	1	0	G	-
3	DRVR	78	M	W	HNBD		PROC ST	S	A	0000	LAND	2001	-	-	A	-	G								

Primary Rd RT 1 Distance (ft) 42 Direction W Secondary Rd 16TH ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.83 Side of Hwy S
 City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans 12 Badge 365 Collision Date 20160330 Time 1757 Day WED
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170216
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	73	M	W	HNBD		PROC ST	S	A	0000	CADIL	2011	-	-	N	-	G								
2	DRVR	32	M	O	HNBD		SLOWING	S	A	0000	HONDA	2008	-	-	N	-	G	DRVR	COMP PN	31	M	1	0	G	-
3	DRVR	21	M	W	HNBD		STOPPED	S	A	0000	JEEP	1995	-	-	N	-	G								
4	DRVR	36	F	W	HNBD		STOPPED	S	A	0000	DODGE	2015	-	-	N	-	G								

Primary Rd RT 1 Distance (ft) 80 Direction N Secondary Rd 16TH ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 32.84 Side of Hwy S
 City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans 12 Badge 178 Collision Date 20160810 Time 1817 Day WED
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170218
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	45	M	W	HNBD		PROC ST	S	-	0000	CHEVR	2011	A	-	N	-	L								
2	DRVR	44	M	O	HNBD		STOPPED	S	-	0000	MERCE	2016	A	-	N	-	G	DRVR	COMP PN	44	M	1	0	G	-

Primary Rd RT 1 Distance (ft) 32 Direction W Secondary Rd 1ST ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 24.56 Side of Hwy S
 City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans 12 Badge 178 Collision Date 20160713 Time 2245 Day WED
 Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170218
 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0
 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	M	O	HNBD		PROC ST	S	A	0000	HONDA	2015	-	-	N	-	L								
2	DRVR	18	M	H	HNBD		STOPPED	S	D	0000	TOYOT	2014	-	-	N	-	G	PASS		16	F	3	0	G	-
																		PASS		20	F	4	0	G	-

Primary Rd RT 1		Distance (ft) 0	Direction	Secondary Rd 5TH ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 33.421	Side of Hwy N															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 368	Collision Date 20160305	Time 1904	Day SAT															
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20170216																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																			
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type I	Ramp/Int 5																		
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	39	F	A	HNBD	PROC ST	N	A	0100	NISSA	2016	-	-	-	-	L G	DRVR	COMP PN 39	F	1	0	L	G		
2	DRVR	78	F	W	HNBD	LFT TURN	S	A	0100	LEXUS	2006	-	3	-	-	L G	DRVR	COMP PN 78	F	1	0	L	G		
Primary Rd RT 1		Distance (ft) 482	Direction N	Secondary Rd 5TH ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 33.51	Side of Hwy S															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 241	Type 0	CalTrans 12	Badge 368	Collision Date 20161208	Time 1856	Day THU															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170302																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																			
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type H	Ramp/Int -																		
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	38	F	H	HNBD	PROC ST	S	A	0100	VOLVO	2012	-	3	M	-	M G	DRVR	COMP PN 38	F	1	0	M	G		
2	DRVR	62	M	W	HNBD	STOPPED	S	A	0100	INFIN	2013	-	3	N	-	M G									
Primary Rd RT 1		Distance (ft) 58	Direction S	Secondary Rd 5TH ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 30.13	Side of Hwy S															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 207	Type 0	CalTrans 12	Badge 368	Collision Date 20161223	Time 2100	Day FRI															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170306																	
Weather1 RAINING	Weather2	Rdwy Surface WET	Rdwy Cond1 OTHER	Rdwy Cond2	Spec Cond 0	Hit and Run																			
Motor Vehicle Involved With PKD MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type H	Ramp/Int -																		
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	F	W	HNBD	PROC ST	S	A	0100	HONDA	2008	-	3	N	-	L G									
2	PRKD	998	-	-	-	PARKED	S	A	0100	AUDI	2011	-	-	N	-	-									
Primary Rd RT 1		Distance (ft) 0	Direction	Secondary Rd 8TH ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 33.251	Side of Hwy S															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00S	Type 0	CalTrans 12	Badge 317	Collision Date 20160608	Time 1320	Day WED															
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 3	Tow Away? Y	Process Date 20170222																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																			
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type I	Ramp/Int 5																		
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	31	F	W	HNBD	LFT TURN	S	-	0000	FORD	2008	A	-	A	-	-	DRVR	COMP PN 31	F	1	0	G	-		
																	PASS	COMP PN 6	F	6	0	G	-		
2	DRVR	20	F	W	HNBD	PROC ST	E	-	0000	NISSA	2002	A	-	A	22350	-	DRVR	COMP PN 20	F	1	3	-	-		
Primary Rd RT 1		Distance (ft) 0	Direction	Secondary Rd 8TH ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 33.251	Side of Hwy S															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans 12	Badge 257	Collision Date 20160804	Time 1513	Day THU															
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170222																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																			
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type I	Ramp/Int 5																		
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	62	M	W	HNBD	STOPPED	N	A	0700	TOYOT	2014	-	3	N	-	M G									
2	DRVR	44	F	W	HNBD	PROC ST	E	A	0100	KIA	2008	-	3	N	-	M G	DRVR	COMP PN 44	F	1	0	M	G		

Primary Rd RT 1		Distance (ft) 24	Direction E	Secondary Rd 8TH ST		NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 30.281	Side of Hwy S													
City Seal Beach		County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans 12	Badge 298	Collision Date 20161118	Time 1313	Day FRI													
Primary Collision Factor UNKNOWN		Violation	Collision Type BROADSIDE		Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170222															
Weather1 CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type I	Ramp/Int 5																	
Party Info																								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	23	F		HNBD		LFT TURN	S	A	0000	HONDA 2010	- -	N		-	G -	PASS		1	M	6	3	G	-
2	DRVR	68	F		HNBD		PROC ST	E	A	0000	JAGUA 2006	- -	N		-	G -	PASS		4	F	4	3	G	-
Primary Rd RT 1		Distance (ft) 280	Direction N	Secondary Rd ANDERSON ST		NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 31.16	Side of Hwy S													
City Seal Beach		County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 246	Collision Date 20160303	Time 1442	Day THU													
Primary Collision Factor R-O-W AUTO		Violation 21804A	Collision Type SIDESWIPE		Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170211															
Weather1 CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type H	Ramp/Int -																	
Party Info																								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	76	M	W	HNBD		U-TURN	E	A	0100	NISSA 2015	- 3	N		-	M G								
2	DRVR	45	M	W	HNBD		PROC ST	S	D	2200	TOYOT 2005	- 3	N		-	M G								
Primary Rd RT 1		Distance (ft) 683	Direction N	Secondary Rd ANDERSON ST		NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 31.24	Side of Hwy N													
City Seal Beach		County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 431	Collision Date 20160716	Time 2026	Day SAT													
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type SIDESWIPE		Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170218															
Weather1 CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type H	Ramp/Int -																	
Party Info																								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	59	M	W	HNBD		LFT TURN	-	A	0000	HONDA 2015	- -	N		-	G -								
2	DRVR	22	M	W	HNBD		PROC ST	-	A	0000	NISSA 2003	- -	N		-	G -	PASS		20	M	2	0	G	-
Primary Rd RT 1		Distance (ft) 291	Direction N	Secondary Rd ANDERSON ST		NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 31.17	Side of Hwy S													
City Seal Beach		County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans 12	Badge 178	Collision Date 20161018	Time 2203	Day TUE													
Primary Collision Factor R-O-W AUTO		Violation 21801B	Collision Type BROADSIDE		Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170216															
Weather1 CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type H	Ramp/Int -																	
Party Info																								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	F	W	HNBD		PROC ST	E	A	0000	FORD 1998	- -	N		-	G -								
2	DRVR	40	M	H	HBD-NUI		MERGING	E	A	0000	FORD 1995	- -	N		-	G -	DRVR	COMP PN 40		M	1	0	G	-
Primary Rd RT 1		Distance (ft) 0	Direction	Secondary Rd ANDERSON ST		NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 31.12	Side of Hwy N													
City Seal Beach		County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 246	Collision Date 20161120	Time 1338	Day SUN													
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type OTHER		Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170304															
Weather1 RAINING		Weather2	Rdwy Surface WET		Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																
Motor Vehicle Involved With OTHER OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type H	Ramp/Int -																	
Party Info																								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	W	HNBD		PROC ST	N	C	0200	TRIUM 2009	- 3	N		-	P W	PASS	OTH VIS	27	F	0	1	P	Y

Primary Rd RT 1		Distance (ft) 0	Direction	Secondary Rd BALBOA	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 33.021	Side of Hwy N															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans 12	Badge 362	Collision Date 20160724	Time 1046	Day SUN															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170218																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With BICYCLE		Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type I	Ramp/Int 5																			
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	69	F	W	HNBD	RGT TURN	-	A	0100	INFIN	2008	-	3	N	-	M	G								
2	BICY	31	M	O	HNBD	PROC ST	-	L	0400	-	-	-	3	N	-	-	-	BICY	COMP PN 31	-	1	1	P	W	
Primary Rd RT 1		Distance (ft) 305	Direction S	Secondary Rd BOLSA AV	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 33.141	Side of Hwy N															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 246	Collision Date 20161110	Time 1716	Day THU															
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170304																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With BICYCLE		Lighting DAYLIGHT	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type I	Ramp/Int 5																			
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	24	F	W	HNBD	LFT TURN	E	A	0100	HONDA	2003	-	3	N	-	M	G								
2	BICY	47	M	W	HNBD	PROC ST	N	L	0400	-	-	-	3	N	-	-	-	BICY	OTH VIS 47	M	9	1	-	-	
Primary Rd RT 1		Distance (ft) 20	Direction E	Secondary Rd MAIN ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 3.18	Side of Hwy S															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat PATRO	Type 0	CalTrans 12	Badge 257	Collision Date 20160622	Time 1033	Day WED															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170214																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type H	Ramp/Int -																			
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	M	W	HNBD	PROC ST	S	A	0100	TOYOT	2003	-	3	N	-	M	G	PASS		54	F	3	0	M	G
2	DRVR	71	M	B	HNBD	STOPPED	S	A	0100	LEXUS	2013	-	3	N	-	M	G								
Primary Rd RT 1		Distance (ft) 21	Direction E	Secondary Rd MARINER	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 31.43	Side of Hwy N															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat PATRO	Type 0	CalTrans 12	Badge 314	Collision Date 20160320	Time 2357	Day SUN															
Primary Collision Factor R-O-W AUTO		Violation 21801A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 3	Tow Away? Y	Process Date 20170216																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type H	Ramp/Int -																			
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	M	W	HBD-NUI	LFT TURN	S	A	0000	BMW	2008	-	-	-	-	G	-	DRVR	SEVERE 27	M	1	0	G	-	
																		PASS	COMP PN 27	M	3	0	G	-	
2	DRVR	54	M	B	HBD-UI	PROC ST	W	A	0000	FORD	2016	-	-	A	23152	-	G	-	DRVR	COMP PN 53	M	1	0	G	-
Primary Rd RT 1		Distance (ft) 631	Direction S	Secondary Rd MARINER DR	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 31.29	Side of Hwy N															
City Seal Beach	County Orange	Population 4	Rpt Dist 12	Beat 007	Type 0	CalTrans 12	Badge 174	Collision Date 20160925	Time 2249	Day SUN															
Primary Collision Factor R-O-W AUTO		Violation 21804A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 4	Tow Away? Y	Process Date 20170302																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type H	Ramp/Int -																			
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	F	W	HNBD	LFT TURN	W	A	0000	VOLKS	2013	-	-	N	-	G	-	DRVR	OTH VIS 27	F	1	0	L	-	
																		PASS		29	M	3	0	G	-
																		PASS	COMP PN 29	M	4	0	G	-	
																		PASS	OTH VIS 28	F	6	0	G	-	

Include State Highways cases

Report Run On: 11/10/2017

2	DRVR	23	F	W	HNBD	PROC ST	N	A	0000	FORD	2010	-	-	N	-	G	-	DRVR	OTH VIS	23	F	1	0	L	-	
Primary Rd RT 1 Distance (ft) 9 Direction N Secondary Rd MARINER DR NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 31.45 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans 12 Badge 246 Collision Date 20161121 Time 0911 Day MON Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170216 Weather1 CLOUDY Weather2 Rdw Surface WET Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting Ped Action Cntrl Dev NT PRS/FCTR Loc Type H Ramp/Int -																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	70	M	W	HNBD		U-TURN	S	G	2531	INFIN	-	3	N	-	M	G									
2	DRVR	22	F	W	HNBD		PROC ST	S	A	0100	TOYOT	1997	-	3	A	22350	-	M	G							
Primary Rd RT 1 Distance (ft) 50 Direction S Secondary Rd MARVISTA AV NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.41 Side of Hwy N City Seal Beach County Orange Population 4 Rpt Dist 6 Beat 007 Type 0 CalTrans 12 Badge 174 Collision Date 20160828 Time 1800 Day SUN Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170121 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev Loc Type H Ramp/Int -																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	F	W	HNBD		CHANG LN	N	A	0000	KIA	2009	-	-	N	-	G	-								
2	DRVR	19	M	B	HNBD		PROC ST	N	A	0000	FORD	2010	-	-	N	-	G	-	PASS		27	M	4	0	G	-
																			PASS		28	M	6	0	G	-
Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd PACIFIC COAST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 31.28 Side of Hwy N City Seal Beach County Orange Population 4 Rpt Dist Beat 206 Type 0 CalTrans 12 Badge 368 Collision Date 20160309 Time 1818 Day WED Primary Collision Factor PED VIOL Violation 21954A Collision Type AUTO/PED Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170211 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With PED Lighting DARK - ST Ped Action NOT IN X- Cntrl Dev NT PRS/FCTR Loc Type H Ramp/Int -																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	PED	38	F	W	HBD-UNK		OTHER	E	N	6000	-	-	3	-	-	-	-									
2	DRVR	60	F	W	HNBD		PROC ST	N	A	0100	MERCE	2009	-	3	-	-	M	G								
Primary Rd RT 1 Distance (ft) 827 Direction N Secondary Rd PHILLIPS ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 31.73 Side of Hwy N City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans 12 Badge 191 Collision Date 20160723 Time 0906 Day SAT Primary Collision Factor NOT DRIVER Violation Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20170223 Weather1 CLOUDY Weather2 Rdw Surface DRY Rdw Cond1 OBSTR ON RD Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type H Ramp/Int -																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	BICY	47	F	HNBD			PROC ST	N	-	0000	-	-	-	E	-	-	-	BICY	COMP PN	47	F	9	3	-	-	
Primary Rd RT 1 Distance (ft) 200 Direction E Secondary Rd PHILLIPS ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 31.53 Side of Hwy S City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans 12 Badge 298 Collision Date 20161118 Time 0555 Day FRI Primary Collision Factor NOT STATED Violation Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170215 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type H Ramp/Int -																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	39	M	H	HNBD		RAN OFF RD	E	A	0000	TOYOT	1994	-	-	N	-	G	-	PASS		33	M	3	3	G	-

Primary Rd	RT 1	Distance (ft)	1337	Direction	S	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.47	Side of Hwy	N	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	12	Badge	365	Collision Date	20160204	Time	2221	Day	THU
Primary Collision Factor	IMPROP TURN	Violation	22107	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170211					
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0									
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - NO	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H	Ramp/Int	-							

Party Info													Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	68	F	W	HNBD		CHANG LN	N	A	0000	FORD	2010	-	-	N	-	G	-									
2	DRVR	51	F	W	HBD-UI		PROC ST	N	D	0000	DODGE	1997	-	-	A	23152	-	G	-								

Primary Rd	RT 1	Distance (ft)	57	Direction	S	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.71	Side of Hwy	N	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	ROVER	Type	0	CalTrans	12	Badge	178	Collision Date	20160217	Time	1912	Day	WED
Primary Collision Factor	LANE CHANGE	Violation	21658A	Collision Type	SIDESWIPE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170211					
Weather1	RAINING	Weather2		Rdwy Surface	WET	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0									
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H	Ramp/Int	-							

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	71	M	A	HNBD		CHANG LN	N	A	0000	LEXUS	2014	-	-	N	-	G	-								
2	DRVR	51	M	W	HNBD		PROC ST	N	A	0000	CHRY	2002	-	-	N	-	G	-								

Primary Rd	RT 1	Distance (ft)	958	Direction	S	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.54	Side of Hwy	N	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	12	Badge	246	Collision Date	20160402	Time	1604	Day	SAT
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20170218					
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0									
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type	H	Ramp/Int	-							

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	16	F	W	HNBD		SLOWING	N	A	0100	VOLVO	1985	-	3	N	-	P	G	DRVR	COMP PN	16	F	1	0	P	G
2	DRVR	48	M	O	HNBD		STOPPED	N	A	0100	VOLKS	2013	-	3	N	-	M	G	PASS		45	F	3	0	M	G
																			PASS		9	F	4	0	P	G
																			PASS		11	F	5	0	P	G
																			PASS		13	F	6	0	P	G
3	DRVR	34	F	W	HNBD		STOPPED	N	A	0100	CHEVR	2012	-	3	N	-	M	G	DRVR	COMP PN	34	F	1	0	M	G
4	DRVR	37	M	A	HNBD		STOPPED	N	A	0100	VOLKS	2013	-	3	N	-	M	G								

Primary Rd	RT 1	Distance (ft)	57	Direction	E	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.7	Side of Hwy	S		
City	Seal Beach	County	Orange	Population	4	Rpt Dist	06	Beat	SOUTH	Type	0	CalTrans	12	Badge	313	Collision Date	20160507	Time	0859	Day	SAT
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	HEAD-ON	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170211						
Weather1	RAINING	Weather2		Rdwy Surface	WET	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0										
Hit and Run		Motor Vehicle Involved With	OTHER OBJ	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H	Ramp/Int	-								

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	F	H	HNBD		PROC ST	S	A	0000	FORD	1999	-	-	N	-	G	-								

Primary Rd	RT 1	Distance (ft)	183	Direction	W	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.76	Side of Hwy	S	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	361	Collision Date	20160528	Time	1302	Day	SAT
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170218					
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0									
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type	H	Ramp/Int	-							

Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F	W	HNBD		PROC ST	E	A	0000	MINI	2012	-	-	-	-	G	-								

Primary Rd SEAL BEACH BL Distance (ft) 710 Direction N Secondary Rd BOLSA AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20160329 Time 0613 Day TUE																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160412																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	F	W	HNBD		PROC ST	S	A	0700	JEEP	2005	-	3	N	-	M G	DRVR	COMP PN 33	F	1	0	M	G		
Primary Rd SEAL BEACH BL Distance (ft) 566 Direction S Secondary Rd BRADBURY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 429 Collision Date 20160228 Time 1849 Day SUN																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160412																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	76	M	W	HNBD		LFT TURN	N	A	0000	MERCE	1983	-	-	N	-	G -									
2	DRVR	32	F	W	HNBD		PROC ST	S	A	0000	BMW	2013	-	-	N	-	G -	DRVR	COMP PN 32	F	1	3	G			
3	DRVR	52	F	W	HNBD		STOPPED	E	A	0000	CHEVR	2002	-	-	N	-	G -									
Primary Rd SEAL BEACH BL Distance (ft) 1320 Direction S Secondary Rd BRADBURY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 152 Collision Date 20160928 Time 1443 Day WED																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161007																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	44	M	W	HNBD		SLOWING	S	A	0100	FORD	2012	-	3	A	22350	F M G									
2	DRVR	16	F	W	HNBD		STOPPED	S	A	0100	HONDA	2008	-	3	N	-	L G									
3	DRVR	78	M	W	HNBD		STOPPED	S	A	0800	CHRY	2001	-	3	N	-	M G									
Primary Rd SEAL BEACH BL Distance (ft) 435 Direction S Secondary Rd BRADBURY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20161219 Time 2034 Day MON																										
Primary Collision Factor R-O-W AUTO Violation 21804A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170110																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	M	H	HNBD		LFT TURN	E	A	0000	NISSA	2008	-	-	-	-	G -									
2	DRVR	18	M	W	HNBD		PROC ST	S	A	0000	HONDA	2007	-	-	-	-	L -									
Primary Rd SEAL BEACH BL Distance (ft) 120 Direction S Secondary Rd BRADBURY RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 106 Type 0 CalTrans Badge 251 Collision Date 20160622 Time 1123 Day WED																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160722																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	42	F	W	HNBD		PROC ST	S	-	0000	FORD	1998	-	-	-	-	G -									
2	DRVR	36	F	H	HNBD		RGT TURN	S	-	0000	FORD	2008	-	-	-	-	G -									
3	DRVR	27	M	H	HNBD		STOPPED	-	-	0000	BMW	2002	-	-	-	-	G -									

Include State Highways cases

Report Run On: 11/10/2017

Primary Rd SEAL BEACH BL Distance (ft) 65 Direction S Secondary Rd BRADBURY RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 191 Collision Date 20160729 Time 1737 Day FRI																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161010																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F	W			LFT TURN	N	A	0000	DODGE	2013	-	-	-	-	G	-							
2	DRVR	76	M	W			PROC ST	N	A	0000	LEXUS	2011	-	-	-	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd GOLDEN RAIN NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 362 Collision Date 20160120 Time 1352 Day WED																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160317																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	M	W	HNBD		PROC ST	-	A	0700	TOYOT	2009	-	3	N	-	M	G							
2	DRVR	998	F	W	HNBD		STOPPED	-	A	0700	JEEP	2014	-	3	N	-	M	G							
Primary Rd SEAL BEACH BL Distance (ft) 50 Direction N Secondary Rd GOLDEN RAIN NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20160715 Time 1201 Day FRI																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160930																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	48	F	B			SLOWING	S	A	0000	FORD	2001	-	-	-	-	G	-							
2	DRVR	44	M	W			STOPPED	S	A	0000	TOYOT	2008	-	-	-	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 27 Direction S Secondary Rd LAMPSON AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 141 Type 0 CalTrans Badge 251 Collision Date 20160715 Time 1424 Day FRI																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160816																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	72	M	W	HNBD		PROC ST	W	A	0000	FORD	1980	-	-	-	-	G	-							
Primary Rd SEAL BEACH BL Distance (ft) 560 Direction S Secondary Rd LANDING NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20160303 Time 1806 Day THU																									
Primary Collision Factor HAZ PARKING Violation 22515A Collision Type AUTO/PED Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160418																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With PED Lighting DUSK/DAWN Ped Action IN RD, Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	PED	53	F	W	IMP UNK	IMP UNK	STOPPED	-	-	0000	-	-	-	-	-	-	-	PED	COMP PN	54	F	9	3	-	-
2	OTHR	998	-	-			BACKING	S	B	0000	LEXUS	1994	-	-	-	-	-								

Primary Rd SEAL BEACH BL Distance (ft) 10 Direction S Secondary Rd LANDING AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 317 Collision Date 20161016 Time 1724 Day SUN																									
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	M	H	HNBD		PROC ST	S	A	0000	DODGE	2005	-	-	A	23123	-	M	-						
2	PRKD	998	-		HNBD		PARKED	W	A	0000	DODGE	1994	-	-	N		-	-							
Primary Rd SEAL BEACH BL Distance (ft) 452 Direction S Secondary Rd N GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 16-2030 Collision Date 20160927 Time 0845 Day TUE																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161007																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	65	M	W	HNBD		PROC ST	S	A	0100	TOYOT	2015	-	3	N		-	L	G						
Primary Rd SEAL BEACH BL Distance (ft) 500 Direction N Secondary Rd N GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20161206 Time 1507 Day TUE																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170110																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	51	M	W	IMP UNK	IMP UNK	PROC ST	S	A	0700	CHEVR	1999	-	3	N		-	M	G						
2	DRVR	24	F	W	HNBD		STOPPED	S	A	0100	TOYOT	2000	-	3	N		-	M	G						
3	DRVR	47	F	W	HNBD		STOPPED	S	A	0700	HONDA	2015	-	3	N		-	M	G						
Primary Rd SEAL BEACH BL Distance (ft) 55 Direction N Secondary Rd NORTH GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160304 Time 1224 Day FRI																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160315																									
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	65	F	W	HNBD		PROC ST	S	A	0100	TOYOT	2014	-	3	N		-	M	G						
2	DRVR	48	F	W	HNBD		STOPPED	S	A	0700	HYUND	2014	-	3	N		-	M	G						
Primary Rd SEAL BEACH BL Distance (ft) 545 Direction N Secondary Rd NORTH GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 432 Collision Date 20161011 Time 0628 Day TUE																									
Primary Collision Factor TOO CLOSE Violation 21703 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																									
Weather1 CLOUDY Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	24	F	W	HNBD		PROC ST	S	A	0100	BMW	2003	-	3	A	22350	-	M	G						
2	DRVR	42	F	H	HNBD		STOPPED	S	A	0100	TOYOT	2014	-	3	N		-	M	G						
3	DRVR	49	M	H	HNBD		STOPPED	S	A	0100	HONDA	2016	-	3	N		-	M	G						

Include State Highways cases

Report Run On: 11/10/2017

Primary Rd SEAL BEACH BL	Distance (ft) 300	Direction N	Secondary Rd NORTH GATE RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20161209	Time 2500	Day FRI	
Primary Collision Factor UNSAFE SPEED	Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170110				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	79	F	W	IMP UNK	IMP UNK	PROC ST	S	A	0100	NISSA	2002	- 3	N	-	-	B								
2	DRVR	62	F	W	IMP UNK	IMP UNK	STOPPED	S	A	0100	TOYOT	2014	- 3	N	-	-	B	DRVR	COMP PN 62	F	1	0	-	B	
3	DRVR	77	M	W	IMP UNK	IMP UNK	STOPPED	S	A	0100	MERCE	2011	- 3	N	-	-	B								

Primary Rd SEAL BEACH BL	Distance (ft) 300	Direction N	Secondary Rd NORTHGATE	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00N	Type 0	CalTrans	Badge 152	Collision Date 20160707	Time 1039	Day THU	
Primary Collision Factor UNSAFE SPEED	Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20161025				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	65	F	W	HNBD		SLOWING	S	A	0000	NISSA	2003	- -	F	-	G	-	DRVR	OTH VIS	65	-	1	0	L	-
2	DRVR	61	M	W	HNBD		STOPPED	S	A	0000	CADIL	2016	- -	N	-	G	-								

Primary Rd SEAL BEACH BL	Distance (ft) 325	Direction N	Secondary Rd NORTHGATE BL	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20160120	Time 1242	Day WED	
Primary Collision Factor UNSAFE SPEED	Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160317				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	39	F	W	HNBD		PROC ST	-	A	0100	HONDA	2009	- 3	N	-	M	G								
2	DRVR	54	F	W	HNBD		STOPPED	-	A	0700	CHEVR	2004	- 3	N	-	M	G								

Primary Rd SEAL BEACH BL	Distance (ft) 122	Direction S	Secondary Rd NORTHGATE RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 362	Collision Date 20160107	Time 0651	Day THU	
Primary Collision Factor UNSAFE SPEED	Violation 22350	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160324				
Weather1 CLOUDY	Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With PKD MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	M	H	HNBD		LFT TURN	-	A	0100	NISSA	2008	- 3	N	-	M	G	PASS		19	M	3	0	M	G
																		PASS		19	M	5	0	M	G
																		PASS		25	M	6	0	M	G
2	PRKD	998	-		HNBD		PARKED	S	I	2000	OTHER	2007	- 3	N	-	-	-								

Primary Rd SEAL BEACH BL	Distance (ft) 462	Direction N	Secondary Rd NORTHGATE RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 007	Type 0	CalTrans	Badge 430	Collision Date 20160116	Time 1533	Day SAT	
Primary Collision Factor UNSAFE SPEED	Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20160323				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With NON-CLSN	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int				

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	28	M	W	HNBD		PROC ST	S	C	0200	KAWA	2011	- 3	N	-	P	W	DRVR	OTH VIS	28	M	1	1	P	W
2	DRVR	57	M	H	HNBD		STOPPED	S	D	2200	CHEVR	1997	- 3	N	-	M	G	PASS		30	M	3	0	M	G

Primary Rd SEAL BEACH BL		Distance (ft) 203	Direction N	Secondary Rd NORTHGATE RD		NCIC 3020	State Hwy? Y	Route 405	Postmile Prefix -	Postmile 22.518	Side of Hwy S
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans 12	Badge 178	Collision Date 20160525	Time 2024	Day WED	
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170204			
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type R	Ramp/Int 4			

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	74	F	W	HNBD		PROC ST	S	A	0000	SUBAR	2009	-	-	N	-	G	DRVR	COMP PN	74	F	1	0	G	-
2	DRVR	42	M	H	HNBD		STOPPED	S	A	0000	JEEP	2007	-	-	N	-	G	PASS		10	F	3	0	G	-
																		PASS		13	F	4	0	G	-
																		PASS		5	M	6	0	Q	-
3	DRVR	43	M	A	HNBD		STOPPED	S	A	0000	TOYOT	2011	-	-	N	-	G								

Primary Rd SEAL BEACH BL		Distance (ft) 400	Direction S	Secondary Rd OLD RANCH		NCIC 3020	State Hwy? Y	Route 405	Postmile Prefix -	Postmile 22.386	Side of Hwy N
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00N	Type 0	CalTrans 12	Badge 152	Collision Date 20160629	Time 1109	Day WED	
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20170204			
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type R	Ramp/Int 4			

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	43	F	W	HNBD		CHANG LN	N	A	0100	TOYOT	2004	-	3	F	-	L	G	DRVR	OTH VIS	43	-	1	0	L	G
2	DRVR	39	M	W	HNBD		SLOWING	N	A	0100	TOYOT	2000	-	3	N	-	M	G	DRVR	COMP PN	39	M	1	0	M	G

Primary Rd SEAL BEACH BL		Distance (ft) 45	Direction N	Secondary Rd OLD RANCH PKWY		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00N	Type 0	CalTrans	Badge 191	Collision Date 20160118	Time 1428	Day MON	
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160317			
Weather1 CLOUDY	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int			

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	58	M	O	HNBD		PROC ST	S	A	0000	TOYOT	2000	-	-	-	-	-	-	DRVR							
2	DRVR	90	F	W	HNBD		STOPPED	S	A	0000	DODGE	2014	-	-	-	-	-	-	DRVR							

Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd OLD RANCH PKWY		NCIC 3020	State Hwy? Y	Route 405	Postmile Prefix -	Postmile 22.558	Side of Hwy N
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans 12	Badge 178	Collision Date 20160215	Time 2059	Day MON	
Primary Collision Factor R-O-W AUTO		Violation 21800D	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170211			
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT FNCT	Loc Type R	Ramp/Int 4			

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	26	F	W	HNBD		PROC ST	N	A	0000	HONDA	2013	-	-	N	-	G								
2	DRVR	24	F	W	HNBD		LFT TURN	S	A	0000	CHEVR	2014	-	-	H	-	G								

Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd OLD RANCH PKWY		NCIC 3020	State Hwy? Y	Route 405	Postmile Prefix -	Postmile 22.558	Side of Hwy N
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans 12	Badge 178	Collision Date 20161012	Time 2228	Day WED	
Primary Collision Factor R-O-W AUTO		Violation 21453C	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170227			
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0						
Hit and Run	Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type R	Ramp/Int 4			

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F	W	HNBD		LFT TURN	S	A	0000	HONDA	2016	-	-	N	-	G								
2	DRVR	23	F	W	HNBD		LFT TURN	W	A	0000	NISSA	2006	-	-	N	-	G								

Primary Rd SEAL BEACH BL Distance (ft) 120 Direction S Secondary Rd OLD RANCH PKWY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20161123 Time 1056 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20161213 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																									
1F	DRVR	78	M	H	HNBD	PROC ST	S	D	2200	FORD	1999	-	3	N	-	M	G								
2	DRVR	49	F	W	HNBD	STOPPED	S	A	0700	FORD	2008	-	3	N	-	M	G	DRVR	COMP PN 49	F	1	0	M	G	
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd OLD RANCH PKY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 365 Collision Date 20160123 Time 0234 Day SAT Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20160322 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																									
1F	DRVR	29	M	W	HNBD	PROC ST	N	A	0000	MERCE	2016	-	-	A	14601	F	G	DRVR	COMP PN 27	M	1	0	G	-	
2	DRVR	54	M	W	HNBD	PROC ST	E	A	0000	TOYOT	2014	-	-	N	-	G	-	DRVR	COMP PN 54	M	1	0	G	-	
Primary Rd SEAL BEACH BL Distance (ft) 89 Direction N Secondary Rd OLD RANCH PKY NCIC 3020 State Hwy? Y Route 405 Postmile Prefix - Postmile 22.386 Side of Hwy N City Seal Beach County Orange Population 4 Rpt Dist 17 Beat NORTH Type 0 CalTrans 12 Badge 313 Collision Date 20160501 Time 1105 Day SUN Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 3 Tow Away? Y Process Date 20170204 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type R Ramp/Int 4																									
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																									
1F	DRVR	19	F	W	HNBD	PROC ST	S	A	0000	HONDA	2008	-	-	N	-	G	-	DRVR	OTH VIS 55	F	1	0	G	-	
2	DRVR	55	F	W	HNBD	PROC ST	S	A	0000	ACURA	2003	-	-	N	-	G	-	DRVR	COMP PN 55	F	1	0	G	-	
3	DRVR	55	F	W	HNBD	STOPPED	S	A	0000	FORD	2015	-	-	N	-	G	-	PASS	COMP PN 69	F	3	0	G	-	
Primary Rd SEAL BEACH BL Distance (ft) 82 Direction N Secondary Rd OLD RANCH PKY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 431 Collision Date 20160509 Time 0624 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160719 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																									
1F	DRVR	21	F	H	HNBD	PROC ST	S	A	0000	CHRY5	2005	-	-	N	-	G	-	DRVR	OTH VIS 21	F	1	0	G	-	
2	DRVR	32	M	A	HNBD	STOPPED	S	A	0000	HONDA	2013	-	-	N	-	G	-								
Primary Rd SEAL BEACH BL Distance (ft) 220 Direction N Secondary Rd OLD RANCH PKY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 246 Collision Date 20160824 Time 0833 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161010 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																									
1F	DRVR	33	F	W	HNBD	PROC ST	S	A	0100	TOYOT	2016	-	3	N	-	L	G	DRVR	COMP PN 33	F	1	0	L	C	
2	DRVR	42	F	O	HNBD	STOPPED	N	A	0700	KIA	2011	-	3	N	-	M	G								

Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd OLD RANCH RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist NA Beat 0NA Type 0 CalTrans Badge 317 Collision Date 20160630 Time 2311 Day THU																									
Primary Collision Factor UNKNOWN Violation 21435A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160816																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	30	F	W	HNBD		PROC ST	N	A	0000	MAZDA	2012	-	F	-	-	-								
2	DRVR	22	M	W	HNBD		LFT TURN	E	A	0000	TOYOT	2013	-	N	-	-	-	PASS		22	M	3	0	G	-
Primary Rd SEAL BEACH BL Distance (ft) 379 Direction N Secondary Rd PACIFIC COAST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 300 Collision Date 20160918 Time 1523 Day SUN																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161108																									
Weather1 CLEAR Weather2 Rdwy Surface Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	M	O	HBD-UI		PROC ST	N	A	0000	HONDA	2015	-	A	23152	-	G								
Primary Rd SEAL BEACH BL Distance (ft) 245 Direction S Secondary Rd PLYMOUTH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 191 Collision Date 20160912 Time 1147 Day MON																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161007																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	F	W	HNBD		PROC ST	N	A	0000	VOLKS	2005	-	A	21703	-	B								
2	DRVR	76	M	W	HNBD		PROC ST	N	A	0000	TOYOT	2005	-	-	-	-	G								
Primary Rd SEAL BEACH BL Distance (ft) 12 Direction N Secondary Rd PLYMOUTH DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 178 Collision Date 20160518 Time 1702 Day WED																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160719																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	F	W	HNBD		PROC ST	N	A	0000	HONDA	2010	-	N	-	-	G								
2	DRVR	33	F	W	HNBD		RGT TURN	N	A	0000	KIA	2015	-	N	-	-	G								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd PLYMOUTH DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20161123 Time 0923 Day WED																									
Primary Collision Factor UNKNOWN Violation Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161207																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	87	F	W	HNBD		PROC ST	N	A	0100	PONTI	1992	-	3	N	-	M	G							
2	DRVR	46	F	W	HNBD		LFT TURN	E	A	0700	SUBAR	2016	-	3	N	-	M	G							

Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd PLYMOUTH DR	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20161129	Time 1427	Day TUE															
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161207																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	85	M	W	HNBD	PROC ST	N	A	0700	BUICK	2011	-	3	N	-	L	G								
2	DRVR	82	M	A	HNBD	PROC ST	W	A	0700	LEXUS	2000	-	3	N	-	M	G								
Primary Rd SEAL BEACH BL		Distance (ft) 40	Direction N	Secondary Rd PLYMOUTH DR	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 257	Collision Date 20161215	Time 0849	Day THU															
Primary Collision Factor R-O-W AUTO		Violation 21804A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170111																	
Weather1 CLOUDY		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	M	W	HNBD	LFT TURN	W	A	0700	TOYOT	2004	-	3	N	-	M	G	PASS		29	F	3	0	M	G
2	DRVR	53	M	W	HNBD	PROC ST	N	A	0100	NISSA	2006	-	3	N	-	M	G								
Primary Rd SEAL BEACH BL		Distance (ft) 30	Direction N	Secondary Rd RD C	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20160703	Time 1845	Day SUN															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20160816																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	50	F	B	HNBD	RGT TURN	S	A	0000	MERCE	2000	-	-	N	-	G	-								
2	DRVR	53	F	W	HNBD	PROC ST	S	A	0000	MERCE	2008	-	-	N	-	G	-								
Primary Rd SEAL BEACH BL		Distance (ft) 450	Direction S	Secondary Rd ROAD C	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00S	Type 0	CalTrans	Badge 191	Collision Date 20160912	Time 1703	Day MON															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161007																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																		
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F		HNBD	PROC ST	N	A	0000	HYUND	2014	-	-	A	21658	-	G	-							
2	DRVR	60	M		HNBD	PROC ST	N	A	0000	HONDA	2012	-	-	-	-	G	-								
Primary Rd SEAL BEACH BL		Distance (ft) 126	Direction S	Secondary Rd RT 1	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 32.721	Side of Hwy S															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat PATRO	Type 0	CalTrans	Badge 314	Collision Date 20160327	Time 0233	Day SUN															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170211																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0	Hit and Run																		
Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type I	Ramp/Int 6																		
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	30	M	H	HBD-UI	PROC ST	S	A	0000	FIAT	2012	-	-	-	-	G	-								
2	DRVR	21	M	W		PROC ST	S	A	0000	TOYOT	2006	-	-	-	-	G	-								
3	PRKD	998	-		null		S	-	0000	DODGE	2009	-	-	-	-	-	-								
4	PRKD	998	-		null		S	-	0000	LINCO	2003	-	-	-	-	-	-								
5	PRKD	998	-		null		S	-	0000	JEEP	2014	-	-	-	-	-	-								

Primary Rd SEAL BEACH BL		Distance (ft) 350	Direction N	Secondary Rd RT 1	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00S	Type 0	CalTrans	Badge 152	Collision Date 20160614	Time 1412	Day TUE																
Primary Collision Factor NOT DRIVER		Violation	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 3	Tow Away? Y	Process Date 20160829																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																		
Party Info										Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	76	M	W	HNBD		PROC ST	S	A	0000	CHEVR	2002	-	-	N	-	G	-	DRVR	OTH VIS	77	M	1	0	G	-
2	DRVR	26	F	W	HNBD		STOPPED	S	A	0000	FORD	2008	-	-	N	-	G	-	DRVR	COMP PN 26	F	1	0	G	-	
																			PASS	COMP PN 998	-	3	0	G	-	
3	DRVR	38	F	W	HNBD		STOPPED	S	A	0000	MAZDA	2010	-	-	N	-	G	-								
4	DRVR	60	F	W	HNBD		STOPPED	S	A	0000	DODGE	2006	-	-	N	-	G	-								
Primary Rd SEAL BEACH BL		Distance (ft) 87	Direction N	Secondary Rd RT 1	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 32.721	Side of Hwy N																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 246	Collision Date 20160814	Time 1732	Day SUN																
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170121																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type I	Ramp/Int 6																		
Party Info										Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	W	HBD-UI		PROC ST	S	A	0700	GMC	2012	-	3	A	23152	-	M	-	PASS	25	M	3	0	M	G
2	DRVR	42	F	A	HNBD		PROC ST	S	A	0700	TOYOT	2015	-	3	N	-	M	G	PASS	43	M	3	0	M	G	
																			PASS	11	F	4	0	M	G	
																			PASS	10	F	5	0	M	G	
																			PASS	35	F	6	0	M	G	
Primary Rd SEAL BEACH BL		Distance (ft) 48	Direction N	Secondary Rd RT 1	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 32.721	Side of Hwy N																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 246	Collision Date 20160830	Time 1251	Day TUE																
Primary Collision Factor TOO CLOSE		Violation 21703	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170121																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type I	Ramp/Int 6																		
Party Info										Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	77	F	H	HNBD		PROC ST	S	A	0800	HONDA	2012	-	3	N	-	M	G	PASS	10	M	9	0	P	Q	
																			PASS	8	M	9	0	P	Q	
2	DRVR	26	F	A	HNBD		STOPPED	S	A	0100	ACURA	2014	-	3	N	-	M	G	PASS	3	M	6	0	P	Q	
Primary Rd SEAL BEACH BL		Distance (ft) 107	Direction N	Secondary Rd RT 1	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 32.721	Side of Hwy N																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans 12	Badge 246	Collision Date 20161130	Time 1047	Day WED																
Primary Collision Factor NOT DRIVER		Violation	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 4	Tow Away? Y	Process Date 20170215																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type I	Ramp/Int 6																		
Party Info										Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	60	F	W	IMP UNK	IMP UNK	PROC ST	S	A	0700	FORD	2011	-	3	N	-	L	G	DRVR	COMP PN 60	F	1	0	L	G	
2	DRVR	32	F	O	HNBD		STOPPED	S	A	0100	HONDA	2009	-	3	N	-	L	G	DRVR	COMP PN 32	M	1	0	L	G	
3	DRVR	60	M	W	HNBD		STOPPED	S	A	0700	JEEP	2012	-	3	N	-	M	G	DRVR	COMP PN 60	M	1	0	M	G	
4	DRVR	60	M	W	HNBD		SLOWING	S	A	0100	HONDA	2014	-	3	N	-	M	G	DRVR	COMP PN 60	M	1	0	M	G	

Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd RT 405	NCIC 3020	State Hwy? Y	Route 405	Postmile Prefix -	Postmile 22.558	Side of Hwy N																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 006	Type 0	CalTrans 12	Badge 368	Collision Date 20160424	Time 2121	Day SUN																
Primary Collision Factor UNKNOWN		Violation	Collision Type OVERTURNED	Severity FATAL	#Killed 1	#Injured 0	Tow Away? Y	Process Date 20160729																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With NON-CLSN			Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type R	Ramp/Int 4																	
Party Info										Victim Info																
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1	DRVR	62	M	W	IMP UNK	IMP UNK	PROC ST	N	C	0200	HARLE	2012	-	-	L	-	P	W	DRVR	KILLED	62	M	1	1	P	W
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd RT 405	NCIC 3020	State Hwy? Y	Route 405	Postmile Prefix -	Postmile 22.558	Side of Hwy N																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00N	Type 0	CalTrans 12	Badge 191	Collision Date 20160731	Time 1245	Day SUN																
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170223																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV			Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type R	Ramp/Int 4																	
Party Info										Victim Info																
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	998	-	IMP UNK	IMP UNK	LFT TURN	-	A	0000	-	-	-	A	20002	-	-	-	-	-	-	-	-	-	-	-	
2	DRVR	21	F	W	HNBD	PROC ST	N	A	0000	TOYOT	2012	-	-	-	-	G	-	-	-	-	-	-	-	-		
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd RT 405	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 368	Collision Date 20160922	Time 0357	Day THU																
Primary Collision Factor UNKNOWN		Violation	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20161007																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV			Lighting DARK - ST	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																	
Party Info										Victim Info																
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1	DRVR	55	M	W	HNBD	PROC ST	N	A	0100	NISSA	2008	-	3	-	-	L	G	DRVR	COMP PN	55	M	1	0	L	G	
2	DRVR	52	M	W	HNBD	LFT TURN	W	A	0100	FORD	2016	-	3	-	-	L	G	DRVR	COMP PN	52	M	1	0	L	G	
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd SAINT ANDREWS	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 423	Collision Date 20161211	Time 1447	Day SUN																
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away?	Process Date 20170110																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER MV			Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																	
Party Info										Victim Info																
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	46	M	A	HNBD	PROC ST	S	A	0000	HONDA	2007	-	-	N	-	G	-	PASS	10	M	6	0	G	-		
2	DRVR	54	M	O	HNBD	LFT TURN	E	A	0000	TOYOT	2007	-	-	N	-	G	-	PASS	75	M	3	0	G	-		
Primary Rd SEAL BEACH BL		Distance (ft) 207	Direction S	Secondary Rd SAINT ANDREWS	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat ROVER	Type 0	CalTrans	Badge 178	Collision Date 20160322	Time 2002	Day TUE																
Primary Collision Factor OTHER EQPMNT		Violation 24002A	Collision Type OTHER	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160413																		
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																					
Hit and Run		Motor Vehicle Involved With OTHER OBJ			Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info										Victim Info																
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	50	M	W	HNBD	PROC ST	S	A	0000	CHEVR	2001	-	-	N	-	G	-	-	-	-	-	-	-	-		
2	DRVR	58	M	W	HNBD	PROC ST	S	D	0000	NISSA	2015	-	-	N	-	G	-	-	-	-	-	-	-	-		

Primary Rd SEAL BEACH BL		Distance (ft) 60	Direction E	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 32.71	Side of Hwy S														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans 12	Badge 298	Collision Date 20161104	Time 0917	Day FRI															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type HIT OBJECT	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170304																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type H	Ramp/Int -																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	67	M	W	HNBD	LFT TURN	S	C	0200	HARLE	2017	-	3	N	-	M	W	DRVR	COMP PN	67	M	1	0	W	-
Primary Rd SEAL BEACH BL		Distance (ft) 342	Direction N	Secondary Rd TOWN CENTER DR		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00N	Type 0	CalTrans	Badge 152	Collision Date 20160921	Time 1241	Day WED															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20161007																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	90	M	W	HNBD	LFT TURN	S	-	0000	ACURA	2007	A	-	F	-	L	-	DRVR	OTH VIS	90	-	1	0	L	-
2	DRVR	90	M	W	HNBD	PROC ST	S	-	0000	VOLKS	1996	A	-	N	-	L	-	DRVR	OTH VIS	90	-	1	0	L	-
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd TOWNE CENTER		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 257	Collision Date 20160409	Time 2024	Day SAT															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20160531																	
Weather1 CLOUDY	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DARK - NO	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	92	M	W	HBD-NUI	LFT TURN	W	A	0100	HONDA	2008	-	3	A	21461	-	M	B							
2	DRVR	35	F	O	HNBD	LFT TURN	W	D	2200	FORD	2014	-	3	N	-	M	G								
Primary Rd SEAL BEACH BL		Distance (ft) 145	Direction S	Secondary Rd TOWNE CENTER		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 19	Beat 006	Type 0	CalTrans	Badge 174	Collision Date 20161104	Time 1942	Day FRI															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20161208																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DUSK/DAWN	Ped Action	Cntrl Dev FNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	52	M	W	HBD-UI	PROC ST	S	A	0000	SUBAR	2014	-	-	F	-	L	-								
2	DRVR	39	M	W	HNBD	STOPPED	S	A	0000	TOYOT	2006	-	-	N	-	G	-	PASS		11	F	9	0	G	-
3	DRVR	48	F	W	HNBD	STOPPED	S	A	0000	TOYOT	2014	-	-	N	-	G	-	DRVR	COMP PN	48	F	1	0	G	-
																		PASS		82	F	3	0	G	-
																		PASS		14	F	4	0	G	-
																		PASS		93	F	6	0	G	-
																		PASS		14	M	7	0	G	-
4	DRVR	45	F	W	HNBD	STOPPED	S	A	0000	INFIN	2013	-	-	N	-	G	-	PASS		9	M	4	0	G	-

Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd TOWNE CENTER NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160310 Time 1545 Day THU																									
Primary Collision Factor UNKNOWN Violation Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160413																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	86	F	W		PHYS	PROC ST	S	A	0100	TOYOT	2001	- 3	N	-	M	G								
2	DRVR	42	F	W	HNBD		PROC ST	E	A	0700	CHEVR	2007	- 3	N	-	M	G	PASS		8	F	4	0	P	Q
																		PASS		6	F	0	0	P	Q
Primary Rd SEAL BEACH BL Distance (ft) 86 Direction S Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 365 Collision Date 20160304 Time 2110 Day FRI																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160317																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	52	F	W	HNBD		PROC ST	N	A	0000	MAZDA	2007	- -	N	-	-	G	DRVR	COMP PN	52	F	1	0	-	G
Primary Rd SEAL BEACH BL Distance (ft) 235 Direction S Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20160305 Time 1340 Day SAT																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160315																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	71	M	W	HNBD		PROC ST	S	A	0100	TOYOT	1995	- 3	N	-	M	G								
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160725 Time 1340 Day MON																									
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20160822																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	65	F	W		DRUG	PROC ST	E	A	0700	HONDA	2003	- 3	A	22350	-	M	G							
2	DRVR	43	F	W	HNBD		STOPPED	-	A	0100	TOYOT	2014	- 3	N	-	M	G								
3	DRVR	61	M	W	HNBD		STOPPED	-	D	2200	CHEVR	2004	- 3	N	-	M	G	PASS		25	M	3	0	M	G
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20160829 Time 0827 Day MON																									
Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161012																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	F	A	HNBD		PROC ST	W	A	0100	TOYOT	2003	- 3	N	-	M	G								
2	DRVR	28	M	W	HNBD		PROC ST	S	I	1100	FORD	2010	- 3	N	-	M	G								

Primary Rd SEAL BEACH BL Distance (ft) 158 Direction S Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20161121 Time 0832 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208 Weather1 CLOUDY Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 33 M H HNBD PROC ST S D 2200 TOYOT 1994 - 3 N - P G 2 DRVR 22 F W HNBD PROC ST S A 0100 SUBAR 2014 - 3 N - M G													
Primary Rd SEAL BEACH BL Distance (ft) 170 Direction N Secondary Rd WESTMINSTER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20161223 Time 1009 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170110 Weather1 CLOUDY Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 22 M W HNBD PROC ST N A 0000 PORSC 2001 - - K - G -													
Primary Rd THUNDERBIRD DR Distance (ft) 0 Direction Secondary Rd THUNDERBIRD DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20161227 Time 1258 Day TUE Primary Collision Factor DRVR ALC DRG Violation 23152E Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170317 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int													
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 66 M W DRUG OTHER S A 0100 HYUND 2014 - 3 N - M B													
Primary Rd WESTMINSTER Distance (ft) 388 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist 3020 Beat NORTH Type 0 CalTrans Badge 429 Collision Date 20160117 Time 1755 Day SUN Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160317 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 74 F H HNBD LFT TURN E A 0100 HONDA 2006 - 3 N - L G 2 DRVR 21 M W HBD-NUI PROC ST W A 0100 MAZDA 2012 - 3 N - L G PASS 22 M 6 0 P G PASS 22 M 4 0 P G PASS 25 M 3 0 L G													
Primary Rd WESTMINSTER AV Distance (ft) 4593 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 106 Type 0 CalTrans Badge 251 Collision Date 20160519 Time 1147 Day THU Primary Collision Factor NOT DRIVER Violation Collision Type OTHER Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160719 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With NON-CLSN Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1 DRVR 56 M W HNBD PROC ST E C 0000 OTHER 1999 - - - - W - DRVR OTH VIS 56 M 1 1 W -													

Primary Rd WESTMINSTER AV Distance (ft) 1285 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20160616 Time 1816 Day THU Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160720 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																								
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																								
1F	DRVR	22	F	H	HNBD	PROC ST	E	-	0000	TOYOT	2000	-	-	N	-	L	-	PASS	20	F	3	0	G	-
2	DRVR	38	M	H	HNBD	STOPPED	E	-	0000	NISSA	2006	-	-	N	-	G	-	PASS	4	F	4	0	Q	-
																		PASS	7	F	5	0	G	-
																		PASS	1	F	6	0	Q	-
3	DRVR	26	M	W	HNBD	STOPPED	E	-	0000	TOYOT	2016	-	-	N	-	G	-							
4	DRVR	35	M	W	HNBD	PROC ST	E	-	0000	MERCE	2005	-	-	N	-	G	-							
Primary Rd WESTMINSTER AV Distance (ft) 2289 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 304 Collision Date 20160721 Time 1510 Day THU Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161010 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																								
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																								
1F	DRVR	58	F	W	HNBD	CHANG LN	E	A	0000	SMART	2010	-	-	-	-	M	-							
2	DRVR	37	M	W	HNBD	PROC ST	E	A	0000	HONDA	2004	-	-	A	22350	-	M	-						
Primary Rd WESTMINSTER AV Distance (ft) 203 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20160820 Time 1113 Day SAT Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HEAD-ON Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161129 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																								
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																								
1F	DRVR	34	M	W	IMP UNK	IMP UNK RAN OFF RD	E	A	0000	JEEP	1997	-	-	-	-	G	-							
2	DRVR	49	M	H		null	E	-	0000	GMC	2015	-	-	-	-	G	-							
Primary Rd WESTMINSTER AV Distance (ft) 3615 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist 14 Beat 007 Type 0 CalTrans Badge 174 Collision Date 20160820 Time 1738 Day SAT Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20161010 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																								
Party Info Victim Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected																								
1F	DRVR	19	M	H	HNBD	SLOWING	E	A	0000	TOYOT	2005	-	-	N	-	G	-							
2	DRVR	69	M	W	HNBD	SLOWING	E	A	0000	CHRY	2016	-	-	N	-	G	-	PASS	35	F	6	0	G	-
																		PASS	31	M	3	0	G	-
																		PASS	55	F	4	0	G	-

Primary Rd WESTMINSTER AV Distance (ft) 580 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20161003 Time 0801 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161207 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	F	B	HNBD		SLOWING	E	A	0700	LEXUS	1999	- 3	N	-	M	G								
2	DRVR	55	F	W	HNBD		STOPPED	E	A	0700	BMW	2011	- 3	N	-	M	G	DRVR	COMP PN 55	F	1	0	M	G	
Primary Rd WESTMINSTER AV Distance (ft) 1014 Direction W Secondary Rd BOLSA CHICA RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 432 Collision Date 20161012 Time 0725 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20161208 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	28	M	W	HNBD		PROC ST	W	A	0700	JEEP	2004	- 3	N	-	M	G								
2	DRVR	58	F	W	HNBD		PROC ST	W	A	0100	SUBAR	2011	- 3	N	-	M	G								
Primary Rd WESTMINSTER AV Distance (ft) 52 Direction W Secondary Rd EDISON POLE NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 368 Collision Date 20161203 Time 2301 Day SAT Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170110 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	M	W	HNBD		PROC ST	E	A	0100	TOYOT	2006	- - -	-	-	M	G								
2	DRVR	28	M	H	HNBD		PROC ST	E	A	0100	HONDA	2010	- - -	-	-	M	G	PASS		30	F	3	0	M	G
Primary Rd WESTMINSTER AV Distance (ft) 222 Direction W Secondary Rd KITTS NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat PATRO Type 0 CalTrans Badge 314 Collision Date 20160524 Time 1817 Day TUE Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20160719 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	O	HNBD		PROC ST	W	A	0000	FORD	2002	- - -	N	-	G	-	DRVR	COMP PN 21	M	1	0	G	-	
2	DRVR	33	M	O	HNBD		STOPPED	W	A	0000	HONDA	2006	- - -	N	-	G	-	DRVR	COMP PN 33	M	1	0	G	-	
3	DRVR	26	M	O	HNBD		STOPPED	W	A	0000	HONDA	2015	- - -	N	-	G	-								
Primary Rd WESTMINSTER AV Distance (ft) 233 Direction W Secondary Rd KITTS HWY NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist 11 Beat SOUTH Type 0 CalTrans Badge 313 Collision Date 20160502 Time 1159 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160719 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info															Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	90	M	W	HNBD		PROC ST	E	A	0000	LINCO	2012	- - -	F	-	G	-	DRVR	OTH VIS	90	M	1	0	G	-
2	DRVR	22	M	H	HNBD		STOPPED	E	A	0000	TOYOT	2003	- - -	N	-	G	-								

Primary Rd	WESTMINSTER AV	Distance (ft)	0	Direction		Secondary Rd	KITTS RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 141	Type	0	CalTrans		Badge	251	Collision Date	20160713	Time	1619	Day	WED
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160816		
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run					Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int		

Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	M	W	HNBD		PROC ST	W	A	0000	FORD	2001	-	-	G	-	G	-								
2	DRVR	43	M	O	HNBD		STOPPED	W	A	0000	VOLKS	2015	-	-	-	-	G	-								
3	DRVR	38	F	W	HNBD		STOPPED	W	A	0000	FORD	2016	-	-	-	-	G	-								

Primary Rd	WESTMINSTER AV	Distance (ft)	108	Direction	W	Secondary Rd	KITTS RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat SOUTH	Type	0	CalTrans		Badge	246	Collision Date	20160714	Time	1416	Day	THU
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20160816		
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run					Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int		

Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	O	HNBD		PROC ST	E	A	0000	TOYOT	2005	-	-	N	-	L	-								
2	DRVR	82	M	W	HNBD		SLOWING	E	A	0000	HYUND	2016	-	-	N	-	M	-	DRVR	COMP PN 82	M	1	0	M	-	
																		PASS	COMP PN 66	F	3	0	M	-		

Primary Rd	WESTMINSTER AV	Distance (ft)	70	Direction	W	Secondary Rd	KITTS RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans		Badge	361	Collision Date	20160910	Time	1708	Day	SAT
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	N	Process Date	20161007		
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run					Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int		

Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	63	F	W	HNBD		PROC ST	E	-	0000	TOYOT	2011	A	-	-	-	G	-								
2	DRVR	23	M	W	HNBD		STOPPED	E	-	0000	FORD	2002	A	-	-	-	G	-	DRVR	COMP PN 24	M	1	0	G	-	
																		PASS	COMP PN 14	M	3	0	G	-		
3	DRVR	26	M	W	HNBD		STOPPED	W	-	0000	NISSA	2006	A	-	-	-	G	-								

Primary Rd	WESTMINSTER AV	Distance (ft)	25	Direction	W	Secondary Rd	KITTS RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 00S	Type	0	CalTrans		Badge	152	Collision Date	20160921	Time	0957	Day	WED
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20161007		
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run					Motor Vehicle Involved With	OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int		

Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	45	M	W	HNBD		PROC ST	E	-	0000	TOYOT	2008	A	-	A	23123	-	L	-							
2	DRVR	43	M	W	HNBD		STOPPED	E	-	0000	TOYOT	2014	A	-	F	-	G	-	DRVR	COMP PN 43	-	1	0	G	-	

Primary Rd	WESTMINSTER AV	Distance (ft)	700	Direction	E	Secondary Rd	ROAD B	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat ROVER	Type	0	CalTrans		Badge	178	Collision Date	20160308	Time	1810	Day	TUE
Primary Collision Factor	R-O-W AUTO		Violation	21801A	Collision Type	BROADSIDE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20160412		
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0					
Hit and Run					Motor Vehicle Involved With	OTHER MV		Lighting	DARK - ST		Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int		

Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	86	M	W	HNBD		LFT TURN	N	A	0000	HONDA	2008	-	-	N	-	-	L	-							

2	DRVR	50	F	A	HNBD	PROC ST	E	A	0000	SATUR	2004	-	-	N	-	-	L	DRVR	COMP PN	50	F	1	0	-	G	
Primary Rd WESTMINSTER AV Distance (ft) 500 Direction E Secondary Rd ROAD B NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20161104 Time 0936 Day FRI Primary Collision Factor NOT STATED Violation Collision Type OVERTURNED Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20161212 Weather1 CLEAR Weather2 Rdw Surface Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With NON-CLSN Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	BICY	70	M	W	HNBD		PROC ST	W	L	0400	-	-	-	-	-	-	-	BICY	COMP PN	70	M	9	0	-	W	
Primary Rd WESTMINSTER AV Distance (ft) 368 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist 11 Beat ROVER Type 0 CalTrans Badge 368 Collision Date 20160226 Time 1758 Day FRI Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? N Process Date 20160315 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	92	M	W	HNBD		LFT TURN	E	M	9500	OTHER	2015	-	3	-	-	M	B	DRVR	OTH VIS	92	M	1	0	M	B
2	DRVR	41	M	W	HNBD		PROC ST	W	A	0100	CHEVR	2006	-	3	-	-	M	G	PASS	OTH VIS	63	F	3	0	M	B
Primary Rd WESTMINSTER AV Distance (ft) 776 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160301 Time 1537 Day TUE Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160323 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	67	M	W	HBD-NUI		PARKING	N	D	2200	CHEVR	2003	-	3	N	-	M	G	DRVR	OTH VIS	67	M	1	0	M	G
2	PRKD	998	-	-	HNBD		PARKED	N	A	0800	TOYOT	2004	-	3	N	-	-	-								
3	DRVR	33	M	W	HNBD		PROC ST	-	A	0100	NISSA	2001	-	3	N	-	L	G								
Primary Rd WESTMINSTER AV Distance (ft) 500 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 317 Collision Date 20160406 Time 0655 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160531 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	F	W	HNBD		PROC ST	W	A	0000	HYUND	2004	-	-	N	-	G	-								
2	DRVR	40	F	W	HNBD		STOPPED	W	A	0000	AUDI	2015	-	-	N	-	G	-	PASS		8	M	3	0	G	-
																			PASS		14	F	9	3	-	-
Primary Rd WESTMINSTER AV Distance (ft) 43 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 431 Collision Date 20160706 Time 1607 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20160816 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	F	H	HNBD		STOPPED	E	D	0000	CHEVR	2001	-	-	N	-	G	-								
2	DRVR	49	F	A	HNBD		STOPPED	E	A	0000	AUDI	2003	-	-	N	-	G	-	DRVR	COMP PN	49	F	1	0	G	-

Primary Rd WESTMINSTER AV		Distance (ft) 353	Direction E	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20160727	Time 1555	Day WED																
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20160819																		
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	M	W	HNBD		PROC ST	W	A	0800	NISSA	2015	- 3	N	-	M	G									
2	DRVR	70	M	W	HNBD		STOPPED	W	A	0100	MERCE	2001	- 3	N	-	M	G	DRVR	COMP PN 70	M	1	0	M	G		
3	DRVR	32	F	H	HNBD		STOPPED	W	D	2200	FORD	1997	- 3	N	-	M	G	PASS		37	F	3	0	M	G	
Primary Rd WESTMINSTER AV		Distance (ft) 956	Direction W	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 361	Collision Date 20160826	Time 1005	Day FRI																
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20161013																		
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	83	F	A	HNBD		RGT TURN	S	A	0000	FORD	1998	- -	-	-	G	-									
2	DRVR	45	M	W	HNBD		PROC ST	E	A	0000	HONDA	1997	- -	-	-	G	-									
Primary Rd WESTMINSTER AV		Distance (ft) 255	Direction W	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20160926	Time 0713	Day MON																
Primary Collision Factor R-O-W AUTO		Violation 21804A	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20161011																		
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	F	W	HNBD		RGT TURN	N	A	0700	JEEP	2015	- 3	N	-	M	G									
2	DRVR	56	M	W	HNBD		PROC ST	E	I	1100	FORD	2013	- 3	N	-	M	G									
Primary Rd WESTMINSTER AV		Distance (ft) 680	Direction E	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 432	Collision Date 20161017	Time 0743	Day MON																
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20161223																		
Weather1 RAINING		Weather2		Rdwy Surface WET		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DUSK/DAWN	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	W	HNBD		PROC ST	W	J	4800	NISSA	2015	- 3	N	-	M	G									
2	DRVR	39	M	A	HNBD		STOPPED	E	A	0100	MAZDA	2005	- 3	N	-	M	G									
Primary Rd WESTMINSTER AV		Distance (ft) 400	Direction W	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 361	Collision Date 20161216	Time 1600	Day FRI																
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170110																		
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	86	F	W	HNBD		LFT TURN	N	A	0000	HYUND	2013	- -	-	-	G										
2	DRVR	46	M	W	HBD-UI		PROC ST	W	D	0000	TOYOT	2006	- -	A	23152	-	G	DRVR	COMP PN 46	M	2	3	-	G		

Primary Rd WESTMINSTER AV		Distance (ft) 0	Direction	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 241	Type 0	CalTrans	Badge 368	Collision Date 20161216	Time 2108	Day FRI															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 5	Tow Away? Y	Process Date 20170322																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	24	M	W	HBD-UI	PROC ST	W	A	0100	VOLVO	1998	-	A	21453	-	M	G	DRVR	OTH VIS	38	M	1	0	L	G
2	DRVR	38	M	W	HNBD	PROC ST	N	A	0100	BMW	2003	-	-	-	-	L	G	DRVR	COMP PN	54	F	1	0	L	G
3	DRVR	54	F	W	HNBD	PROC ST	S	A	0100	JEEP	2014	-	-	-	-	L	G	PASS	COMP PN	13	F	4	0	L	G
4	DRVR	16	F	W	HNBD	PROC ST	S	A	0100	JEEP	2014	-	-	-	-	L	G	PASS	COMP PN	13	F	6	0	L	G
																		DRVR	COMP PN	16	F	1	0	L	G
Primary Rd WESTMINSTER AV		Distance (ft) 955	Direction W	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist 10	Beat 241	Type 0	CalTrans	Badge 368	Collision Date 20161222	Time 1841	Day THU															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170111																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	43	F	A	HNBD	LFT TURN	N	A	0100	FORD	2005	-	3	-	-	L	G								
2	DRVR	78	M	W	HNBD	PROC ST	E	A	0100	LEXUS	2014	-	3	-	-	L	G								
Primary Rd WESTMINSTER BL		Distance (ft) 7920	Direction E	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 236	Collision Date 20161108	Time 1714	Day TUE															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20161213																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info											Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	78	M	A	HNBD	STOPPED	W	-	0000	HONDA	2000	-	N	-	-	M	G								
2	DRVR	38	F	W	HNBD	STOPPED	W	-	0000	HONDA	2004	-	N	-	-	M	-	DRVR	COMP PN	38	F	1	0	-	M



REPORT 8 - TOTAL COLLISIONS

01/01/2017 thru 11/01/2017

Total Count: 111

Jurisdiction(s): Seal Beach

Include State Highways cases

Report Run On: 11/10/2017

Primary Rd 10TH ST ALY		Distance (ft)	1320	Direction	N	Secondary Rd OCEAN		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	00S	Type	0	CalTrans	Badge	152	Collision Date	20170831	Time	0915	Day	THU							
Primary Collision Factor		NOT STATED		Violation	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20171011									
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	56	M	W	HNBD		PROC ST	N	D	0000	FREIG	2013	-	-	F	-	G	-	-	-	-	-	-	-	-	-
2	PRKD	998	-	-	-		PARKED	-	A	0000	JEEP	2017	-	-	N	-	-	-	-	-	-	-	-	-	-	-
Primary Rd 12TH ST		Distance (ft)	100	Direction	S	Secondary Rd SEAL WY		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	361	Collision Date	20170806	Time	1850	Day	SUN								
Primary Collision Factor		DRVR ALC DRG		Violation	Collision Type		HEAD-ON		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20171011									
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	F	H	HBD-UI		PROC ST	-	A	0000	TOYOT	2007	-	-	-	-	-	-	-	-	-	-	-	-	-	
Primary Rd 1ST ST		Distance (ft)	425	Direction	N	Secondary Rd MARINA DR		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	365	Collision Date	20170920	Time	1456	Day	WED							
Primary Collision Factor		UNSAFE SPEED		Violation	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20171024									
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	63	F	W	HBD-NUI		PROC ST	N	A	0000	VOLKS	2004	-	-	N	-	G	-	-	-	-	-	-	-	-	
2	PRKD	998	-	-	-		PARKED	-	D	0000	FORD	2002	-	-	N	-	-	-	-	-	-	-	-	-	-	
Primary Rd 5TH ST		Distance (ft)	19	Direction	N	Secondary Rd OCEAN AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy											
City	Seal Beach	County	Orange	Population	4	Rpt Dist	03	Beat	SOUTH	Type	0	CalTrans	Badge	313	Collision Date	20170805	Time	2308	Day	SAT						
Primary Collision Factor		STRTNG BCKNG		Violation	Collision Type		SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20170913									
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	26	M	B	HNBD		BACKING	N	A	0000	MERCE	2017	-	-	N	-	G	-	-	-	-	-	-	-	-	
2	PRKD	998	-	-	HNBD		PARKED	-	A	0000	AUDI	2013	-	-	N	-	-	-	-	-	-	-	-	-	-	
3	PRKD	998	-	-	-	null	-	-	-	0000	DODGE	2008	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	PRKD	998	-	-	-	null	-	-	-	0000	TOYOT	2007	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	PRKD	998	-	-	-	null	-	-	-	0000	TOYOT	2007	-	-	-	-	-	-	-	-	-	-	-	-	-	

Include State Highways cases

Primary Rd ADOLFO LOPEZ Distance (ft) 1200 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20170303 Time 1533 Day FRI													
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170316													
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run MSDMNR Motor Vehicle Involved With PKD MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip													
1F DRVR 43 M H HNBD U-TURN W - 0000 FREIG 2015 - - N - - G -													
2 PRKD 998 - PARKED E - 0000 SUBAR 1999 A - N - - - -													
Victim Info													
ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 43 M H HNBD U-TURN W - 0000 FREIG 2015 - - N - - G -													
2 PRKD 998 - PARKED E - 0000 SUBAR 1999 A - N - - - -													
Primary Rd ANCHOR WY Distance (ft) 33 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat 207 Type 0 CalTrans Badge 368 Collision Date 20170203 Time 2355 Day FRI													
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type HEAD-ON Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170315													
Weather1 CLOUDY Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip													
1F DRVR 23 M H HBD-UI RGT TURN E A 0000 NISSA 2015 - - A 22350 - G -													
Victim Info													
ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 23 M H HBD-UI RGT TURN E A 0000 NISSA 2015 - - A 22350 - G -													
Primary Rd BIRCHWOOD Distance (ft) 137 Direction E Secondary Rd SOUTHERN NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist 20 Beat 006 Type 0 CalTrans Badge 174 Collision Date 20170804 Time 1755 Day FRI													
Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170911													
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip													
1F DRVR 19 F W HNBD U-TURN N A 0000 ACURA 2005 - - N - - G -													
2 DRVR 27 M W HNBD PROC ST W A 0000 OLDSM 2002 - - N - - G -													
Victim Info													
ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 19 F W HNBD U-TURN N A 0000 ACURA 2005 - - N - - G -													
2 DRVR 27 M W HNBD PROC ST W A 0000 OLDSM 2002 - - N - - G -													
Primary Rd CENTRAL AV Distance (ft) 34 Direction E Secondary Rd 7TH ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 313 Collision Date 20170522 Time 1257 Day MON													
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type OTHER Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170712													
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip													
1F DRVR 79 M W HNBD BACKING W A 0000 FERRA 2016 - - N - - G -													
2 DRVR 40 M W HNBD STOPPED W A 0000 NISSA 2009 - - N - - G -													
Victim Info													
ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 79 M W HNBD BACKING W A 0000 FERRA 2016 - - N - - G -													
2 DRVR 40 M W HNBD STOPPED W A 0000 NISSA 2009 - - N - - G -													
Primary Rd CENTRAL AV Distance (ft) 34 Direction W Secondary Rd MAIN ST NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy													
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 300 Collision Date 20170406 Time 1358 Day THU													
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type OTHER Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170612													
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0													
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev Loc Type Ramp/Int													
Party Info													
Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip													
1F DRVR 28 F O HNBD BACKING W A 0000 VOLKS 2016 - - N - - G -													
2 DRVR 68 M O HNBD SLOWING E A 0000 JEEP 2013 - - N - - - -													
Victim Info													
ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
1F DRVR 28 F O HNBD BACKING W A 0000 VOLKS 2016 - - N - - G -													
2 DRVR 68 M O HNBD SLOWING E A 0000 JEEP 2013 - - N - - - -													

Primary Rd LAMPSON AV Distance (ft) 135 Direction E Secondary Rd BASSWOOD ST NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20170613 Time 1726 Day TUE																										
Primary Collision Factor UNKNOWN Violation Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170711																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	21	M	W	HNBD		PROC ST	E	A	0000	GMC	2011	-	-	N	-	M	-								
2	DRVR	65	M	W	HNBD		RGT TURN	S	A	0000	TOYOT	2014	-	-	N	-	M	-								
Primary Rd LAMPSON AV Distance (ft) 1580 Direction E Secondary Rd CANDLEBERRY AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist 3020 Beat NORTH Type 0 CalTrans Badge 437 Collision Date 20170728 Time 0240 Day FRI																										
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type OTHER Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170912																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	O	HBD-UI		PROC ST	E	A	0000	VOLKS	2016	-	-	N	-	G	-								
Primary Rd LAMPSON AV Distance (ft) 0 Direction Secondary Rd HEATHER AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20170315 Time 2037 Day WED																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170412																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	16	M		HNBD		LFT TURN	W	A	0000	HONDA	2015	-	-	-	-	G	-								
Primary Rd LAMPSON AV Distance (ft) 36 Direction W Secondary Rd OLD RANCH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20170316 Time 1547 Day THU																										
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170412																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	78	F	H	HNBD		PROC ST	W	A	0100	CHEVR	2009	-	3	N	-	B	G								
Primary Rd LAMPSON AV Distance (ft) 36 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																										
City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20170213 Time 1941 Day MON																										
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170322																										
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																										
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	F	W	HNBD		PROC ST	W	A	0000	JEEP	2009	-	-	-	-	G	-								
2	DRVR	59	F	W	HNBD		STOPPED	W	A	0000	TOYOT	2007	-	-	-	-	G	-								

Primary Rd MAIN ST		Distance (ft) 198	Direction S	Secondary Rd ELECTRIC AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist 02	Beat SOUTH	Type 0	CalTrans	Badge 313	Collision Date 20170805	Time 2056	Day SAT																
Primary Collision Factor STRTNG BCKNG		Violation 22106	Collision Type SIDESWIPE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170912																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	54	M	W	HNBD	BACKING	S	A	0000	FORD	2017	-	-	N	-	G	-	-	-	-	-	-	-	-		
2	PRKD	998	-	-	HNBD	PARKED	-	A	0000	DODGE	2006	-	-	N	-	-	-	-	-	-	-	-	-	-		
Primary Rd MAIN ST		Distance (ft) 0	Direction	Secondary Rd MAIN ST 208 REAR		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20170214	Time 1102	Day TUE																
Primary Collision Factor STRTNG BCKNG		Violation 22106	Collision Type HIT OBJECT	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20170316																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	72	M	W	HNBD	BACKING	W	A	0700	MERCE	2009	-	3	N	-	L	H	DRVR	OTH VIS	72	M	1	0	M	H	
2	OTHR	998	-	-	HNBD	OTHER	-	-	0000	-	-	-	3	N	-	-	-	OTHR	OTH VIS	22	F	9	3	-	-	
Primary Rd MARINA DR		Distance (ft) 135	Direction E	Secondary Rd 1ST ST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20170901	Time 0753	Day FRI																
Primary Collision Factor OTHER HAZ		Violation 22517	Collision Type SIDESWIPE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20171010																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With BICYCLE		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	48	F	W	HNBD	PARKED	W	A	0100	HONDA	2012	-	3	N	-	M	G	BICY	COMP PN	72	F	9	0	-	-	
2	BICY	22	F	W	HNBD	PROC ST	W	L	0400	-	-	-	3	N	-	-	-	-	-	-	-	-	-	-		
Primary Rd MARINE DR		Distance (ft) 57	Direction W	Secondary Rd CARAVEL WY		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist 03	Beat SOUTH	Type 0	CalTrans	Badge 313	Collision Date 20170903	Time 1856	Day SUN																
Primary Collision Factor DRVR ALC DRG		Violation 23152	Collision Type SIDESWIPE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20171024																		
Weather1 CLEAR		Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV		Lighting DARK - ST	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	23	F	H	HBD-UI	PROC ST	E	A	0000	BLUEB	2010	-	-	N	-	G	-	PASS	COMP PN	23	F	3	3	G	-	
2	PRKD	998	-	-	-	PARKED	-	A	0000	HYUND	2012	-	-	-	-	-	-	-	-	-	-	-	-	-		
3	PRKD	998	-	-	-	PARKED	-	A	0000	GMC	2006	-	-	-	-	-	-	-	-	-	-	-	-	-		
Primary Rd N GATE RD		Distance (ft) 0	Direction	Secondary Rd SEAL BEACH BL		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 206	Type 0	CalTrans	Badge 368	Collision Date 20170804	Time 0234	Day FRI																
Primary Collision Factor DRVR ALC DRG		Violation 23152E	Collision Type HEAD-ON	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170911																		
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev	FNCTNG	Loc Type	Ramp/Int																	
Party Info											Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	33	M	H	DRUG	PROC ST	S	A	0000	VOLKS	2014	-	-	A	12500	-	H	-	DRVR	SEVERE	33	M	1	0	H	-

Include State Highways cases

Primary Rd NORTH GATE RD		Distance (ft) 0	Direction	Secondary Rd NORTH GATE RD		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 0	Type 0	CalTrans	Badge 298	Collision Date 20170203	Time 1113	Day FRI															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170322																	
Weather1 RAINING	Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev FUNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party 1F	Type DRVR	Age 26	Sex M	Race W	Sobriety1 HNBD	Sobriety2	Move Pre PROC ST	Dir E	SW Veh D	CHP Veh 0000	Make DODGE	Year 2007	SP Info -	OAF1 -	Viol F	OAF2 -	Safety Equip G	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Primary Rd NORTHWOOD RD		Distance (ft) 94	Direction W	Secondary Rd EDISON POLE		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 206	Type 0	CalTrans	Badge 368	Collision Date 20170421	Time 2020	Day FRI															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type SIDESWIPE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170608																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV		Lighting DARK - ST	Ped Action	Cntrl Dev NT PRS/FCTR	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party 1F	Type DRVR	Age 91	Sex M	Race W	Sobriety1 IMP UNK	Sobriety2 IMP UNK	Move Pre PROC ST	Dir W	SW Veh A	CHP Veh 0000	Make FORD	Year 2010	SP Info -	OAF1 -	Viol -	OAF2 -	Safety Equip G	ROLE DRVR	Ext Of Inj OTH VIS	AGE 91	Sex M	Seat Pos 1	Safety 0	EQUIP G	Ejected -
Party 2	Type PRKD	Age 998	Sex -	Race -	Sobriety1 -	Sobriety2 -	Move Pre PARKED	Dir W	SW Veh A	CHP Veh 0000	Make LEXUS	Year 2002	SP Info -	OAF1 -	Viol -	OAF2 -	Safety Equip -	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Primary Rd OCEAN AV		Distance (ft) 77	Direction W	Secondary Rd 7TH ST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 206	Type 0	CalTrans	Badge 251	Collision Date 20170202	Time 0335	Day THU															
Primary Collision Factor WRONG SIDE		Violation 21651	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170322																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV		Lighting DARK - ST	Ped Action	Cntrl Dev FUNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party 1F	Type DRVR	Age 55	Sex M	Race W	Sobriety1 HNBD	Sobriety2	Move Pre OPPOS LN	Dir E	SW Veh A	CHP Veh 0000	Make HYUND	Year 2010	SP Info -	OAF1 -	Viol -	OAF2 -	Safety Equip G	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Party 2	Type PRKD	Age 998	Sex -	Race -	Sobriety1 -	Sobriety2 -	Move Pre PARKED	Dir -	SW Veh A	CHP Veh 0000	Make HONDA	Year 2005	SP Info -	OAF1 -	Viol -	OAF2 -	Safety Equip -	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Party 3	Type PRKD	Age 998	Sex -	Race -	Sobriety1 -	Sobriety2 -	Move Pre PARKED	Dir -	SW Veh A	CHP Veh 0000	Make HONDA	Year 2011	SP Info -	OAF1 -	Viol -	OAF2 -	Safety Equip -	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Primary Rd OCEAN AV		Distance (ft) 109	Direction E	Secondary Rd 7TH ST		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 3020	Type 0	CalTrans	Badge 365	Collision Date 20170717	Time 0759	Day MON															
Primary Collision Factor DRVR ALC DRG		Violation 23152F	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170810																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PKD MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev FUNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party 1F	Type DRVR	Age 48	Sex M	Race W	Sobriety1 DRUG	Sobriety2	Move Pre PROC ST	Dir W	SW Veh -	CHP Veh 0000	Make NISSA	Year 2017	SP Info -	OAF1 N	Viol -	OAF2 -	Safety Equip G	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Party 2	Type PRKD	Age 998	Sex -	Race -	Sobriety1 -	Sobriety2 -	Move Pre PARKED	Dir -	SW Veh -	CHP Veh 0000	Make TOYOT	Year 2005	SP Info A	OAF1 N	Viol -	OAF2 -	Safety Equip -	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Party 3	Type PRKD	Age 998	Sex -	Race -	Sobriety1 -	Sobriety2 -	Move Pre PARKED	Dir -	SW Veh -	CHP Veh 0000	Make HONDA	Year 2003	SP Info A	OAF1 N	Viol -	OAF2 -	Safety Equip -	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Primary Rd OCEAN AV		Distance (ft) 3	Direction N	Secondary Rd ELECTRIC AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 365	Collision Date 20170126	Time 0528	Day THU															
Primary Collision Factor R-O-W PED		Violation 21950A	Collision Type AUTO/PED	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170321																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With PED		Lighting DARK - ST	Ped Action X-WLK AT	Cntrl Dev FUNCTNG	Loc Type	Ramp/Int																	
Party Info												Victim Info													
Party 1F	Type DRVR	Age 52	Sex M	Race W	Sobriety1 HNBD	Sobriety2	Move Pre PROC ST	Dir N	SW Veh -	CHP Veh 0000	Make CHEVR	Year 1980	SP Info -	OAF1 3	Viol F	OAF2 -	Safety Equip G	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
Party 2	Type PED	Age 72	Sex M	Race W	Sobriety1 HBD-UNK	Sobriety2	Move Pre OTHER	Dir -	SW Veh N	CHP Veh 6000	Make -	Year -	SP Info -	OAF1 N	Viol -	OAF2 -	Safety Equip -	ROLE PED	Ext Of Inj COMP PN 62	AGE M	Sex 9	Seat Pos 3	Safety -	EQUIP -	Ejected -

Include State Highways cases

Report Run On: 11/10/2017

Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd		10TH ST		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	423	Collision Date	20170811	Time	1618	Day	FRI							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	BROADSIDE		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170925							
Weather1	CLEAR		Weather2		Rdwy Surface		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0													
Hit and Run		Motor Vehicle Involved With		BICYCLE		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type		Ramp/Int										
Party Info																			Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	M	H	HNBD		LFT TURN	S	A	0000	HONDA	2011	-	-	E	-	G	-								
2	BICY	54	M	A	HNBD		PROC ST	S	L	0000	-	-	-	-	E	-	-	-	BICY	COMP PN 54	M	9	3	-	-	
Primary Rd		PACIFIC COAST		Distance (ft)	0	Direction		Secondary Rd		1ST ST		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	423	Collision Date	20170706	Time	0607	Day	THU							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?		Process Date	20170810							
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type		Ramp/Int										
Party Info																			Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	31	F	H	HNBD		PROC ST	E	A	0000	NISSA	2003	-	-	N	-	G	-								
2	DRVR	63	M	W	HNBD		SLOWING	E	A	0000	HONDA	2015	-	-	N	-	G	-								
Primary Rd		PACIFIC COAST		Distance (ft)	185	Direction	E	Secondary Rd		BOLSA AV		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	423	Collision Date	20170713	Time	1210	Day	THU							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	SIDESWIPE		Severity	PDO		#Killed	0	#Injured	0	Tow Away?		Process Date	20170810							
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type		Ramp/Int										
Party Info																			Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	65	M	W	HNBD		PROC ST	W	-	0000	CHEVR	2005	-	D	N	-	G	-								
2	PRKD	998	-	-	HNBD		PARKED	W	-	0000	INTER	2009	-	-	N	-	-	-								
Primary Rd		PACIFIC COAST		Distance (ft)	105	Direction	S	Secondary Rd		EDISON POLE		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	206	Type	0	CalTrans	Badge	435	Collision Date	20170712	Time	2156	Day	WED							
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type	OVERTURNED		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170811							
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting	DARK - ST		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type		Ramp/Int										
Party Info																			Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	61	M	H	HBD-UI		PROC ST	S	C	0000	HARLE	2009	-	-	N	-	-	W	DRVR	OTH VIS	61	M	1	1	-	W
Primary Rd		PACIFIC COAST		Distance (ft)	80	Direction	E	Secondary Rd		MAIN ST		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	298	Collision Date	20170615	Time	1318	Day	THU								
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170713							
Weather1	CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type		Ramp/Int										
Party Info																			Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	M	H	HNBD		PROC ST	E	-	0000	HARLE	2017	-	C	N	-	M	W	DRVR	OTH VIS	25	M	1	0	W	-
2	DRVR	25	M	H	HNBD		SLOWING	E	-	0000	CHEVR	2011	-	D	N	-	G	-								

Primary Rd		PACIFIC COAST		Distance (ft)	100	Direction	E	Secondary Rd		SOUTHERN		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type		0	CalTrans	Badge	298	Collision Date	20170422	Time	0739	Day	SAT					
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	BROADSIDE		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170609							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action			Cntrl Dev	FNCTNG		Loc Type	Ramp/Int								
																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	F	H	HNBD		RAN OFF RD	W	A	0000	KIA	2007	-	-	N	-	G	-	PASS		25	F	3	0	G	-
2	DRVR	24	F	H	HNBD		PROC ST	N	A	0000	VOLKS	2005	-	-	N	-	G	-	DRVR	COMP PN 24	F	1	0	G	-	
Primary Rd		RT 1		Distance (ft)	139	Direction	E	Secondary Rd		14TH ST		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type		0	CalTrans	Badge	313	Collision Date	20170618	Time	1859	Day	SUN					
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170810							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DUSK/DAWN		Ped Action			Cntrl Dev	FNCTNG		Loc Type	Ramp/Int								
																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	W	HNBD		PROC ST	W	A	0000	JEEP	2001	-	-	N	-	G	-	PASS		47	F	3	3	G	-
2	DRVR	47	M	W	HNBD		PROC ST	W	A	0000	BMW	2012	-	-	N	-	G	-	PASS		14	M	6	3	G	-
Primary Rd		RT 1		Distance (ft)	70	Direction	S	Secondary Rd		14TH ST		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City		Seal Beach		County	Orange	Population	4	Rpt Dist	6	Beat	Type		007	CalTrans	Badge	174	Collision Date	20170723	Time	2213	Day	SUN				
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	HIT OBJECT		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20171024							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting	DARK - ST		Ped Action			Cntrl Dev	FNCTNG		Loc Type	Ramp/Int								
																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	21	M	W		FATG	PROC ST	N	A	0000	FORD	2005	-	-	N	-	G	-	DRVR	COMP PN 21	M	1	0	G	-	
Primary Rd		RT 1		Distance (ft)	14	Direction		Secondary Rd		15TH ST		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy							
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type		0	CalTrans	Badge	246	Collision Date	20170928	Time	2002	Day	THU					
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type	BROADSIDE		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20171104							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DARK - ST		Ped Action			Cntrl Dev	NT PRS/FCTR		Loc Type	Ramp/Int								
																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	60	M	W	HBD-UI		LFT TURN	N	D	2200	TOYOT	2005	-	3	A	21801	-	M	G							
2	DRVR	44	F	A	HNBD		PROC ST	E	A	0700	LEXUS	2014	-	3	N	-	M	G	PASS		4	M	5	0	P	Q
3	PRKD	998	-	-			PARKED	N	A	0100	FORD	1992	-	-	-	-	-	-								
Primary Rd		RT 1		Distance (ft)	196	Direction	S	Secondary Rd		1ST ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.58	Side of Hwy	S			
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	Type		0	CalTrans	12	Badge	246	Collision Date	20170222	Time	0854	Day	WED				
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170630							
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0											
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action			Cntrl Dev	NT PRS/FCTR		Loc Type	H	Ramp/Int -							
																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	22	M	W	HNBD		PROC ST	S	A	0100	FORD	2009	-	3	N	-	M	G								
2	DRVR	29	M	W	HNBD		STOPPED	S	A	0100	HONDA	2008	-	3	N	-	M	G	PASS		27	F	3	0	M	G

Primary Rd RT 1 Distance (ft) 60 Direction S Secondary Rd 1ST ST NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20170604 Time 1700 Day SUN																									
Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170720																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	37	F	B	HNBD		PROC ST	N	A	0100	VOLKS	2013	-	2	N	-	M G								
2	DRVR	59	M	W	HNBD		STOPPED	N	A	0100	PORSC	1970	-	3	N	-	P G								
Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd 1ST ST NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20170607 Time 1322 Day WED																									
Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? N Process Date 20170713																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	62	F	W	HNBD		PROC ST	S	A	0700	AUDI	2017	-	3	N	-	M G								
2	DRVR	48	F	W	HNBD		LFT TURN	E	D	2200	TOYOT	2004	-	3	N	-	M G	DRVR	COMP PN 48	48	F	1	0	M	G
																		PASS	COMP PN 78	78	F	3	0	M	G
Primary Rd RT 1 Distance (ft) 351 Direction W Secondary Rd 5TH ST NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 365 Collision Date 20170625 Time 1244 Day SUN																									
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20170713																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With BICYCLE Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	37	M	W	HNBD		RGT TURN	E	-	0000	DODGE	2015	-	-	N	-	G -								
2	BICY	45	M	W	HNBD		PROC ST	E	-	0000	-	-	-	-	N	-	-	BICY	COMP PN 45	45	M	1	0	G	-
Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd 5TH ST NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat 006 Type 0 CalTrans Badge 174 Collision Date 20170710 Time 0507 Day MON																									
Primary Collision Factor FELL ASLEEP Violation Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170918																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DUSK/DAWN Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	32	F	H		FATG	RAN OFF RD	S	A	0000	PONTI	2008	-	-	F	-	G -	DRVR	COMP PN 32	32	F	1	0	G	-
Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd 8TH ST NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																									
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 300 Collision Date 20170415 Time 0850 Day SAT																									
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170612																									
Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0																									
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	53	F		HNBD		PROC ST	E	D	0000	INTER	2016	-	-	N	-	G -								
2	DRVR	78	M	O	HNBD		STOPPED	E	A	0000	TOYOT	2004	-	-	N	-	G -								

Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd BOLSA AV NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 33.19 Side of Hwy N City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans 12 Badge 246 Collision Date 20170321 Time 0544 Day TUE Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170627 Weather1 RAINING Weather2 Rdw Surface WET Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type I Ramp/Int 5																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	39	M	W	HNBD		PROC ST	N	A	0100	TOYOT	2009	-	3	N	-	M	G								
2	DRVR	68	M	W	HNBD		LFT TURN	E	A	0700	JEEP	2016	-	3	N	-	L	G	DRVR	OTH VIS	68	M	1	0	L	G
Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd MAIN ST NCIC 3020 State Hwy? Y Route 1 Postmile Prefix - Postmile 24.721 Side of Hwy N City Seal Beach County Orange Population 4 Rpt Dist 2 Beat 007 Type 0 CalTrans 12 Badge 174 Collision Date 20170129 Time 2138 Day SUN Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170627 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type I Ramp/Int 5																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	72	F	W	HNBD		PROC ST	E	A	0000	KIA	2010	-	-	N	-	G	-								
2	DRVR	49	M	H	HNBD		PROC ST	S	A	0000	NISSA	1997	-	-	N	-	G	-	PASS	COMP PN	47	M	4	0	G	-
																			PASS		42	M	3	0	G	-
Primary Rd RT 1 Distance (ft) 24 Direction E Secondary Rd MAIN ST EAST NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 365 Collision Date 20170806 Time 1339 Day SUN Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170921 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	60	M	W	HNBD		PROC ST	W	A	0000	HONDA	1994	-	-	N	-	G	-								
2	DRVR	31	F	W	HNBD		STOPPED	W	A	0000	NISSA	2015	-	-	N	-	G	-	PASS		34	M	3	0	G	-
Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd MAR VISTA NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 206 Type 0 CalTrans Badge 368 Collision Date 20170428 Time 0230 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170711 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	F	W		FATG	PROC ST	N	A	0000	HONDA	2000	-	-	-	-	G	-								
Primary Rd RT 1 Distance (ft) 0 Direction Secondary Rd MARINA AV NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 246 Collision Date 20170520 Time 1830 Day SAT Primary Collision Factor UNKNOWN Violation Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170609 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	49	F	W	IMP UNK	IMP UNK	CHANG LN	S	A	0100	HONDA	2014	-	3	N	-	M	B								
2	DRVR	25	M	H	IMP UNK	IMP UNK	PROC ST	S	A	0100	KIA	2013	-	3	N	-	M	B								

Include State Highways cases

Report Run On: 11/10/2017

Primary Rd RT 1		Distance (ft) 308	Direction S	Secondary Rd PHILLIPS RANCH	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist 6	Beat 007	Type 0	CalTrans	Badge 174	Collision Date 20170623	Time 2054	Day FRI															
Primary Collision Factor DRVR ALC DRG		Violation 23152B	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 3	Tow Away? Y	Process Date 20170713																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	M	B	HBD-UI	PROC ST	S	-	0000	TOYOT	2016	-	D	A	22350	-	G	-	PASS	COMP PN 56	M	3	0	G	-
2	DRVR	49	M	H	HNBD	PROC ST	S	-	0000	TOYOT	2016	-	-	N	-	G	-	PASS	COMP PN 55	F	6	0	G	-	
Primary Rd RT 1		Distance (ft) 250	Direction S	Secondary Rd PHILLIPS ST	NCIC 3020	State Hwy? Y	Route 1	Postmile Prefix -	Postmile 31.52	Side of Hwy N															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20170201	Time 1111	Day WED															
Primary Collision Factor NOT DRIVER		Violation	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170630																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With FIXED OBJ	Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type H	Ramp/Int -																	
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	73	M	W	PHYS	PROC ST	N	A	0700	TOYOT	2011	-	3	N	-	M	G								
Primary Rd SAINT ANDREWS		Distance (ft) 26	Direction S	Secondary Rd GOLDEN RAIN RD	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20170717	Time 1537	Day MON															
Primary Collision Factor DRVR ALC DRG		Violation 23152A	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170810																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	62	M	W	HBD-UI	PROC ST	N	D	2200	GMC	2001	-	3	A	-	M	B								
2	DRVR	89	F	W	HNBD	STOPPED	N	A	0700	BUICK	2007	-	3	N	-	M	G								
Primary Rd SAINT ANDREWS		Distance (ft) 210	Direction S	Secondary Rd OAKMONT	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 436	Collision Date 20170430	Time 0957	Day SUN															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170628																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	24	M		HNBD	PROC ST	S	A	0000	LEXUS	2002	-	-	A	22350	F	-	-							
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction S	Secondary Rd ADOLFO LOPEZ	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 298	Collision Date 20170128	Time 1333	Day SAT															
Primary Collision Factor UNKNOWN		Violation	Collision Type SIDESWIPE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170321																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV	Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																	
Party Info																									
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	62	F	W	HNBD	PROC ST	S	D	0000	TOYOT	2006	-	-	N	-	G	-								
2	DRVR	43	M	O	HNBD	PROC ST	S	A	0000	NISSA	2005	-	-	N	-	G	-	DRVR	COMP PN 43	M	1	0	G	-	

Include State Highways cases

Primary Rd SEAL BEACH BL		Distance (ft) 231	Direction S	Secondary Rd ADOLFO LOPEZ		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat PATRO	Type 0	CalTrans	Badge 314	Collision Date 20170609	Time 2219	Day FRI															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170710																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	H		PROC ST	N	A	0000	FORD	2004	-	-	N	-	G	-	PASS		28	M	6	0	G	-
																		PASS		27	M	3	0	G	-
																		PASS		27	M	4	0	G	-
2	DRVR	21	M	H		PROC ST	N	A	0000	TOYOT	2013	-	-	N	-	G	-	DRVR	COMP PN	21	M	1	0	G	-
3	DRVR	53	F	W		PROC ST	N	A	0000	JEEP	2014	-	-	N	-	G	-	PASS		54	M	3	0	G	-
Primary Rd SEAL BEACH BL		Distance (ft) 840	Direction N	Secondary Rd APOLLO DR		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20170620	Time 1114	Day TUE															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type HIT OBJECT	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170710																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	87	F	W	HNBD	PROC ST	N	A	0100	SUZUK	2012	-	3	N	-	L	G	DRVR	COMP PN	87	F	1	0	L	G
Primary Rd SEAL BEACH BL		Distance (ft) 5	Direction S	Secondary Rd APOLLO DR		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 365	Collision Date 20170709	Time 1549	Day SUN															
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type HEAD-ON	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170810																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With NON-CLSN		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	20	M	W	HNBD	PROC ST	S	A	0000	ACURA	2007	-	-	A	22350	-	G	-							
2	DRVR	31	M	W	HNBD	LFT TURN	W	A	0000	FORD	2011	-	-	N	-	G	-								
Primary Rd SEAL BEACH BL		Distance (ft) 468	Direction N	Secondary Rd BOLSA AV		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20170315	Time 1600	Day WED															
Primary Collision Factor NOT DRIVER		Violation	Collision Type HIT OBJECT	Severity INJURY	#Killed 0	#Injured 2	Tow Away? Y	Process Date 20170411																	
Weather1 CLEAR		Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	60	F	B	PHYS	PROC ST	S	A	0100	CHEVR	2007	-	3	N	-	L	G	DRVR	OTH VIS	60	F	1	0	L	G
																		PASS	COMP PN	28	F	3	0	L	G
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd GOLDEN RAIN		NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy														
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 001	Type 0	CalTrans	Badge 362	Collision Date 20170123	Time 0613	Day MON															
Primary Collision Factor IMPROP TURN		Violation 22107	Collision Type HIT OBJECT	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170322																	
Weather1 RAINING		Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																			
Hit and Run		Motor Vehicle Involved With FIXED OBJ		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	60	F	H	HNBD	LFT TURN	N	-	0000	NISSA	2006	-	D	N	-	M	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	34	Direction	N	Secondary Rd	GOLDEN RAIN RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	432	Collision Date	20170102	Time	1830	Day	MON	
Primary Collision Factor	STRNGJ BCKNG	Violation	22106	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170321				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DUSK/DAWN	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int							

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	19	M	W	HNBD		STOPPED	S	A	0000	NISSA	2010	-	-	N	-	G M	DRVR	COMP PN	19	M	1	0	G	-
2F	DRVR	58	M	O	IMP UNK	IMP UNK	BACKING	-	A	0000	TOYOT	2009	-	-	N	-	B M								

Primary Rd	SEAL BEACH BL	Distance (ft)	231	Direction	S	Secondary Rd	GOLDEN RAIN RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	251	Collision Date	20170209	Time	0321	Day	THU	
Primary Collision Factor	OTHER IMPROP DRV	Violation		Collision Type	HIT OBJECT	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170322				
Weather1	FOG	Weather2		Rdwy Surface	WET	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	FIXED OBJ	Lighting	DARK - ST	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int							

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	86	M	W	HNBD		RAN OFF RD	S	A	0000	TOYOT	2015	-	-	-	-	G -	DRVR	COMP PN	86	F	1	0	G	-

Primary Rd	SEAL BEACH BL	Distance (ft)	31	Direction	N	Secondary Rd	GOLDEN RAIN RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	365	Collision Date	20170214	Time	1933	Day	TUE	
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170421				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DUSK/DAWN	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int							

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	86	F	W	HNBD		PROC ST	S	A	0000	SUBAR	2007	-	-	N	-	G -	DRVR	COMP PN	86	F	1	0	G	-
2	DRVR	24	F	W	HNBD		STOPPED	S	A	0000	TOYOT	2007	-	-	N	-	G -								

Primary Rd	SEAL BEACH BL	Distance (ft)	40	Direction	N	Secondary Rd	GOLDEN RAIN RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	174	Collision Date	20170312	Time	1800	Day	SUN	
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170412				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DUSK/DAWN	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int							

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	F	W	HNBD		PROC ST	S	A	0000	FORD	2014	-	-	F	-	G -	PASS		17	F	3	0	G	-
																		PASS		16	F	4	0	G	-
																		PASS		15	M	6	0	G	-
2	DRVR	53	F	H	HNBD		STOPPED	S	A	0000	TOYOT	2000	-	-	N	-	G -	PASS		19	F	3	0	G	-
																		PASS		18	M	4	0	G	-

Primary Rd	SEAL BEACH BL	Distance (ft)	103	Direction	S	Secondary Rd	GOLDEN RAIN RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	246	Collision Date	20170503	Time	0536	Day	WED	
Primary Collision Factor	DRVR ALC DRG	Violation	23152A	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170609				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DUSK/DAWN	Ped Action		Cntrl Dev	FUNCTNG	Loc Type		Ramp/Int							

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	F	H	HBD-UI		PROC ST	N	A	0100	NISSA	2011	-	1	A	23123	-	L G							
2	DRVR	27	M	W	HNBD		PROC ST	N	D	2200	FORD	2006	-	3	N	-	M G								
3	DRVR	30	F	W	HNBD		STOPPED	N	A	0700	TOYOT	2013	-	3	N	-	M G								

Primary Rd		SEAL BEACH BL		Distance (ft)	150	Direction	N	Secondary Rd		HERON POINTE		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	SOUTH		Type	0	CalTrans	Badge	246	Collision Date	20170509	Time	0811	Day	TUE						
Primary Collision Factor		NOT STATED		Violation		Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170613									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type	Ramp/Int									
																			Party Info					Victim Info				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1F	DRVR	22	M	W	HNBD		PROC ST	S	D	2200	CHEVR	2015	- 3	N	-	M	G	PASS		25	M	3	0	M	G			
2	DRVR	53	F	W	HNBD		OTHER	S	A	0700	TOYOT	2014	- 3	N	-	M	G	DRVR	COMP PN 53	F	1	0	M	G				
Primary Rd		SEAL BEACH BL		Distance (ft)	7	Direction	S	Secondary Rd		MARLIN AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	SOUTH		Type	0	CalTrans	Badge	246	Collision Date	20170529	Time	1211	Day	MON						
Primary Collision Factor		R-O-W AUTO		Violation	21801A	Collision Type	BROADSIDE		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170713									
Weather1		CLOUDY		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With				BICYCLE		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type	Ramp/Int									
																			Party Info					Victim Info				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1F	DRVR	24	F	W	HNBD		LFT TURN	E	A	0100	FORD	2017	- 3	N	-	M	G											
2	BICY	52	M	W	HNBD		LFT TURN	N	L	0400	-	-	- 3	N	-	-	-	BICY	OTH VIS	52	M	9	2	-	W			
Primary Rd		SEAL BEACH BL		Distance (ft)	226	Direction	N	Secondary Rd		MARLIN AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	207		Type	0	CalTrans	Badge	368	Collision Date	20170602	Time	0114	Day	FRI						
Primary Collision Factor		FELL ASLEEP		Violation		Collision Type	HIT OBJECT		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170710									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting	DARK - ST		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type	Ramp/Int									
																			Party Info					Victim Info				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1	DRVR	20	M	A		FATG	PROC ST	S	E	0000	TOYOT	2005	- - -	-	-	G	-	DRVR	COMP PN 20	M	1	0	G	-				
2	DRVR	40	M	H	HNBD		PROC ST	S	A	0000	CHEVR	2000	- - -	-	-	G	-											
Primary Rd		SEAL BEACH BL		Distance (ft)	166	Direction	S	Secondary Rd		N GATE RD		NCIC	3020	State Hwy?	Y	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat			Type	0	CalTrans	Badge	300	Collision Date	20170508	Time	0630	Day	MON						
Primary Collision Factor		DRVR ALC DRG		Violation	23152E	Collision Type	HEAD-ON		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170609									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type	Ramp/Int									
																			Party Info					Victim Info				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1F	DRVR	18	F	O	HBD-UI		PROC ST	S	A	0000	MERCE	2017	- - A	22350	-	G	-											
Primary Rd		SEAL BEACH BL		Distance (ft)	1077	Direction	N	Secondary Rd		NORTH GATE		NCIC	3020	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy									
City		Seal Beach		County	Orange	Population	4	Rpt Dist	Beat	NORTH		Type	0	CalTrans	Badge	429	Collision Date	20170819	Time	1128	Day	SAT						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170911									
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0													
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type	Ramp/Int									
																			Party Info					Victim Info				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1F	DRVR	81	F	W	HNBD		PROC ST	N	A	0000	HONDA	2015	- - -	-	-	G	-											
2	DRVR	998	F	A			SLOWING	N	A	0000	BMW		- - -	-	-	-	-											

Primary Rd SEAL BEACH BL Distance (ft) 853 Direction N Secondary Rd NORTH GATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 365 Collision Date 20170507 Time 0113 Day SUN																											
Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170608																											
Weather1 RAINING Weather2 Rdw Surface WET Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	23	M	H	HBD-UI		PROC ST	S	A	0000	HONDA	2014	-	-	A	22350	-	G	-								
2	DRVR	50	F	W	HNBD		PROC ST	S	A	0000	TOYOT	2006	-	-	N		-	G	-	DRVR	OTH VIS	40	F	1	0	G	-
Primary Rd SEAL BEACH BL Distance (ft) 30 Direction S Secondary Rd NORTHGATE LN NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 152 Collision Date 20170620 Time 1352 Day TUE																											
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 2 Tow Away? N Process Date 20170713																											
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	58	M	W	HNBD		PROC ST	N	A	0100	CHEVR	2017	-	3	F		M	G									
2	DRVR	31	M	H	HNBD		STOPPED	N	A	0100	CHRYS	2017	-	3	N		M	G	PASS	COMP PN	27	F	3	0	M	G	
																			PASS	COMP PN	15	F	4	0	M	-	
Primary Rd SEAL BEACH BL Distance (ft) 470 Direction N Secondary Rd NORTHGATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20170315 Time 2242 Day WED																											
Primary Collision Factor LANE CHANGE Violation 21658A Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170415																											
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	24	M	W	HNBD		SLOWING	S	A	0000	JEEP	2016	-	-	M		G	-									
2	DRVR	29	M	W	HNBD		STOPPED	S	A	0000	FORD	2015	-	-	M		G	-									
3	DRVR	35	F	H	HNBD		SLOWING	S	A	0000	HYUND	2012	-	-	M		G	-									
Primary Rd SEAL BEACH BL Distance (ft) 300 Direction S Secondary Rd NORTHGATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20170809 Time 2235 Day WED																											
Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity INJURY #Killed 0 #Injured 1 Tow Away? N Process Date 20170911																											
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With PED Lighting DARK - ST Ped Action IN RD, Cntrl Dev NT PRS/FCR Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	59	M	W	HNBD		PROC ST	S	A	0000	CHEVR	2014	-	-	-		-	-									
2	PED	44	M	H	HNBD					0000									PED	COMP PN	45	M	9	3			
Primary Rd SEAL BEACH BL Distance (ft) 64 Direction N Secondary Rd NORTHGATE RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy																											
City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 365 Collision Date 20170825 Time 1359 Day FRI																											
Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20171011																											
Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0																											
Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info																											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	31	M	H	HNBD		PROC ST	S	F	0000	DODGE	2002	-	-	M		G	-									
2	DRVR	53	F	W	HNBD		STOPPED	S	A	0000	HYUND	2016	-	-	N		G	-									
3	DRVR	28	M	W	HNBD		STOPPED	S	A	0000	FORD	2017	-	-	N		G	-									

Primary Rd	SEAL BEACH BL	Distance (ft)	28	Direction	N	Secondary Rd	OLD RANCH PKWY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	246	Collision Date	20170118	Time	1400	Day	WED
Primary Collision Factor	OTHER HAZ	Violation	21461A	Collision Type	BROADSIDE	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170321				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	BICYCLE	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type									Ramp/Int

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	BICY	69	M	W	HNBD		PROC ST	N	L	0400	-	-	3	A	21650	-	-	-	BICY	COMP PN	69	M	9	1	-	W
2	DRVR	52	F	W	HNBD		PROC ST	E	A	0100	TOYOT	2007	-	3	N	-	M	G								

Primary Rd	SEAL BEACH BL	Distance (ft)	0	Direction		Secondary Rd	OLD RANCH PKWY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	298	Collision Date	20170204	Time	1056	Day	SAT
Primary Collision Factor	IMPROP TURN	Violation	22107	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20170322				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type									Ramp/Int

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	63	F	A	HNBD		RGT TURN	N	A	0000	TOYOT	2004	-	-	N	-	G	-	PASS		87	F	3	3	G	-
																			PASS		61	F	6	3	G	-
2	DRVR	51	M	W	HNBD		PROC ST	N	A	0000	CHRY	2013	-	-	N	-	G	-	PASS		79	F	3	3	G	-
																			PASS		40	F	6	3	G	-

Primary Rd	SEAL BEACH BL	Distance (ft)	149	Direction	N	Secondary Rd	OLD RANCH PKWY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	298	Collision Date	20170325	Time	1558	Day	SAT
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170411				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type									Ramp/Int

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	14	M	A	HNBD		PROC ST	S	C	0000	HONDA	2017	-	-	N	-	W	-	DRVR	COMP PN	14	M	1	0	W	-
2	DRVR	36	F	W	HNBD		STOPPED	S	A	0000	TOYOT	2012	-	-	N	-	G	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	0	Direction		Secondary Rd	OLD RANCH PKY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	241	Type	0	CalTrans	Badge	251	Collision Date	20170524	Time	2203	Day	WED
Primary Collision Factor	STOP SGN SIG	Violation	21453A	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170608				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type									Ramp/Int

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	54	F	A	HNBD		PROC ST	N	-	0000	HYUND	2013	-	-	A	-	G	-								
2	DRVR	32	F	W	HNBD		LFT TURN	S	-	0000	TOYOT	2008	-	-	A	-	G	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	255	Direction	N	Secondary Rd	OLD RANCH PKY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	300	Collision Date	20170918	Time	1542	Day	MON
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20171024				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	MV ON OTHER RD	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FUNCTNG	Loc Type									Ramp/Int

Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	F	O	HNBD		STOPPED	S	A	0000	ACURA	2011	-	-	M	-	G	-	PASS		14	F	2	3	G	-
2	DRVR	70	M				STOPPED	S	A	0000	HUMM	2004	-	-	N	-	G	-								

Primary Rd SEAL BEACH BL Distance (ft) 62 Direction S Secondary Rd PLYMOUTH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20170130 Time 1831 Day MON Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170321 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	44	M	W	HNBD		PROC ST	N	A	0000	FORD	2009	-	-	-	-	G	-	DRVR	COMP PN 46	F	1	0	G	-
2	DRVR	46	F	W	HNBD		STOPPED	N	A	0000	ACURA	2004	-	-	-	-	G	-	DRVR	COMP PN 46	F	1	0	G	-
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd PLYMOUTH NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 361 Collision Date 20170929 Time 1942 Day FRI Primary Collision Factor UNKNOWN Violation Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20171024 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	19	F	W	HNBD		PROC ST	N	A	0000	CHEVR	2001	-	-	-	-	G	-	DRVR	COMP PN 46	F	1	0	G	-
2	DRVR	19	M	O	HNBD		U-TURN	E	E	0000	CHEVR	2002	-	-	-	-	G	-	DRVR	COMP PN 46	F	1	0	G	-
Primary Rd SEAL BEACH BL Distance (ft) 310 Direction N Secondary Rd PLYMOUTH DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20170328 Time 0852 Day TUE Primary Collision Factor TOO CLOSE Violation 21703 Collision Type REAR END Severity INJURY #Killed 0 #Injured 3 Tow Away? N Process Date 20170411 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	48	F	A	HNBD		PROC ST	S	A	0800	TOYOT	2005	-	3	N	-	M	G	DRVR	COMP PN 58	F	1	0	M	G
2	DRVR	58	F	W	HNBD		SLOWING	S	A	0100	MERCE	2010	-	3	N	-	M	G	PASS	COMP PN 57	M	3	0	M	G
3	DRVR	57	F	W	HNBD		SLOWING	S	A	0100	MAZDA	2012	-	3	N	-	M	G	DRVR	COMP PN 57	F	1	0	M	G
Primary Rd SEAL BEACH BL Distance (ft) 48 Direction N Secondary Rd ROAD C NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 365 Collision Date 20170920 Time 1109 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20171010 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	W	HNBD		PROC ST	S	D	2200	CHEVR	2015	-	3	N	-	L	-	DRVR	OTH VIS 34	M	1	0	G	-
2	DRVR	85	F	W	HNBD		STOPPED	S	-	0000	HONDA	2008	A	-	N	-	M	-	DRVR	OTH VIS 85	F	1	0	G	-
Primary Rd SEAL BEACH BL Distance (ft) 0 Direction Secondary Rd ROSSMOOR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 437 Collision Date 20170818 Time 2235 Day FRI Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170911 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	54	M	W	HNBD		PROC ST	S	M	0000	FORD	1998	-	-	N	-	G	-	DRVR	SEVERE 54	-	1	0	G	-
2	DRVR	23	M	W	HNBD		LFT TURN	N	A	0000	HONDA	1990	-	-	N	-	G	-	DRVR	SEVERE 54	-	1	0	G	-

Primary Rd SEAL BEACH BL		Distance (ft) 5	Direction N	Secondary Rd RT 1	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy																		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 365	Collision Date 20170510	Time 2308	Day WED																		
Primary Collision Factor UNKNOWN		Violation 23153E	Collision Type OTHER	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170609																				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																							
Hit and Run		Motor Vehicle Involved With BICYCLE		Lighting DARK - ST	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																			
Party Info										Victim Info																		
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	29	F	H		DRUG	PROC ST	S	-	0000	HONDA	2017	A	-	A	21453	-	G	-									
2	BICY	21	M	W	HNBD		PROC ST	E	-	0000	-	-	-	-	N	-	-	-			BICY	SEVERE	21	M	9	3	-	-
Primary Rd SEAL BEACH BL		Distance (ft) 6	Direction N	Secondary Rd RT 405	NCIC 3020	State Hwy? Y	Route	Postmile Prefix	Postmile	Side of Hwy																		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 365	Collision Date 20170723	Time 1610	Day SUN																		
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170814																				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																							
Hit and Run		Motor Vehicle Involved With BICYCLE		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																			
Party Info										Victim Info																		
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1	DRVR	60	M	A	HNBD	RGT TURN	N	A	0000	MITSU	2008	-	-	N	-	G	-											
2F	BICY	46	M	W	HNBD	PROC ST	N	L	0000	-	-	-	-	N	-	-	-				BICY	COMP PN	46	M	9	0	-	-
Primary Rd SEAL BEACH BL		Distance (ft) 50	Direction N	Secondary Rd SAINT ANDREWS	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 298	Collision Date 20170217	Time 1544	Day FRI																		
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20170322																				
Weather1 RAINING	Weather2	Rdwy Surface WET	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																							
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT FNCT	Loc Type	Ramp/Int																			
Party Info										Victim Info																		
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	31	F	W	HNBD	PROC ST	S	D	0000	FORD	2015	-	-	N	-	G	-											
2	DRVR	63	F	W	HNBD	STOPPED	S	A	0000	FORD	2006	-	-	N	-	G	-											
Primary Rd SEAL BEACH BL		Distance (ft) 0	Direction	Secondary Rd SAINT ANDREWS	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 423	Collision Date 20170802	Time 0711	Day WED																		
Primary Collision Factor R-O-W AUTO		Violation 21453C	Collision Type BROADSIDE	Severity PDO	#Killed 0	#Injured 0	Tow Away? N	Process Date 20170912																				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																							
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																			
Party Info										Victim Info																		
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	45	F	B	HNBD	LFT TURN	N	A	0000	SATUR	2004	-	-	A	22350	-	G	-										
2	DRVR	16	M	W	HNBD	PROC ST	S	A	0000	JEEP	1998	-	-	N	-	G	-	PASS		16	F	3	0	G	-			
																		PASS		16	M	6	0	G	-			
Primary Rd SEAL BEACH BL		Distance (ft) 354	Direction S	Secondary Rd SAINT ANDREWS	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy																		
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 246	Collision Date 20170222	Time 1502	Day WED																		
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170316																				
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																							
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	NT PRS/FCTR	Loc Type	Ramp/Int																			
Party Info										Victim Info																		
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	48	F	W	HNBD	SLOWING	S	A	0800	HONDA	2010	-	3	N	-	L	G	PASS		9	F	3	0	L	G			
																		PASS		12	F	4	0	P	G			
																		PASS		12	F	5	0	P	G			
2	DRVR	40	M	W	HNBD	PROC ST	S	A	0700	CHEVR	1989	-	3	N	-	P	G	DRVR	COMP PN	40	M	1	0	P	G			

Include State Highways cases

Primary Rd	SEAL BEACH BL	Distance (ft)	70	Direction	N	Secondary Rd	SAINT ANDREWS	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	246	Collision Date	20170815	Time	1214	Day	TUE
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170912				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	H	HNBD		PROC ST	S	A	0100	HONDA	1997	- 3	N	-	L	G								
2	DRVR	16	F	W	HNBD		STOPPED	S	A	0100	FORD	2017	- 3	N	-	M	G								
3	DRVR	39	M	A	HNBD		STOPPED	S	A	0100	HYUND	2017	- 3	N	-	M	G	PASS		39	F	4	0	M	G
																		PASS		5	M	4	0	P	Q
																		PASS		2	F	6	0	P	Q

Primary Rd	SEAL BEACH BL	Distance (ft)	0	Direction		Secondary Rd	SAINT CLOUD DR	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	298	Collision Date	20170224	Time	0820	Day	FRI
Primary Collision Factor	UNKNOWN	Violation		Collision Type	BROADSIDE	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20170316				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	52	M	A	HNBD		PROC ST	S	A	0000	CHEVR	2016	- -	N	-	G	-								
2	DRVR	69	F	W	HNBD		LFT TURN	E	A	0000	HYUND	2012	- -	N	-	G	-	DRVR	COMP PN 69		F	1	0	G	-

Primary Rd	SEAL BEACH BL	Distance (ft)	257	Direction	N	Secondary Rd	SAINT CLOUD DR	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	246	Collision Date	20170306	Time	1705	Day	MON
Primary Collision Factor	TOO CLOSE	Violation	21703	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20170411				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		FUNCTNG		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	58	M	W	HNBD		SLOWING	S	A	0000	TOYOT	2014	- -	N	-	G	-								
2	DRVR	31	F	H	HNBD		STOPPED	S	A	0000	TOYOT	1999	- -	N	-	G	-	DRVR	OTH VIS	31	F	1	0	G	-
																		PASS		12	F	3	0	G	-
3	DRVR	36	F	H	HNBD		STOPPED	S	A	0000	HONDA	2008	- -	N	-	G	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	0	Direction		Secondary Rd	TOWN CENTER DR	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	317	Collision Date	20170701	Time	1100	Day	SAT
Primary Collision Factor	R-O-W AUTO	Violation	21800D	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20170807				
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0								
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		NT FNCT		Loc Type		Ramp/Int					

Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	93	F	W	HNBD		PROC ST	S	A	0000	DODGE	1996	- -	N	-	M	-								
2	DRVR	58	M	W	HNBD		PARKED	W	A	0000	MERCE	2016	- -	N	-	M	-								

Primary Rd SEAL BEACH BL Distance (ft) 404 Direction N Secondary Rd TOWNE CENTER NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20170201 Time 2011 Day WED Primary Collision Factor WRONG SIDE Violation 21651 Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170322 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip Victim Info 1F DRVR 82 M W HNBD CHANG LN N A 0000 FORD 2010 - - - - G - ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
Primary Rd SEAL BEACH BL Distance (ft) 403 Direction N Secondary Rd TOWNE CENTER NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 241 Type 0 CalTrans Badge 251 Collision Date 20170105 Time 2024 Day THU Primary Collision Factor NOT DRIVER Violation Collision Type HIT OBJECT Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170322 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DARK - ST Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip Victim Info 1 DRVR 70 M W HNBD PROC ST N A 0000 DODGE 1999 - - - - L G ROLE Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													
Primary Rd SEAL BEACH BL Distance (ft) 60 Direction S Secondary Rd WESTMINSTER BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20170203 Time 1247 Day FRI Primary Collision Factor IMPROP TURN Violation 22107 Collision Type SIDESWIPE Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20170322 Weather1 RAINING Weather2 Rdwy Surface WET Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip Victim Info 1F DRVR 35 M H HNBD CHANG LN N D 0000 GMC 2015 - - N - G - PASS Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected 2 DRVR 25 M O HNBD RAN OFF RD N A 0000 CHEVR 2008 - - N - G - DRVR COMP PN 59 F 3 3 G -													
Primary Rd WESTMINSTER AV Distance (ft) 32 Direction E Secondary Rd APOLLO DR NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat NORTH Type 0 CalTrans Badge 246 Collision Date 20170614 Time 1537 Day WED Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170711 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int													
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip Victim Info 1F DRVR 27 M W HNBD PROC ST E D 2200 FORD 2008 - 3 N - M G DRVR COMP PN 59 F 1 0 L G 2 DRVR 59 F W HNBD LFT TURN N A 0700 LEXUS 2011 - 3 N - L G DRVR COMP PN 59 F 1 0 L G													
Primary Rd WESTMINSTER AV Distance (ft) 2112 Direction W Secondary Rd BOLSA CHICA AV NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat SOUTH Type 0 CalTrans Badge 246 Collision Date 20170307 Time 1356 Day TUE Primary Collision Factor DRVR ALC DRG Violation 23152A Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170412 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int													
Party Info Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip Victim Info 1F DRVR 21 F W HBD-UI PROC ST W A 0100 HONDA 2010 - 3 A 22350 - L G PASS Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected 2 DRVR 39 M W HNBD PROC ST W A 0800 CHRY 2003 - 3 N - M G PASS Ext Of Inj AGE Sex Seat Pos Safety EQUIP Ejected													

Include State Highways cases

Primary Rd WESTMINSTER AV		Distance (ft) 0	Direction	Secondary Rd ROAD B	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20170529	Time 1141	Day MON															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170713																	
Weather1 CLOUDY	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	79	M	A	HNBD	SLOWING	E	A	0100	HYUND	2006	-	3	N	-	M	G	PASS		11	F	3	3	M	G
2	DRVR	46	F	W	HNBD	STOPPED	E	A	0700	GMC	2015	-	3	N	-	M	G	DRVR	COMP PN	46	F	1	0	M	G
Primary Rd WESTMINSTER AV		Distance (ft) 0	Direction	Secondary Rd ROAD B	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 00S	Type 0	CalTrans	Badge 152	Collision Date 20170607	Time 0636	Day WED															
Primary Collision Factor STOP SGN SIG		Violation 21453A	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170710																	
Weather1 CLOUDY	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	31	F	H	HNBD	PROC ST	E	A	0100	KIA	2014	-	3	F	-	L	G								
2	DRVR	32	M	W	HNBD	LFT TURN	W	A	0100	SUBAR	2013	-	3	N	-	L	G	DRVR	COMP PN	32	M	1	0	L	G
Primary Rd WESTMINSTER AV		Distance (ft) 24	Direction E	Secondary Rd ROAD B	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUT	Type 0	CalTrans	Badge 246	Collision Date 20170628	Time 1011	Day WED															
Primary Collision Factor UNKNOWN		Violation	Collision Type BROADSIDE	Severity INJURY	#Killed 0	#Injured 1	Tow Away? Y	Process Date 20170719																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	35	M	H	HNBD	LFT TURN	S	A	0100	MINI	2004	-	3	N	-	L	G								
2	DRVR	87	M	W	HNBD	PROC ST	E	D	2200	TOYOT	2004	-	2	N	-	L	G	DRVR	COMP PN	87	M	1	0	L	G
Primary Rd WESTMINSTER AV		Distance (ft) 60	Direction W	Secondary Rd ROAD B	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat SOUTH	Type 0	CalTrans	Badge 246	Collision Date 20170831	Time 1359	Day THU															
Primary Collision Factor NOT STATED		Violation	Collision Type REAR END	Severity PDO	#Killed 0	#Injured 0	Tow Away? Y	Process Date 20171011																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	34	F	W	HNBD	SLOWING	E	A	0100	HONDA	1999	-	3	K	-	L	G								
2	DRVR	32	M	H	HNBD	STOPPED	E	A	0100	HONDA	2016	-	3	N	-	M	G								
Primary Rd WESTMINSTER AV		Distance (ft) 4046	Direction E	Secondary Rd SAINT KITTS	NCIC 3020	State Hwy? N	Route	Postmile Prefix	Postmile	Side of Hwy															
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat NORTH	Type 0	CalTrans	Badge 429	Collision Date 20170721	Time 1125	Day FRI															
Primary Collision Factor UNSAFE SPEED		Violation 22350	Collision Type REAR END	Severity INJURY	#Killed 0	#Injured 1	Tow Away? N	Process Date 20170817																	
Weather1 CLEAR	Weather2	Rdwy Surface DRY	Rdwy Cond1 NO UNUSL CND	Rdwy Cond2	Spec Cond 0																				
Hit and Run		Motor Vehicle Involved With OTHER MV		Lighting DAYLIGHT	Ped Action	Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int																
Party Info										Victim Info															
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	H	HNBD	PROC ST	W	D	0000	DODGE	2005	-	-	-	-	G	-	DRVR	COMP PN	29	M	1	0	G	-
2	DRVR	36	F	A	HNBD	STOPPED	W	A	0000	HONDA	2013	-	-	-	-	G	-	PASS		42	M	3	0	G	-
																		PASS		1	M	4	0	Q	-
																		PASS		2	F	6	0	Q	-
																		PASS		4	F	7	0	Q	-

Include State Highways cases

Report Run On: 11/10/2017

Primary Rd WESTMINSTER AV Distance (ft) 2156 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? Y Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 300 Collision Date 20170415 Time 0729 Day SAT Primary Collision Factor UNKNOWN Violation 27155A Collision Type Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170711 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With FIXED OBJ Lighting DAYLIGHT Ped Action Cntrl Dev Loc Type Ramp/Int																											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	33	M		HNBD		PROC ST	E	A	0000	KIA	2004	-	-	N	-	G	-									
Primary Rd WESTMINSTER AV Distance (ft) 398 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist WOC Beat Type 0 CalTrans Badge 257 Collision Date 20170504 Time 1537 Day THU Primary Collision Factor R-O-W AUTO Violation 21804A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20170608 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	19	F	A	HNBD		LFT TURN	S	A	0100	TOYOT	2004	-	3	N	-	M	G									
2	DRVR	42	F	W	HNBD		PROC ST	W	-	0000	HONDA	2010	-	3	N	-	L	G	DRVR	OTH VIS	42	F	1	0	L	G	
Primary Rd WESTMINSTER AV Distance (ft) 0 Direction Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 436 Collision Date 20170519 Time 0717 Day FRI Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20170608 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	21	F	H	HBD-UI		PROC ST	N	A	0000	HONDA	2012	-	-	A	23153	-	G	-	DRVR	OTH VIS	21	F	1	0	G	-
2	DRVR	32	M	A	HNBD		PROC ST	E	A	0000	HONDA	1990	-	-	-	-	G	-	PASS	COMP PN	21	F	3	0	G	-	
3	DRVR	61	M	W	HNBD		PROC ST	E	A	0000	NISSA	2015	-	-	-	-	G	-									
Primary Rd WESTMINSTER AV Distance (ft) 48 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20170616 Time 0722 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20170711 Weather1 CLEAR Weather2 Rdw Surface DRY Rdw Cond1 NO UNUSL CND Rdw Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																											
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	44	M	H	HNBD		PROC ST	E	A	0000	ACURA	2006	-	-	E	-	G	-									
2	DRVR	29	M	H	HNBD		STOPPED	E	A	0000	INFIN	2013	-	-	N	-	G	-									

APPENDIX C

TRAFFIC DATA
COLLECTION
SHEETS

National Data & Surveying Services

Intersection Turning Movement Count

Location: Pacific Coast Hwy & Balboa Dr/12th St
 City: Seal Beach
 Control: Signalized

Project ID: 17-01249-001
 Date: 11/14/2017

Total

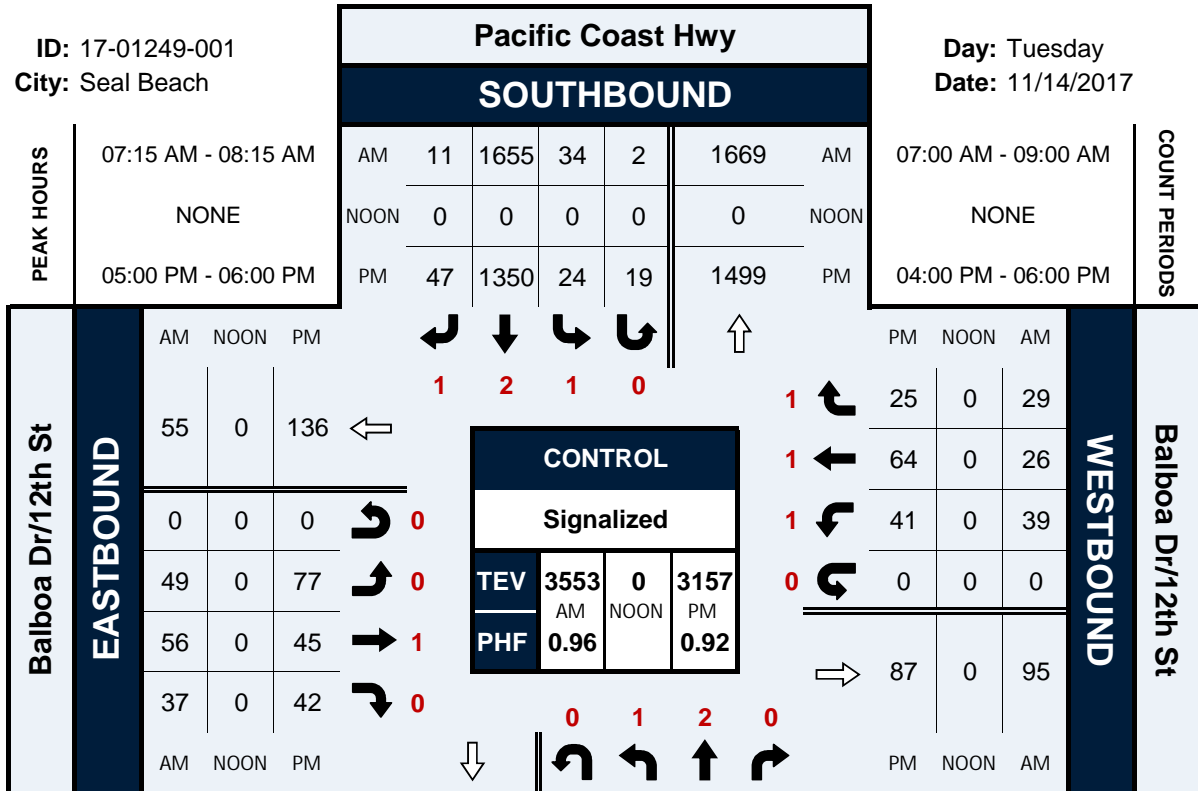
NS/EW Streets:	Pacific Coast Hwy				Pacific Coast Hwy				Balboa Dr/12th St				Balboa Dr/12th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	1 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	4	311	1	1	4	466	9	1	16	7	8	0	7	3	4	0	842
7:15 AM	2	389	2	1	5	469	6	1	15	8	11	0	11	2	1	0	923
7:30 AM	3	402	1	2	18	425	1	0	11	36	6	0	9	4	5	0	923
7:45 AM	9	398	0	0	8	349	4	1	10	10	8	0	12	12	20	0	841
8:00 AM	4	400	2	0	3	412	0	0	13	2	12	0	7	8	3	0	866
8:15 AM	8	354	4	0	1	431	5	1	9	3	6	0	10	5	2	0	839
8:30 AM	11	277	4	6	5	316	5	1	19	16	11	0	14	3	6	0	694
8:45 AM	4	308	2	1	3	316	5	0	12	8	13	0	7	5	5	0	689
TOTAL VOLUMES :	45	2839	16	11	47	3184	35	5	105	90	75	0	77	42	46	0	6617
APPROACH %'s :	1.55%	97.53%	0.55%	0.38%	1.44%	97.34%	1.07%	0.15%	38.89%	33.33%	27.78%	0.00%	46.67%	25.45%	27.88%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	18	1589	5	3	34	1655	11	2	49	56	37	0	39	26	29	0	3553
PEAK HR FACTOR :	0.500	0.988	0.625	0.375	0.472	0.882	0.458	0.500	0.817	0.389	0.771	0.000	0.813	0.542	0.363	0.000	0.962
	0.990				0.885				0.670				0.534				
PM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	1 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
4:00 PM	4	310	4	3	6	336	19	3	18	9	5	0	12	16	9	0	754
4:15 PM	5	298	8	2	14	324	6	2	19	17	5	0	10	14	3	0	727
4:30 PM	4	303	3	2	10	329	7	6	12	12	7	0	12	12	4	0	723
4:45 PM	6	323	4	0	3	320	11	5	20	12	10	0	14	14	4	0	746
5:00 PM	8	295	3	1	6	315	11	4	16	16	12	0	12	19	3	0	721
5:15 PM	7	383	4	0	9	351	13	4	25	15	11	0	12	16	10	0	860
5:30 PM	4	354	4	1	1	367	14	7	21	6	10	0	11	16	5	0	821
5:45 PM	6	346	7	0	8	317	9	4	15	8	9	0	6	13	7	0	755
TOTAL VOLUMES :	44	2612	37	9	57	2659	90	35	146	95	69	0	89	120	45	0	6107
APPROACH %'s :	1.63%	96.67%	1.37%	0.33%	2.01%	93.59%	3.17%	1.23%	47.10%	30.65%	22.26%	0.00%	35.04%	47.24%	17.72%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	25	1378	18	2	24	1350	47	19	77	45	42	0	41	64	25	0	3157
PEAK HR FACTOR :	0.781	0.899	0.643	0.500	0.667	0.920	0.839	0.679	0.770	0.703	0.875	0.000	0.854	0.842	0.625	0.000	0.918
	0.903				0.925				0.804				0.855				

Pacific Coast Hwy & Balboa Dr/12th St

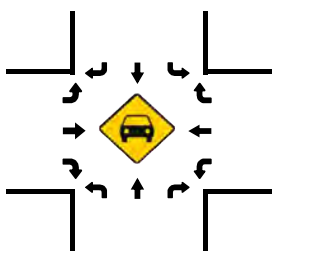
Peak Hour Turning Movement Count

ID: 17-01249-001
City: Seal Beach

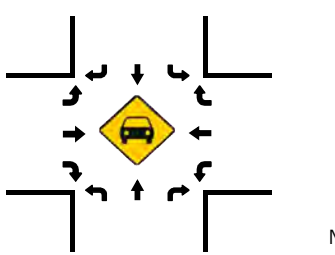
Day: Tuesday
Date: 11/14/2017



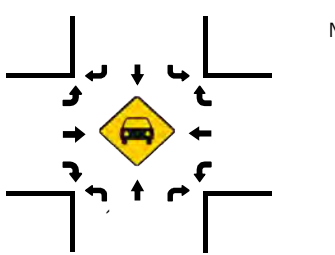
Total Vehicles (AM)



Total Vehicles (NOON)



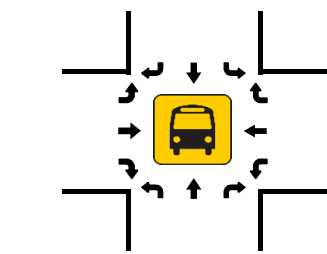
Total Vehicles (PM)



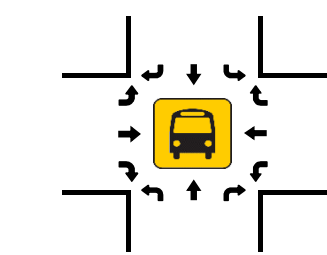
Pacific Coast Hwy NORTHBOUND	AM				
	PM	NOON	AM	NOON	PM
1435	2	25	1378	18	1435
0	0	0	0	0	0
1734	3	18	1589	5	1734

Pacific Coast Hwy NORTHBOUND

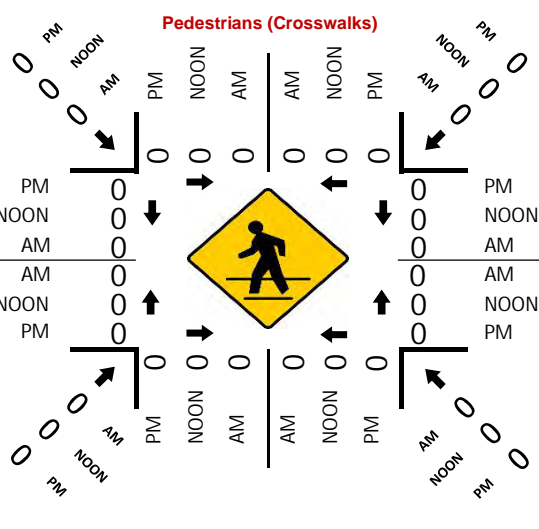
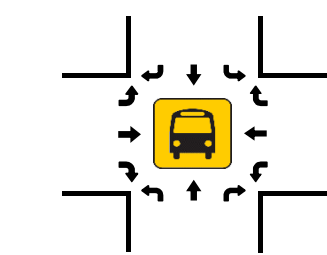
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Pacific Coast Hwy & Main St
 City: Seal Beach
 Control: Signalized

Project ID: 17-01249-002
 Date: 11/14/2017

Total

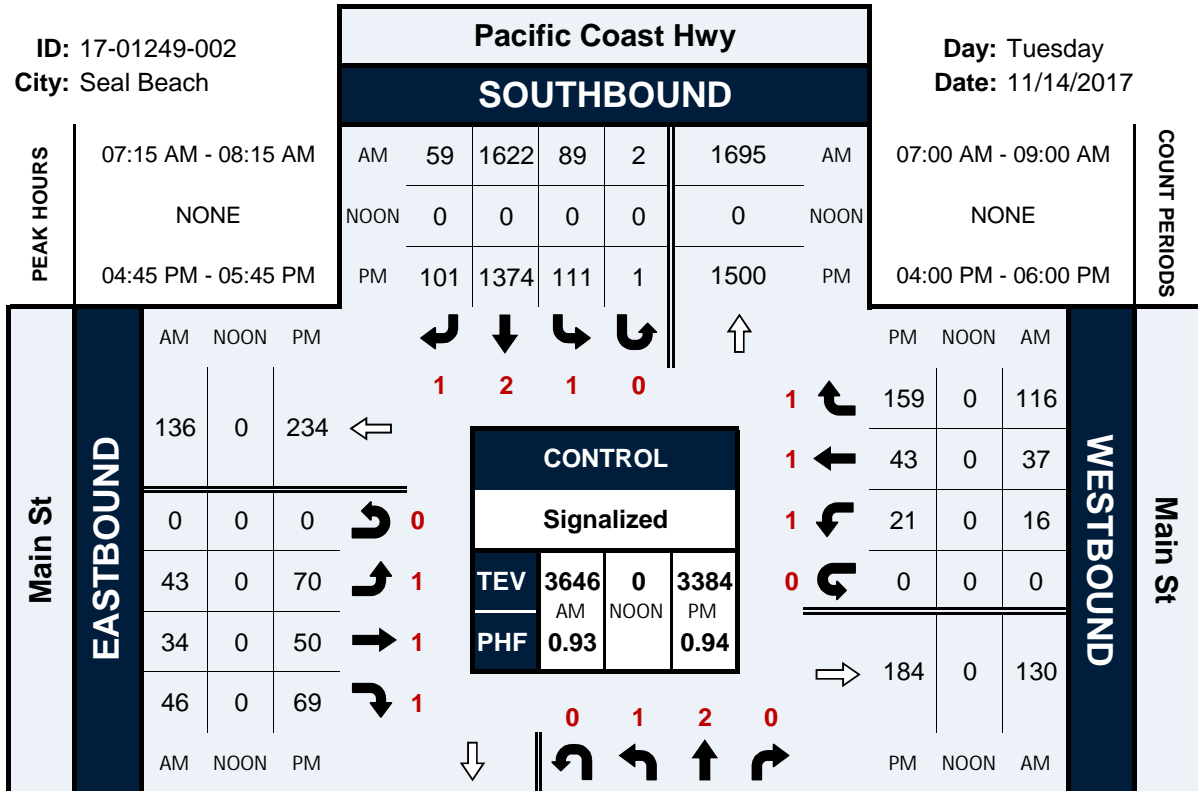
NS/EW Streets:	Pacific Coast Hwy				Pacific Coast Hwy				Main St				Main St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	1 SR	0 SU	1 EL	1 ET	1 ER	0 EU	1 WL	1 WT	1 WR	0 WU	TOTAL
7:00 AM	4	373	0	0	10	463	10	0	9	4	11	0	2	7	17	0	910
7:15 AM	10	341	0	0	14	433	14	1	15	7	11	0	2	3	20	0	871
7:30 AM	8	395	1	0	36	459	10	0	14	11	13	0	1	6	23	0	977
7:45 AM	12	409	4	1	22	325	16	1	5	9	15	0	8	12	40	0	879
8:00 AM	10	389	2	0	17	405	19	0	9	7	7	0	5	16	33	0	919
8:15 AM	16	311	0	0	14	408	20	0	11	10	13	0	9	14	29	0	855
8:30 AM	15	306	1	2	14	296	14	2	14	4	10	0	4	9	22	0	713
8:45 AM	20	304	3	0	13	294	21	2	13	6	11	0	7	11	18	0	723
TOTAL VOLUMES :	95	2828	11	3	140	3083	124	6	90	58	91	0	38	78	202	0	6847
APPROACH %'s :	3.23%	96.29%	0.37%	0.10%	4.18%	91.95%	3.70%	0.18%	37.66%	24.27%	38.08%	0.00%	11.95%	24.53%	63.52%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	40	1534	7	1	89	1622	59	2	43	34	46	0	16	37	116	0	3646
PEAK HR FACTOR :	0.833	0.938	0.438	0.250	0.618	0.883	0.776	0.500	0.717	0.773	0.767	0.000	0.500	0.578	0.725	0.000	0.933
	0.928				0.877				0.809				0.704				
PM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	1 SR	0 SU	1 EL	1 ET	1 ER	0 EU	1 WL	1 WT	1 WR	0 WU	TOTAL
4:00 PM	14	267	0	1	33	314	26	0	13	10	25	0	6	18	31	0	758
4:15 PM	18	303	3	1	26	315	20	0	20	14	15	0	6	9	30	0	780
4:30 PM	14	288	2	0	33	320	29	0	25	15	16	0	4	16	37	0	799
4:45 PM	27	294	6	1	18	343	20	0	12	7	16	0	2	10	33	0	789
5:00 PM	16	286	5	0	31	321	27	0	31	18	26	0	4	11	49	0	825
5:15 PM	26	371	9	1	29	343	27	1	12	15	10	0	9	11	33	0	897
5:30 PM	21	319	3	0	33	367	27	0	15	10	17	0	6	11	44	0	873
5:45 PM	23	298	1	0	30	292	22	1	22	9	18	0	5	12	36	0	769
TOTAL VOLUMES :	159	2426	29	4	233	2615	198	2	150	98	143	0	42	98	293	0	6490
APPROACH %'s :	6.07%	92.67%	1.11%	0.15%	7.64%	85.79%	6.50%	0.07%	38.36%	25.06%	36.57%	0.00%	9.70%	22.63%	67.67%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	90	1270	23	2	111	1374	101	1	70	50	69	0	21	43	159	0	3384
PEAK HR FACTOR :	0.833	0.856	0.639	0.500	0.841	0.936	0.935	0.250	0.565	0.694	0.663	0.000	0.583	0.977	0.811	0.000	0.943
	0.851				0.929				0.630				0.871				

Pacific Coast Hwy & Main St

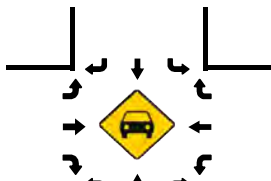
Peak Hour Turning Movement Count

ID: 17-01249-002
City: Seal Beach

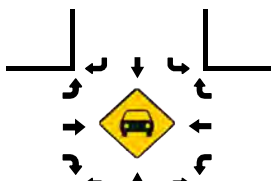
Day: Tuesday
Date: 11/14/2017



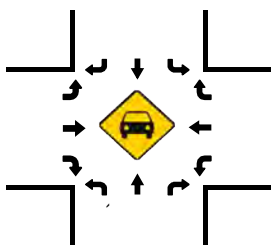
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

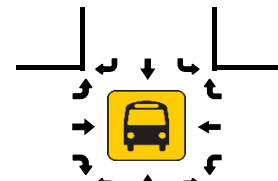


PM	1466	2	90	1270	23	PM
NOON	0	0	0	0	0	NOON
AM	1685	1	40	1534	7	AM

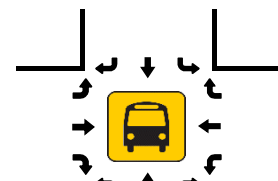
NORTHBOUND

Pacific Coast Hwy

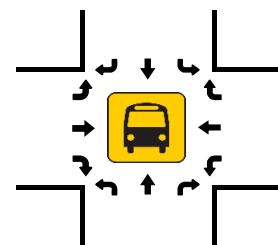
Total Vehicles (AM)



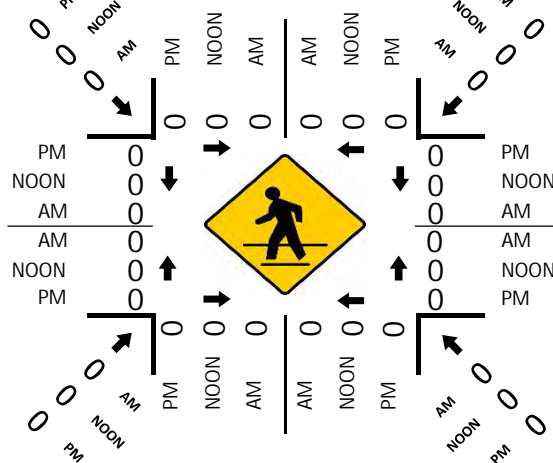
Total Vehicles (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Pacific Coast Hwy & Marvista Dr/5th St
 City: Seal Beach
 Control: Signalized

Project ID: 17-01249-003
 Date: 11/14/2017

Total

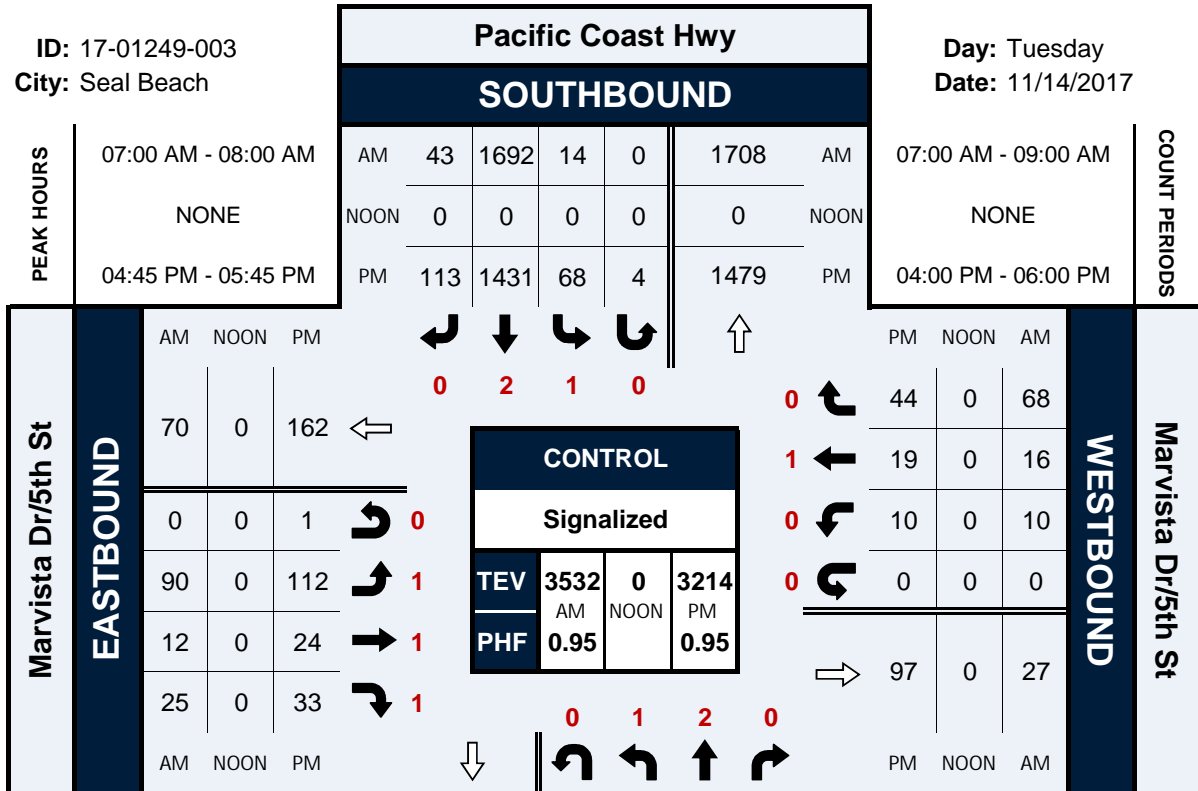
NS/EW Streets:	Pacific Coast Hwy				Pacific Coast Hwy				Marvista Dr/5th St				Marvista Dr/5th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	2	0	0	1	2	0	0	1	1	1	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	1	360	0	0	3	447	11	0	20	2	11	0	0	3	19	0	877
7:15 AM	3	373	1	0	5	464	6	0	22	3	1	0	4	5	17	0	904
7:30 AM	0	409	0	0	4	453	10	0	20	5	9	0	3	5	16	0	934
7:45 AM	7	408	0	0	2	328	16	0	28	2	4	0	3	3	16	0	817
8:00 AM	4	360	1	0	5	406	10	0	30	4	5	0	0	3	12	0	840
8:15 AM	5	344	1	0	3	419	16	2	34	0	8	0	2	1	18	0	853
8:30 AM	1	311	0	0	3	284	15	0	33	3	9	0	3	2	19	0	683
8:45 AM	3	298	0	0	5	321	14	1	23	3	5	0	2	2	19	0	696
TOTAL VOLUMES :	24	2863	3	0	30	3122	98	3	210	22	52	0	17	24	136	0	6604
APPROACH %'s :	0.83%	99.07%	0.10%	0.00%	0.92%	95.97%	3.01%	0.09%	73.94%	7.75%	18.31%	0.00%	9.60%	13.56%	76.84%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	11	1550	1	0	14	1692	43	0	90	12	25	0	10	16	68	0	3532
PEAK HR FACTOR :	0.393	0.947	0.250	0.000	0.700	0.912	0.672	0.000	0.804	0.600	0.568	0.000	0.625	0.800	0.895	0.000	0.945
	0.941																
	0.921																
	0.934																
	0.904																
PM	1	2	0	0	1	2	0	0	1	1	1	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	5	279	2	1	17	334	22	2	23	5	5	0	3	7	6	0	711
4:15 PM	6	262	2	0	13	315	28	0	23	4	8	0	3	5	14	0	683
4:30 PM	10	331	1	0	19	344	19	3	22	6	5	0	2	0	15	0	777
4:45 PM	5	268	2	0	13	347	33	3	23	2	6	0	3	5	7	0	717
5:00 PM	8	356	2	0	23	350	28	1	35	7	9	1	1	6	18	0	845
5:15 PM	8	375	0	1	13	360	23	0	20	7	6	0	1	4	6	0	824
5:30 PM	8	320	1	1	19	374	29	0	34	8	12	0	5	4	13	0	828
5:45 PM	5	307	0	1	13	315	24	1	25	4	4	0	1	3	6	0	709
TOTAL VOLUMES :	55	2498	10	4	130	2739	206	10	205	43	55	1	19	34	85	0	6094
APPROACH %'s :	2.14%	97.31%	0.39%	0.16%	4.21%	88.78%	6.68%	0.32%	67.43%	14.14%	18.09%	0.33%	13.77%	24.64%	61.59%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	29	1319	5	2	68	1431	113	4	112	24	33	1	10	19	44	0	3214
PEAK HR FACTOR :	0.906	0.879	0.625	0.500	0.739	0.957	0.856	0.333	0.800	0.750	0.688	0.250	0.500	0.792	0.611	0.000	0.951
	0.882																
	0.957																
	0.787																
	0.730																

Pacific Coast Hwy & Marvista Dr/5th St

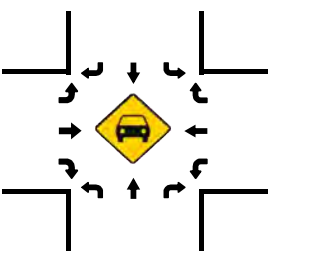
Peak Hour Turning Movement Count

ID: 17-01249-003
City: Seal Beach

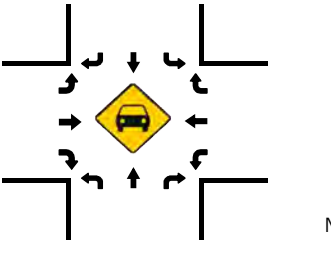
Day: Tuesday
Date: 11/14/2017



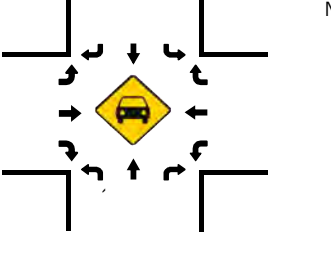
Total Vehicles (AM)



Total Vehicles (NOON)



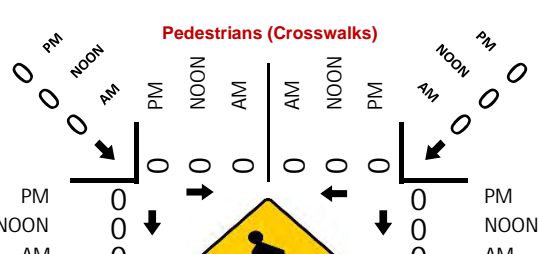
Total Vehicles (PM)



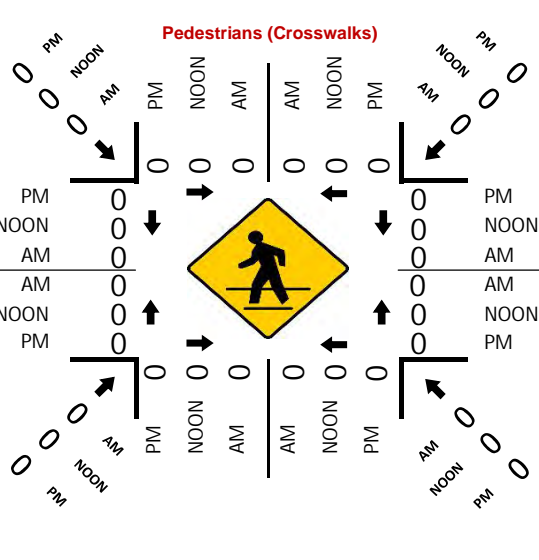
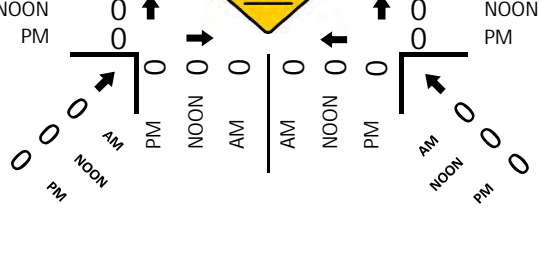
PM	1476	2	29	1319	5	PM
NOON	0	0	0	0	0	NOON
AM	1727	0	11	1550	1	AM

NORTHBOUND Pacific Coast Hwy

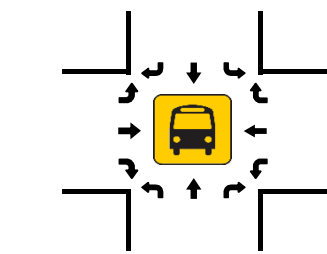
Total Vehicles (AM)



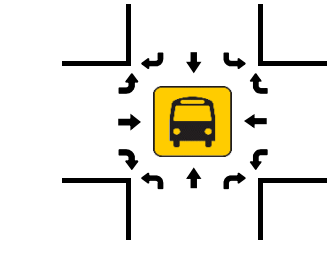
Total Vehicles (NOON)



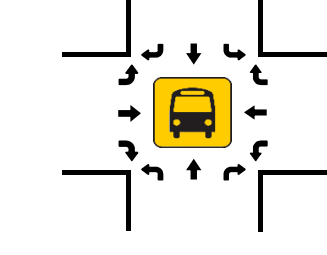
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Pacific Coast Hwy & 1st St
 City: Seal Beach
 Control: Signalized

Project ID: 17-01249-004
 Date: 11/14/2017

Total

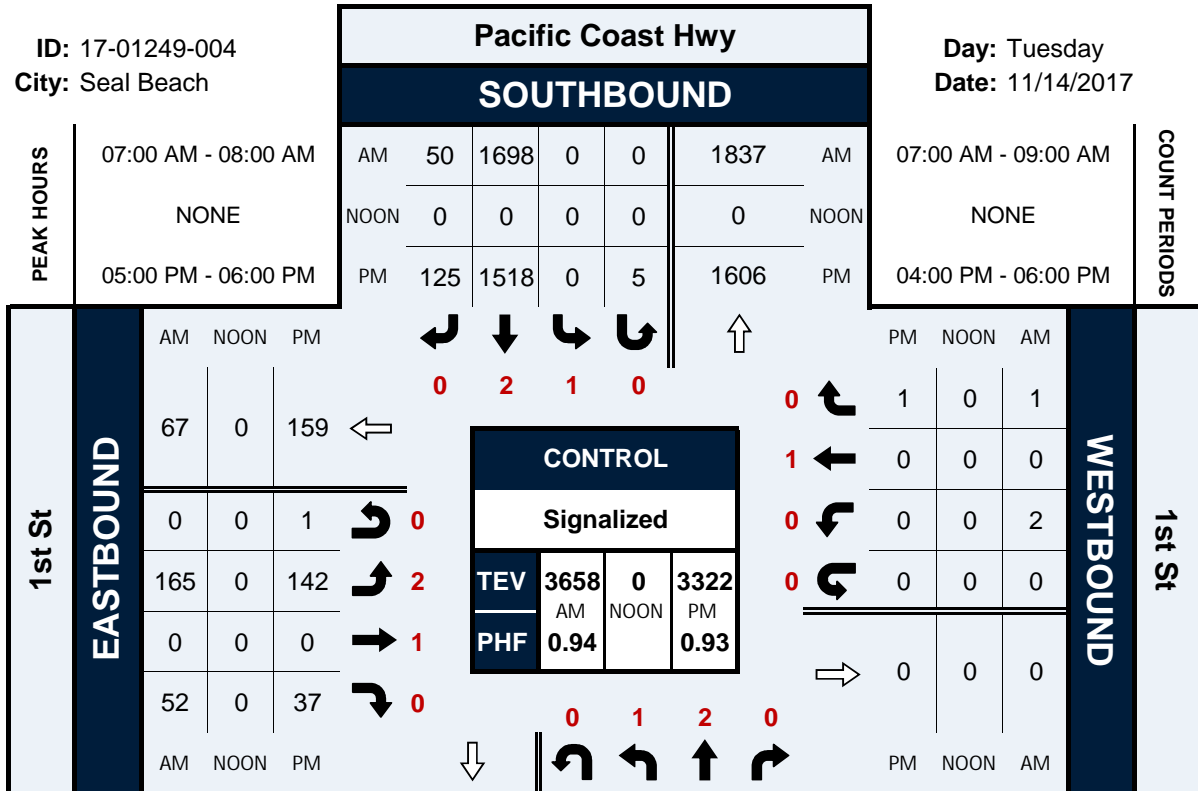
NS/EW Streets:	Pacific Coast Hwy				Pacific Coast Hwy				1st St				1st St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	2 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	3	365	0	0	0	455	12	0	39	0	8	0	1	0	1	0	
7:15 AM	5	436	0	0	0	473	12	0	41	0	8	0	1	0	0	0	
7:30 AM	4	402	0	2	0	440	12	0	60	0	28	0	0	0	0	0	
7:45 AM	5	468	0	0	0	330	14	0	25	0	8	0	0	0	0	0	
8:00 AM	5	383	0	0	0	423	8	0	38	0	9	0	0	0	0	0	
8:15 AM	5	407	2	0	0	417	12	0	25	0	12	0	0	0	1	0	
8:30 AM	6	329	1	3	0	301	13	2	36	0	12	1	0	0	1	0	
8:45 AM	6	350	0	0	0	320	21	0	23	0	12	1	0	0	0	0	
TOTAL VOLUMES :	39	3140	3	5	0	3159	104	2	287	0	97	2	2	0	3	0	
APPROACH %'s :	1.22%	98.53%	0.09%	0.16%	0.00%	96.75%	3.19%	0.06%	74.35%	0.00%	25.13%	0.52%	40.00%	0.00%	60.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																
PEAK HR VOL :	17	1671	0	2	0	1698	50	0	165	0	52	0	2	0	1	0	
PEAK HR FACTOR :	0.850	0.893	0.000	0.250	0.000	0.897	0.893	0.000	0.688	0.000	0.464	0.000	0.500	0.000	0.250	0.000	
	0.893				0.901				0.616				0.375				
TOTAL																	3658
																	0.937
PM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	2 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	7	297	1	0	0	338	14	1	36	1	9	1	1	0	2	0	
4:15 PM	13	317	0	0	0	360	26	1	23	1	9	0	1	0	2	0	
4:30 PM	9	347	0	1	0	371	19	1	23	0	11	0	0	0	0	0	
4:45 PM	5	281	1	0	0	379	39	1	34	0	12	0	0	0	0	0	
5:00 PM	10	372	0	0	0	392	33	1	40	0	3	0	0	0	1	0	
5:15 PM	7	354	0	1	0	365	28	1	47	0	18	0	0	0	0	0	
5:30 PM	9	388	0	0	0	428	34	1	27	0	8	1	0	0	0	0	
5:45 PM	7	344	0	1	0	333	30	2	28	0	8	0	0	0	0	0	
TOTAL VOLUMES :	67	2700	2	3	0	2966	223	9	258	2	78	2	2	0	5	0	
APPROACH %'s :	2.42%	97.40%	0.07%	0.11%	0.00%	92.75%	6.97%	0.28%	75.88%	0.59%	22.94%	0.59%	28.57%	0.00%	71.43%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																
PEAK HR VOL :	33	1458	0	2	0	1518	125	5	142	0	37	1	0	0	1	0	
PEAK HR FACTOR :	0.825	0.939	0.000	0.500	0.000	0.887	0.919	0.625	0.755	0.000	0.514	0.250	0.000	0.000	0.250	0.000	
	0.940				0.890				0.692				0.250				
TOTAL																	3322
																	0.927

Pacific Coast Hwy & 1st St

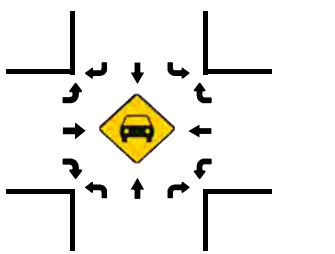
Peak Hour Turning Movement Count

ID: 17-01249-004
City: Seal Beach

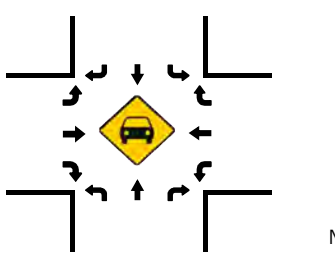
Day: Tuesday
Date: 11/14/2017



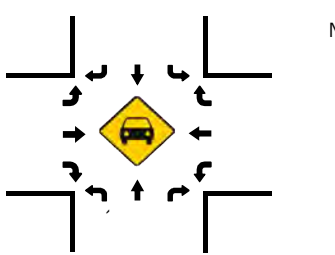
Total Vehicles (AM)



Total Vehicles (NOON)



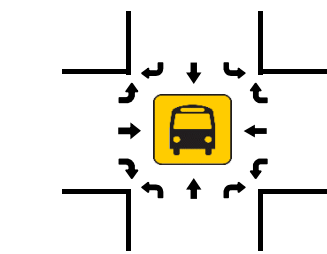
Total Vehicles (PM)



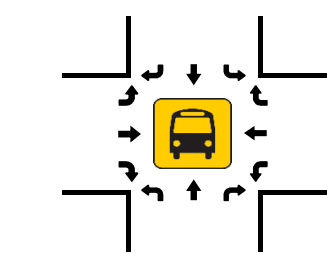
PM	1557	2	33	1458	0	PM
NOON	0	0	0	0	0	NOON
AM	1754	2	17	1671	0	AM

Pacific Coast Hwy NORTHBOUND

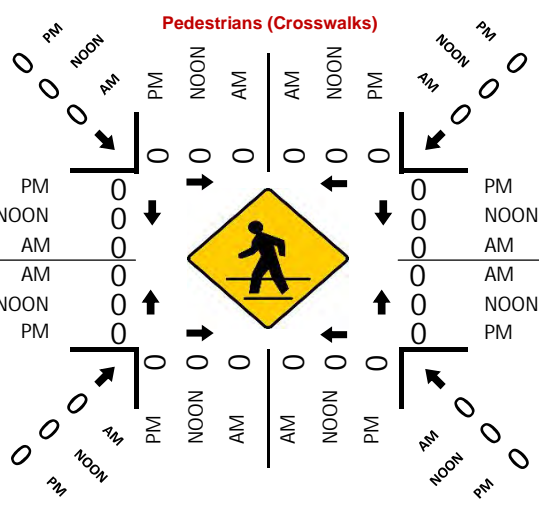
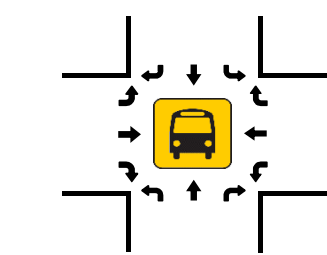
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: 5th St & Marina Dr
 City: Seal Beach
 Control: 4-Way Stop

Project ID: 17-01249-005
 Date: 11/14/2017

Total

NS/EW Streets:	5th St				5th St				Marina Dr				Marina Dr				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	1	4	1	0	3	6	2	0	3	13	0	0	1	17	8	0					59
7:15 AM	0	11	4	0	4	8	4	0	0	25	0	0	1	19	7	0					83
7:30 AM	0	10	5	0	2	9	2	0	3	27	0	0	4	16	4	1					83
7:45 AM	1	8	4	0	6	11	5	0	0	21	0	0	1	28	13	0					98
8:00 AM	0	8	7	0	5	4	2	0	6	26	3	0	4	24	19	0					108
8:15 AM	0	12	4	0	3	7	9	0	2	16	1	0	3	32	10	0					99
8:30 AM	0	7	2	0	5	12	1	0	4	15	2	0	3	30	18	0					99
8:45 AM	1	7	3	0	5	4	4	0	2	24	0	0	0	37	11	0					98
TOTAL VOLUMES :	3	67	30	0	33	61	29	0	20	167	6	0	17	203	90	1					727
APPROACH %'s :	3.00%	67.00%	30.00%	0.00%	26.83%	49.59%	23.58%	0.00%	10.36%	86.53%	3.11%	0.00%	5.47%	65.27%	28.94%	0.32%					
PEAK HR :	07:45 AM - 08:45 AM																				TOTAL
PEAK HR VOL :	1	35	17	0	19	34	17	0	12	78	6	0	11	114	60	0					404
PEAK HR FACTOR :	0.250	0.729	0.607	0.000	0.792	0.708	0.472	0.000	0.500	0.750	0.500	0.000	0.688	0.891	0.789	0.000					0.935
				0.828				0.795				0.686				0.907					
PM	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0	0	TOTAL				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	1	7	6	0	10	12	8	0	7	25	2	0	5	29	11	0	123				
4:15 PM	1	8	4	1	9	10	8	0	5	32	1	0	3	34	11	0	127				
4:30 PM	1	4	3	0	3	8	12	0	7	29	4	0	9	43	14	0	137				
4:45 PM	2	7	7	0	8	20	6	0	6	33	1	0	11	37	13	0	151				
5:00 PM	1	11	5	1	13	12	9	0	6	28	0	0	8	47	15	0	156				
5:15 PM	1	8	4	0	8	11	13	0	8	37	3	0	4	38	18	0	153				
5:30 PM	2	8	4	0	7	11	8	0	9	22	0	0	6	39	21	0	137				
5:45 PM	0	4	5	0	4	16	7	0	1	23	1	0	5	36	20	0	122				
TOTAL VOLUMES :	9	57	38	2	62	100	71	0	49	229	12	0	51	303	123	0	1106				
APPROACH %'s :	8.49%	53.77%	35.85%	1.89%	26.61%	42.92%	30.47%	0.00%	16.90%	78.97%	4.14%	0.00%	10.69%	63.52%	25.79%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL				
PEAK HR VOL :	5	30	19	1	32	51	40	0	27	127	8	0	32	165	60	0	597				
PEAK HR FACTOR :	0.625	0.682	0.679	0.250	0.615	0.638	0.769	0.000	0.844	0.858	0.500	0.000	0.727	0.878	0.833	0.000	0.957				
				0.764				0.904				0.844				0.918					

National Data & Surveying Services

Intersection Turning Movement Count

Location: 1st St & Marina Dr
 City: Seal Beach
 Control: Signalized

Project ID: 17-01249-006
 Date: 11/14/2017

Total

NS/EW Streets:	1st St				1st St				Marina Dr				Marina Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	1 NR	0 NU	1 SL	1.5 ST	0.5 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	TOTAL
7:00 AM	8	12	2	0	6	3	1	0	1	6	3	0	2	16	9	0	69
7:15 AM	11	8	1	0	6	4	0	0	1	14	1	0	1	20	17	0	84
7:30 AM	14	12	1	0	2	8	2	0	3	23	7	0	3	16	15	0	106
7:45 AM	12	5	1	0	3	7	7	0	3	13	10	0	4	24	12	0	101
8:00 AM	6	6	4	0	8	2	2	1	1	13	3	0	2	22	15	1	86
8:15 AM	11	7	1	0	7	2	5	0	4	19	7	0	1	31	14	0	109
8:30 AM	22	16	1	0	2	6	3	2	1	14	8	0	4	23	21	0	123
8:45 AM	7	6	1	0	9	7	6	1	3	29	6	0	0	33	12	0	120
TOTAL VOLUMES :	91	72	12	0	43	39	26	4	17	131	45	0	17	185	115	1	798
APPROACH %'s :	52.00%	41.14%	6.86%	0.00%	38.39%	34.82%	23.21%	3.57%	8.81%	67.88%	23.32%	0.00%	5.35%	58.18%	36.16%	0.31%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	46	35	7	0	26	17	16	4	9	75	24	0	7	109	62	1	438
PEAK HR FACTOR :	0.523	0.547	0.438	0.000	0.722	0.607	0.667	0.500	0.563	0.647	0.750	0.000	0.438	0.826	0.738	0.250	0.890
	0.564				0.685				0.711				0.932				
PM	1 NL	2 NT	1 NR	0 NU	1 SL	1.5 ST	0.5 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	TOTAL
4:00 PM	11	13	8	0	7	6	5	2	7	36	17	1	2	32	21	0	168
4:15 PM	11	8	1	0	8	5	3	2	4	57	15	0	3	27	17	0	161
4:30 PM	9	6	3	0	7	4	4	0	6	41	19	0	3	48	8	0	158
4:45 PM	12	13	2	0	8	11	2	0	4	35	20	0	3	33	13	0	156
5:00 PM	17	22	4	0	16	7	5	2	2	24	17	0	1	51	14	0	182
5:15 PM	28	16	1	0	6	6	3	3	12	43	24	0	0	49	31	0	222
5:30 PM	8	10	2	0	4	8	0	0	3	32	10	0	2	33	21	0	133
5:45 PM	7	5	3	0	4	5	6	0	3	30	11	0	2	42	13	0	131
TOTAL VOLUMES :	103	93	24	0	60	52	28	9	41	298	133	1	16	315	138	0	1311
APPROACH %'s :	46.82%	42.27%	10.91%	0.00%	40.27%	34.90%	18.79%	6.04%	8.67%	63.00%	28.12%	0.21%	3.41%	67.16%	29.42%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	66	57	10	0	37	28	14	5	24	143	80	0	7	181	66	0	718
PEAK HR FACTOR :	0.589	0.648	0.625	0.000	0.578	0.636	0.700	0.417	0.500	0.831	0.833	0.000	0.583	0.887	0.532	0.000	0.809
	0.739				0.700				0.782				0.794				

APPENDIX D

**INTERSECTION ANALYSIS
WORKSHEETS**

Scenario Report

Scenario: EX AM
 Command: EX AM
 Volume: EX AM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: None
 Trip Distribution: None
 Paths: Default Path
 Routes: Default Route
 Configuration: EX

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	LOS Veh	C	LOS Veh	C	+ 0.000 V/C
	C xxxxx	0.711	C xxxxx	0.711	
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.745	C xxxxx	0.745	+ 0.000 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.687	B xxxxx	0.687	+ 0.000 V/C
# 4 Pacific Coast Highway at Balbo	C xxxxx	0.729	C xxxxx	0.729	+ 0.000 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.251	A xxxxx	0.251	+ 0.000 V/C
# 6 5th Street at Marina Drive	A	8.1 0.217	A	8.1 0.217	+ 0.000 V/C

Level Of Service Computation Report
 ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

 Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.711
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 51 Level Of Service: C

Street Name: Pacific Coast Highway 1st 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 Split Phase Split Phase
 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 1 0 1 0 1 1 0 0 0 1 0 0

Volume Module:
 Base Vol: 19 1671 0 0 1698 50 165 0 52 2 0 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: 19 1671 0 0 1698 50 165 0 52 2 0 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: 19 1671 0 0 1698 50 165 0 52 2 0 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: 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: 19 1671 0 0 1698 50 165 0 52 2 0 1
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 19 1671 0 0 1698 50 165 0 52 2 0 1
 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: 19 1671 0 0 1698 50 165 0 52 2 0 1

Saturation Flow Module:
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
 Adjustment: 0.94 0.97 1.00 0.94 0.97 0.94 0.94 0.94 0.94 1.00 1.00 1.00
 Lanes: 1.00 2.00 0.00 1.00 1.94 0.06 2.00 0.00 1.00 0.67 0.00 0.33
 Final Sat.: 1600 3300 0 1600 3208 92 3200 0 1600 1133 0 567

Capacity Analysis Module:
 Vol/Sat: 0.01 0.51 0.00 0.00 0.53 0.55 0.05 0.00 0.03 0.00 0.00 0.00
 Crit Moves: ****

Level Of Service Computation Report
 ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

 Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.745
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 56 Level Of Service: C

Street Name: Pacific Coast Highway Marvista Drive/5th 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 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 1 0 1 0 1 1 0 1 0 1 0 0 1

Volume Module:
 Base Vol: 11 1550 1 14 1692 43 90 12 25 10 16 68
 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: 11 1550 1 14 1692 43 90 12 25 10 16 68
 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: 11 1550 1 14 1692 43 90 12 25 10 16 68
 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: 11 1550 1 14 1692 43 90 12 25 10 16 68
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 11 1550 1 14 1692 43 90 12 25 10 16 68
 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: 11 1550 1 14 1692 43 90 12 25 10 16 68

Saturation Flow Module:
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
 Adjustment: 0.94 0.97 0.94 0.94 0.97 0.94 0.94 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.99 0.01 1.00 1.95 0.05 1.00 1.00 1.00 0.38 0.62 1.00
 Final Sat.: 1600 3298 2 1600 3221 79 1600 1700 1700 654 1046 1700

Capacity Analysis Module:
 Vol/Sat: 0.01 0.47 0.48 0.01 0.53 0.54 0.06 0.01 0.01 0.01 0.02 0.04
 Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.687
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, and OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with columns for Vol/Sat, OvlAdjV/S, and Crit Moves. Rows include Vol/Sat, OvlAdjV/S, and Crit Moves.

Capacity Analysis Module:
Vol/Sat: 0.03 0.02 0.03 0.01 0.02 0.07 0.06 0.48 0.03 0.03 0.47 0.48
OvlAdjV/S: 0.01
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.729
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, and OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with columns for Vol/Sat, OvlAdjV/S, and Crit Moves. Rows include Vol/Sat, OvlAdjV/S, and Crit Moves.

Capacity Analysis Module:
Vol/Sat: 0.03 0.08 0.08 0.02 0.02 0.02 0.02 0.49 0.01 0.01 0.48 0.50
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.251
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for 1st Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves for Capacity Analysis Module.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.217
Loss Time (sec): 0 Average Delay (sec/veh): 8.1
Optimal Cycle: 0 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for 5th Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ for Capacity Analysis Module.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: EX PM
 Command: EX PM
 Volume: EX PM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: None
 Trip Distribution: None
 Paths: Default Path
 Routes: Default Route
 Configuration: EX

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
	LOS	Veh C	LOS	Veh C	
# 1 Pacific Coast Highway at 1st S	B xxxxx	0.681	B xxxxx	0.681	+ 0.000 V/C
# 2 Pacific Coast Highway at Marvi	B xxxxx	0.698	B xxxxx	0.698	+ 0.000 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.643	B xxxxx	0.643	+ 0.000 V/C
# 4 Pacific Coast Highway at Balbo	B xxxxx	0.685	B xxxxx	0.685	+ 0.000 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.319	A xxxxx	0.319	+ 0.000 V/C
# 6 5th Street at Marina Drive	A 9.0	0.326	A 9.0	0.326	+ 0.000 V/C

Level Of Service Computation Report
 ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

 Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.681
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 48 Level Of Service: B

Street Name: Pacific Coast Highway 1st 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 Split Phase Split Phase
 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
 Lanes: 1 0 1 1 0 1 0 1 0 0 0 0 1

Volume Module:
 Base Vol: 35 1458 0 5 1518 125 143 0 37 0 0 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
 Initial Bse: 35 1458 0 5 1518 125 143 0 37 0 0 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: 35 1458 0 5 1518 125 143 0 37 0 0 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
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Volume: 35 1458 0 5 1518 125 143 0 37 0 0 1
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 35 1458 0 5 1518 125 143 0 37 0 0 1
 PCE Adj: 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
 FinalVolume: 35 1458 0 5 1518 125 143 0 37 0 0 1

Saturation Flow Module:
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
 Adjustment: 0.94 0.97 1.00 0.94 0.97 0.94 0.94 0.94 0.94 0.94 1.00
 Lanes: 1.00 2.00 0.00 1.00 1.85 0.15 2.00 0.00 1.00 0.00 0.00 1.00
 Final Sat.: 1600 3300 0 1600 3057 243 3200 0 1600 0 0 1700

Capacity Analysis Module:
 Vol/Sat: 0.02 0.44 0.00 0.00 0.50 0.51 0.04 0.00 0.02 0.00 0.00 0.00
 Crit Moves: ****

Level Of Service Computation Report
 ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

 Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.698
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 50 Level Of Service: B

Street Name: Pacific Coast Highway Marvista Drive/5th 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 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
 Lanes: 1 0 1 1 0 1 0 1 0 1 0 1 0 1

Volume Module:
 Base Vol: 31 1319 5 72 1431 113 113 24 33 10 19 44
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 31 1319 5 72 1431 113 113 24 33 10 19 44
 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: 31 1319 5 72 1431 113 113 24 33 10 19 44
 User Adj: 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
 PHF Volume: 31 1319 5 72 1431 113 113 24 33 10 19 44
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 31 1319 5 72 1431 113 113 24 33 10 19 44
 PCE Adj: 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
 FinalVolume: 31 1319 5 72 1431 113 113 24 33 10 19 44

Saturation Flow Module:
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
 Adjustment: 0.94 0.97 0.94 0.94 0.97 0.94 0.94 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.99 0.01 1.00 1.85 0.15 1.00 1.00 1.00 0.34 0.66 1.00
 Final Sat.: 1600 3288 12 1600 3066 234 1600 1700 1700 586 1114 1700

Capacity Analysis Module:
 Vol/Sat: 0.02 0.40 0.41 0.05 0.47 0.48 0.07 0.01 0.02 0.01 0.02 0.03
 Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.643
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.685
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.319
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for 1st Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves for Capacity Analysis Module.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.326
Loss Time (sec): 0 Average Delay (sec/veh): 9.0
Optimal Cycle: 0 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for 5th Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ for Capacity Analysis Module.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: EX WP AM

Command: EX WP AM

Volume: EX AM

Geometry: EXISTING

Impact Fee: Default Impact Fee

Trip Generation: Project AM

Trip Distribution: Project

Paths: Default Path

Routes: Default Route

Configuration: EX

Trip Generation Report

Forecast for PROJECT AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	71.00	69.00	71	69	140	70.0
	Zone 1 Subtotal					71	69	140	70.0
2	Pass-By	1.00	Pass-By	31.00	29.00	31	29	60	30.0
	Zone 2 Subtotal					31	29	60	30.0
TOTAL						102	98	200	100.0

Trip Distribution Report

Percent Of Trips PROJECT

Zone	To Gates						
	1	2	3	4	5	6	7
1	35.0	5.0	20.0	5.0	35.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	50.0	50.0

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
# 1 Pacific Coast Highway at 1st S	C xxxxx	0.711	C xxxxx	0.719	+ 0.008 V/C
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.745	D xxxxx	0.807	+ 0.062 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.687	B xxxxx	0.695	+ 0.008 V/C
# 4 Pacific Coast Highway at Balbo	C xxxxx	0.729	C xxxxx	0.736	+ 0.008 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.251	A xxxxx	0.253	+ 0.002 V/C
# 6 5th Street at Marina Drive	A 8.1	0.217	A 8.2	0.223	+ 0.006 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.719
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and 1st Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.807
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 68 Level Of Service: D

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.736
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.253
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level of Service: A

Street Name: 1st Street Marina Drive
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: 1 0 2 0 1 1 0 2 0 1 1 0 0 1 0

Volume Module:
Base Vol: 46 35 7 30 17 16 9 75 24 8 109 62
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: 46 35 7 30 17 16 9 75 24 8 109 62
Added Vol: 0 0 0 0 0 0 0 4 0 0 3 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 46 35 7 30 17 16 9 79 24 8 112 62
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: 46 35 7 30 17 16 9 79 24 8 112 62
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 46 35 7 30 17 16 9 79 24 8 112 62
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: 46 35 7 30 17 16 9 79 24 8 112 62

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 0.94 0.94 0.94 0.94 0.94
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 0.77 0.23 1.00 0.64 0.36
Final Sat.: 1600 3400 1700 1600 3400 1700 1600 1227 373 1600 1030 570

Capacity Analysis Module:
Vol/Sat: 0.03 0.01 0.00 0.02 0.01 0.01 0.01 0.06 0.06 0.01 0.11 0.11
Crit Moves: ****

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.223
Loss Time (sec): 0 Average Delay (sec/veh): 8.2
Optimal Cycle: 0 Level of Service: A

Street Name: 5th Street Marina Drive
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 Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1! 0 0 0 1 0 0 1 0 0 1! 0 0

Volume Module:
Base Vol: 1 35 17 19 34 17 12 78 6 11 114 60
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: 1 35 17 19 34 17 12 78 6 11 114 60
Added Vol: 0 14 0 0 14 3 4 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 49 17 19 48 20 16 78 6 11 114 60
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: 1 49 17 19 48 20 16 78 6 11 114 60
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 49 17 19 48 20 16 78 6 11 114 60
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: 1 49 17 19 48 20 16 78 6 11 114 60

Saturation Flow Module:
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: 0.01 0.74 0.25 0.28 0.72 1.00 0.16 0.78 0.06 0.06 0.62 0.32
Final Sat.: 11 544 189 184 464 762 125 608 47 49 512 270

Capacity Analysis Module:
Vol/Sat: 0.09 0.09 0.09 0.10 0.10 0.03 0.13 0.13 0.13 0.22 0.22 0.22
Crit Moves: ****
Delay/Veh: 8.0 8.0 8.0 8.6 8.6 7.3 8.1 8.1 8.1 8.3 8.3 8.3
Delay 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
AdjDel/Veh: 8.0 8.0 8.0 8.6 8.6 7.3 8.1 8.1 8.1 8.3 8.3 8.3
LOS by Move: A A A A A A A A A A A A
ApproachDel: 8.0 8.3 8.1 8.3
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 8.0 8.3 8.1 8.3
LOS by Appr: A A A A
AllWayAvgQ: 0.1 0.1 0.1 0.1 0.1 0.0 0.1 0.1 0.1 0.3 0.3 0.3

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: EX WP PM
 Command: EX WP PM
 Volume: EX PM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: Project PM
 Trip Distribution: Project
 Paths: Default Path
 Routes: Default Route
 Configuration: EX

Trip Generation Report

Forecast for PROJECT PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	80.00	77.00	80	77	157	70.1
	Zone 1 Subtotal					80	77	157	70.1
2	Pass-By	1.00	Pass-By	34.00	33.00	34	33	67	29.9
	Zone 2 Subtotal					34	33	67	29.9
TOTAL						114	110	224	100.0

 Trip Distribution Report

Percent Of Trips PROJECT

Zone	To Gates						
	1	2	3	4	5	6	7
1	35.0	5.0	20.0	5.0	35.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	50.0	50.0

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
# 1 Pacific Coast Highway at 1st S	B xxxxx	0.681	B xxxxx	0.689	+ 0.009 V/C
# 2 Pacific Coast Highway at Marvi	B xxxxx	0.698	C xxxxx	0.767	+ 0.068 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.643	B xxxxx	0.652	+ 0.009 V/C
# 4 Pacific Coast Highway at Balbo	B xxxxx	0.685	B xxxxx	0.694	+ 0.009 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.319	A xxxxx	0.321	+ 0.003 V/C
# 6 5th Street at Marina Drive	A 9.0	0.326	A 9.2	0.335	+ 0.009 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.689
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: B

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and 1st Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.767
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 60 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.652
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, and OvlAdjVol.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, OvlAdjV/S, and Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.694
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, and OvlAdjVol.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, and other metrics.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.321
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for 1st Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves for Capacity Analysis Module.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.335
Loss Time (sec): 0 Average Delay (sec/veh): 9.2
Optimal Cycle: 0 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for 5th Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ for Capacity Analysis Module.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: OY AM

Command: OY AM

Volume: OY AM

Geometry: EXISTING

Impact Fee: Default Impact Fee

Trip Generation: None

Trip Distribution: None

Paths: Default Path

Routes: Default Route

Configuration: OY

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	C xxxxx	0.724	C xxxxx	0.744	+ 0.020 V/C
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.758	C xxxxx	0.772	+ 0.014 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.699	C xxxxx	0.723	+ 0.024 V/C
# 4 Pacific Coast Highway at Balbo	C xxxxx	0.741	C xxxxx	0.755	+ 0.013 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.249	A xxxxx	0.252	+ 0.003 V/C
# 6 5th Street at Marina Drive	A 8.1	0.222	A 8.2	0.226	+ 0.004 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.744
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and 1st Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.772
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.723
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.755
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, Sat/Lane, Adjustment, Lanes, Final Sat., Capacity Analysis Module.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.252
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for 1st Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves for Capacity Analysis Module.

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.226
Loss Time (sec): 0 Average Delay (sec/veh): 8.2
Optimal Cycle: 0 Level of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for 5th Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns: Vol/Sat, Crit Moves for Capacity Analysis Module.

Table with columns: Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: OY PM
 Command: OY PM
 Volume: OY PM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: None
 Trip Distribution: None
 Paths: Default Path
 Routes: Default Route
 Configuration: OY

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	B xxxxx	0.692	C xxxxx	0.730	+ 0.038 V/C
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.710	C xxxxx	0.738	+ 0.028 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.654	B xxxxx	0.698	+ 0.044 V/C
# 4 Pacific Coast Highway at Balbo	B xxxxx	0.697	C xxxxx	0.721	+ 0.024 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.323	A xxxxx	0.328	+ 0.005 V/C
# 6 5th Street at Marina Drive	A 9.1	0.333	A 9.2	0.346	+ 0.013 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows show traffic volume and adjustment factors.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows show saturation flow and final saturation levels.

Table with columns: Vol/Sat, Crit Moves. Rows show volume to saturation ratio and critical moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.738
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows show traffic volume and adjustment factors.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows show saturation flow and final saturation levels.

Table with columns: Vol/Sat, Crit Moves. Rows show volume to saturation ratio and critical moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.698
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves for Capacity Analysis Module.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.721
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves for Capacity Analysis Module.

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.328
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module. Rows include 1st Street and Marina Drive with various approach and movement details.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include 1st Street and Marina Drive.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include 1st Street and Marina Drive.

Table with columns for Vol/Sat and Crit Moves. Rows include 1st Street and Marina Drive.

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.346
Loss Time (sec): 0 Average Delay (sec/veh): 9.2
Optimal Cycle: 0 Level of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, and Volume Module. Rows include 5th Street and Marina Drive with various approach and movement details.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include 5th Street and Marina Drive.

Table with columns for Adjustment, Lanes, and Final Sat. Rows include 5th Street and Marina Drive.

Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ. Rows include 5th Street and Marina Drive.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: OY WP AM
 Command: OY WP AM
 Volume: OY AM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: Project AM
 Trip Distribution: Project
 Paths: Default Path
 Routes: Default Route
 Configuration: OY

Trip Generation Report

Forecast for PROJECT AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	71.00	69.00	71	69	140	70.0
	Zone 1 Subtotal					71	69	140	70.0
2	Pass-By	1.00	Pass-By	31.00	29.00	31	29	60	30.0
	Zone 2 Subtotal					31	29	60	30.0
TOTAL						102	98	200	100.0

 Trip Distribution Report

Percent Of Trips PROJECT

Zone	To Gates						
	1	2	3	4	5	6	7
1	35.0	5.0	20.0	5.0	35.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	50.0	50.0

 Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	LOS Veh	C	LOS Veh	C	+ 0.028 V/C
	C xxxxx	0.724	C xxxxx	0.752	
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.758	D xxxxx	0.834	+ 0.076 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.699	C xxxxx	0.731	+ 0.032 V/C
# 4 Pacific Coast Highway at Balbo	C xxxxx	0.741	C xxxxx	0.762	+ 0.021 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.249	A xxxxx	0.254	+ 0.005 V/C
# 6 5th Street at Marina Drive	A	8.1 0.222	A	8.3 0.232	+ 0.010 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.752
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and 1st Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.834
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 75 Level Of Service: D

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.762
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.254
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module data.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ for Capacity Analysis Module.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.232
Loss Time (sec): 0 Average Delay (sec/veh): 8.3
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, and Volume Module data.

Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table with columns for Adjustment, Lanes, and Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ for Capacity Analysis Module.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: OY WP PM
 Command: OY WP PM
 Volume: OY PM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: Project PM
 Trip Distribution: Project
 Paths: Default Path
 Routes: Default Route
 Configuration: OY

Trip Generation Report

Forecast for PROJECT PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	80.00	77.00	80	77	157	70.1
	Zone 1 Subtotal					80	77	157	70.1
2	Pass-By	1.00	Pass-By	34.00	33.00	34	33	67	29.9
	Zone 2 Subtotal					34	33	67	29.9
TOTAL						114	110	224	100.0

Trip Distribution Report

Percent Of Trips PROJECT

Zone	To Gates						
	1	2	3	4	5	6	7
1	35.0	5.0	20.0	5.0	35.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	50.0	50.0

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 Pacific Coast Highway at 1st S	B xxxxx	0.692	C xxxxx	0.738	+ 0.046 V/C
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.710	D xxxxx	0.807	+ 0.096 V/C
# 3 Pacific Coast Highway at Bolsa	B xxxxx	0.654	C xxxxx	0.706	+ 0.052 V/C
# 4 Pacific Coast Highway at Balbo	B xxxxx	0.697	C xxxxx	0.730	+ 0.033 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.323	A xxxxx	0.331	+ 0.008 V/C
# 6 5th Street at Marina Drive	A 9.1	0.333	A 9.4	0.355	+ 0.022 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.738
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows show traffic volume and adjustment factors.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows show saturation flow and final saturation levels.

Table with columns: Vol/Sat, Crit Moves. Rows show capacity analysis results.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.807
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 68 Level Of Service: D

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows show traffic volume and adjustment factors.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows show saturation flow and final saturation levels.

Table with columns: Vol/Sat, Crit Moves. Rows show capacity analysis results.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.706
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.331
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, Cumulative, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves.

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.355
Loss Time (sec): 0 Average Delay (sec/veh): 9.4
Optimal Cycle: 0 Level of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, and Volume Module.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Saturation Flow Module, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: BO AM
 Command: BO AM
 Volume: BO AM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: None
 Trip Distribution: None
 Paths: Default Path
 Routes: Default Route
 Configuration: BO

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	C xxxxx	0.782	C xxxxx	0.782	+ 0.000 V/C
# 2 Pacific Coast Highway at Marvi	D xxxxx	0.820	D xxxxx	0.820	+ 0.000 V/C
# 3 Pacific Coast Highway at Bolsa	C xxxxx	0.755	C xxxxx	0.755	+ 0.000 V/C
# 4 Pacific Coast Highway at Balbo	D xxxxx	0.801	D xxxxx	0.801	+ 0.000 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.263	A xxxxx	0.263	+ 0.000 V/C
# 6 5th Street at Marina Drive	A 8.3	0.246	A 8.3	0.246	+ 0.000 V/C

Level Of Service Computation Report
 ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

 Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.782
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 63 Level Of Service: C

Street Name: Pacific Coast Highway 1st 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 Split Phase Split Phase
 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 1 0 1 0 1 1 0 0 0 1 0 0

Volume Module:
 Base Vol: 19 1671 0 0 1698 50 165 0 52 2 0 1
 Growth Adj: 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12
 Initial Bse: 21 1865 0 0 1895 56 184 0 58 2 0 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: 21 1865 0 0 1895 56 184 0 58 2 0 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: 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: 21 1865 0 0 1895 56 184 0 58 2 0 1
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 21 1865 0 0 1895 56 184 0 58 2 0 1
 PCE Adj: 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
 FinalVolume: 21 1865 0 0 1895 56 184 0 58 2 0 1

Saturation Flow Module:
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
 Adjustment: 0.94 0.97 1.00 0.94 0.97 0.94 0.94 0.94 0.94 1.00 1.00 1.00
 Lanes: 1.00 2.00 0.00 1.00 1.94 0.06 2.00 0.00 1.00 0.67 0.00 0.33
 Final Sat.: 1600 3300 0 1600 3208 92 3200 0 1600 1133 0 567

Capacity Analysis Module:
 Vol/Sat: 0.01 0.57 0.00 0.00 0.59 0.61 0.06 0.00 0.04 0.00 0.00 0.00
 Crit Moves: ****

Level Of Service Computation Report
 ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

 Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.820
 Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 71 Level Of Service: D

Street Name: Pacific Coast Highway Marvista Drive/5th 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 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 1 0 1 0 1 1 0 1 0 1 0 0 1

Volume Module:
 Base Vol: 11 1550 1 14 1692 43 90 12 25 10 16 68
 Growth Adj: 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12
 Initial Bse: 12 1730 1 16 1888 48 100 13 28 11 18 76
 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: 12 1730 1 16 1888 48 100 13 28 11 18 76
 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: 12 1730 1 16 1888 48 100 13 28 11 18 76
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 12 1730 1 16 1888 48 100 13 28 11 18 76
 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: 12 1730 1 16 1888 48 100 13 28 11 18 76

Saturation Flow Module:
 Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
 Adjustment: 0.94 0.97 0.94 0.94 0.97 0.94 0.94 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.99 0.01 1.00 1.95 0.05 1.00 1.00 1.00 0.38 0.62 1.00
 Final Sat.: 1600 3298 2 1600 3221 79 1600 1700 1700 654 1046 1700

Capacity Analysis Module:
 Vol/Sat: 0.01 0.52 0.54 0.01 0.59 0.61 0.06 0.01 0.02 0.01 0.02 0.04
 Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.755
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.801
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 67 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.263
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, and Volume Module. Rows include 1st Street North/South Bound and Marina Drive East/West Bound.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves for Capacity Analysis Module.

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.246
Loss Time (sec): 0 Average Delay (sec/veh): 8.3
Optimal Cycle: 0 Level of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, and Volume Module. Rows include 5th Street North/South Bound and Marina Drive East/West Bound.

Table with columns for Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ for Capacity Analysis Module.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: BO PM
 Command: BO PM
 Volume: BO PM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: None
 Trip Distribution: None
 Paths: Default Path
 Routes: Default Route
 Configuration: BO

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	LOS Veh	C	LOS Veh	C	+ 0.000 V/C
	C xxxxx	0.748	C xxxxx	0.748	
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.768	C xxxxx	0.768	+ 0.000 V/C
# 3 Pacific Coast Highway at Bolsa	C xxxxx	0.706	C xxxxx	0.706	+ 0.000 V/C
# 4 Pacific Coast Highway at Balbo	C xxxxx	0.753	C xxxxx	0.753	+ 0.000 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.344	A xxxxx	0.344	+ 0.000 V/C
# 6 5th Street at Marina Drive	A	9.5 0.371	A	9.5 0.371	+ 0.000 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.748
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and 1st Street.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and 1st Street.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and 1st Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.768
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 60 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.706
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, OvlAdjV/S, Crit Moves for Capacity Analysis Module.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.753
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Vol/Sat, Crit Moves for Capacity Analysis Module.

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.344
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows for 1st Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves.

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.371
Loss Time (sec): 0 Average Delay (sec/veh): 9.5
Optimal Cycle: 0 Level of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for 5th Street and Marina Drive.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns: Saturation Flow Module, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: BO WP AM
 Command: BO WP AM
 Volume: BO AM
 Geometry: EXISTING
 Impact Fee: Default Impact Fee
 Trip Generation: Project AM
 Trip Distribution: Project
 Paths: Default Path
 Routes: Default Route
 Configuration: BO

Trip Generation Report

Forecast for PROJECT AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	71.00	69.00	71	69	140	70.0
	Zone 1 Subtotal					71	69	140	70.0
2	Pass-By	1.00	Pass-By	31.00	29.00	31	29	60	30.0
	Zone 2 Subtotal					31	29	60	30.0
TOTAL						102	98	200	100.0

Trip Distribution Report

Percent Of Trips PROJECT

Zone	To Gates						
	1	2	3	4	5	6	7
1	35.0	5.0	20.0	5.0	35.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	50.0	50.0

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	LOS Veh	C	LOS Veh	C	+ 0.008 V/C
	C xxxxx	0.782	C xxxxx	0.790	
# 2 Pacific Coast Highway at Marvi	D xxxxx	0.820	D xxxxx	0.882	+ 0.062 V/C
# 3 Pacific Coast Highway at Bolsa	C xxxxx	0.755	C xxxxx	0.763	+ 0.008 V/C
# 4 Pacific Coast Highway at Balbo	D xxxxx	0.801	D xxxxx	0.809	+ 0.008 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.263	A xxxxx	0.265	+ 0.002 V/C
# 6 5th Street at Marina Drive	A	8.3 0.246	A	8.4 0.252	+ 0.007 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.790
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 65 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and 1st Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.882
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 92 Level Of Service: D

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.763
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.809
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 69 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.265
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Table with columns for Street Name (1st Street, Marina Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), and various traffic volume and delay metrics.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each approach.

Table for Saturation Flow Module showing Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.252
Loss Time (sec): 0 Average Delay (sec/veh): 8.4
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name (5th Street, Marina Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and various traffic volume and delay metrics.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each approach.

Table for Saturation Flow Module showing Adjustment, Lanes, and Final Sat. for each approach.

Table for Capacity Analysis Module showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Scenario Report

Scenario: BO WP PM

Command: BO WP PM

Volume: BO PM

Geometry: EXISTING

Impact Fee: Default Impact Fee

Trip Generation: Project PM

Trip Distribution: Project

Paths: Default Path

Routes: Default Route

Configuration: BO

Trip Generation Report

Forecast for PROJECT PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	PROJECT	1.00	PROJECT	80.00	77.00	80	77	157	70.1
	Zone 1 Subtotal					80	77	157	70.1
2	Pass-By	1.00	Pass-By	34.00	33.00	34	33	67	29.9
	Zone 2 Subtotal					34	33	67	29.9
TOTAL						114	110	224	100.0

Trip Distribution Report

Percent Of Trips PROJECT

Zone	To Gates						
	1	2	3	4	5	6	7
1	35.0	5.0	20.0	5.0	35.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	50.0	50.0

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 1 Pacific Coast Highway at 1st S	C xxxxx	0.748	C xxxxx	0.757	+ 0.009 V/C
# 2 Pacific Coast Highway at Marvi	C xxxxx	0.768	D xxxxx	0.836	+ 0.068 V/C
# 3 Pacific Coast Highway at Bolsa	C xxxxx	0.706	C xxxxx	0.715	+ 0.009 V/C
# 4 Pacific Coast Highway at Balbo	C xxxxx	0.753	C xxxxx	0.762	+ 0.009 V/C
# 5 1st Street at Marina Drive	A xxxxx	0.344	A xxxxx	0.347	+ 0.003 V/C
# 6 5th Street at Marina Drive	A	9.5 0.371	A	9.7 0.382	+ 0.010 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Pacific Coast Highway at 1st Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.757
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: C

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and 1st Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and 1st Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and 1st Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Coast Highway at Marvista Dr/5th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.836
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 76 Level Of Service: D

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway and Marvista Drive/5th Street with various movement and control details.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Table with columns: Vol/Sat, Crit Moves. Rows include Pacific Coast Highway and Marvista Drive/5th Street.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pacific Coast Highway at Bolsa Avenue/Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.715
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Bolsa Avenue/Main Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, OvlAdjV/S, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Pacific Coast Highway at Balboa Drive/12th Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.762
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes. Rows include Pacific Coast Highway East/West Bound and Balboa Drive/12th Street North/South Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume, OvlAdjVol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 1st Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.347
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes, Volume Module, and Saturation Flow Module.

Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns for Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #6 5th Street at Marina Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.382
Loss Time (sec): 0 Average Delay (sec/veh): 9.7
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, Volume Module, and Saturation Flow Module.

























Table with columns for Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

Table with columns for Saturation Flow Module: Adjustment, Lanes, Final Sat.






















Table with columns for Capacity Analysis Module: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.
























HCM 2010 Signalized Intersection Summary
 1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 				 			 		 	 	
Traffic Volume (veh/h)	165	0	52	2	0	1	19	1671	0	0	1698	50
Future Volume (veh/h)	165	0	52	2	0	1	19	1671	0	0	1698	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	179	0	57	2	0	1	21	1816	0	0	1846	54
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	0	128	5	0	2	40	2442	0	38	2420	70
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.02	0.69	0.00	0.00	0.69	0.69
Sat Flow, veh/h	3442	0	1583	1137	0	569	1774	3632	0	1774	3512	102
Grp Volume(v), veh/h	179	0	57	3	0	0	21	1816	0	0	926	974
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1706	0	0	1774	1770	0	1774	1770	1845
Q Serve(g_s), s	4.5	0.0	3.0	0.2	0.0	0.0	1.0	28.9	0.0	0.0	30.2	30.8
Cycle Q Clear(g_c), s	4.5	0.0	3.0	0.2	0.0	0.0	1.0	28.9	0.0	0.0	30.2	30.8
Prop In Lane	1.00		1.00	0.67		0.33	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	277	0	128	7	0	0	40	2442	0	38	1219	1271
V/C Ratio(X)	0.65	0.00	0.45	0.44	0.00	0.00	0.52	0.74	0.00	0.00	0.76	0.77
Avail Cap(c_a), veh/h	701	0	322	347	0	0	102	2442	0	100	1219	1271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	38.8	43.9	0.0	0.0	42.7	8.7	0.0	0.0	9.0	9.1
Incr Delay (d2), s/veh	2.5	0.0	2.4	38.4	0.0	0.0	9.9	2.1	0.0	0.0	4.5	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.4	0.1	0.0	0.0	0.6	14.6	0.0	0.0	15.9	17.0
LnGrp Delay(d),s/veh	41.9	0.0	41.2	82.3	0.0	0.0	52.7	10.8	0.0	0.0	13.5	13.5
LnGrp LOS	D		D	F			D	B			B	B
Approach Vol, veh/h		236			3			1837			1900	
Approach Delay, s/veh		41.7			82.3			11.3			13.5	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	65.5		11.6	6.5	65.4		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	0.0	30.9		6.5	3.0	32.8		2.2				
Green Ext Time (p_c), s	0.0	17.7		0.7	0.0	17.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			14.2									
HCM 2010 LOS			B									






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	12	25	10	16	68	11	1550	1	14	1692	43
Future Volume (veh/h)	90	12	25	10	16	68	11	1550	1	14	1692	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	98	13	27	11	17	74	12	1685	1	15	1839	47
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	200	170	47	38	126	25	2719	2	31	2655	68
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.01	0.75	0.75	0.02	0.75	0.75
Sat Flow, veh/h	1300	1863	1583	90	356	1177	1774	3630	2	1774	3527	90
Grp Volume(v), veh/h	98	13	27	102	0	0	12	821	865	15	919	967
Grp Sat Flow(s),veh/h/ln	1300	1863	1583	1622	0	0	1774	1770	1862	1774	1770	1847
Q Serve(g_s), s	2.5	0.7	1.7	0.8	0.0	0.0	0.7	23.3	23.3	0.9	28.7	29.2
Cycle Q Clear(g_c), s	8.9	0.7	1.7	6.3	0.0	0.0	0.7	23.3	23.3	0.9	28.7	29.2
Prop In Lane	1.00		1.00	0.11		0.73	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	195	200	170	211	0	0	25	1326	1395	31	1332	1391
V/C Ratio(X)	0.50	0.06	0.16	0.48	0.00	0.00	0.48	0.62	0.62	0.48	0.69	0.70
Avail Cap(c_a), veh/h	303	355	302	344	0	0	84	1326	1395	91	1332	1391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	43.1	43.5	45.6	0.0	0.0	52.6	6.3	6.3	52.3	6.8	6.9
Incr Delay (d2), s/veh	2.0	0.1	0.4	1.7	0.0	0.0	13.8	2.2	2.1	10.8	2.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.4	0.7	3.0	0.0	0.0	0.4	12.0	12.6	0.5	14.9	15.6
LnGrp Delay(d),s/veh	48.9	43.2	44.0	47.3	0.0	0.0	66.4	8.5	8.4	63.1	9.8	9.8
LnGrp LOS	D	D	D	D			E	A	A	E	A	A
Approach Vol, veh/h		138			102			1698			1901	
Approach Delay, s/veh		47.4			47.3			8.8			10.2	
Approach LOS		D			D			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	85.0		16.0	6.0	85.4		16.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	80.5		20.5	5.1	80.9		20.5				
Max Q Clear Time (g_c+I1), s	2.9	25.3		10.9	2.7	31.2		8.3				
Green Ext Time (p_c), s	0.0	19.0		0.7	0.0	23.4		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			11.9									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1622	59	41	1534	7	43	34	46	16	37	116
Future Volume (veh/h)	91	1622	59	41	1534	7	43	34	46	16	37	116
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	99	1763	64	45	1667	8	47	37	50	17	40	126
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	2170	971	100	2161	10	285	356	302	302	356	415
Arrive On Green	0.07	0.61	0.61	0.06	0.60	0.60	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3612	17	1215	1863	1583	1305	1863	1583
Grp Volume(v), veh/h	99	1763	64	45	816	859	47	37	50	17	40	126
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1215	1863	1583	1305	1863	1583
Q Serve(g_s), s	5.3	37.2	1.6	2.4	33.3	33.4	3.2	1.6	2.6	1.1	1.7	6.2
Cycle Q Clear(g_c), s	5.3	37.2	1.6	2.4	33.3	33.4	4.9	1.6	2.6	2.6	1.7	6.2
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	2170	971	100	1059	1113	285	356	302	302	356	415
V/C Ratio(X)	0.78	0.81	0.07	0.45	0.77	0.77	0.17	0.10	0.17	0.06	0.11	0.30
Avail Cap(c_a), veh/h	247	2901	1298	158	1361	1430	285	356	302	302	356	415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	14.4	7.5	44.2	14.5	14.5	34.4	32.3	32.7	33.4	32.4	28.6
Incr Delay (d2), s/veh	10.1	1.4	0.0	3.1	2.1	2.0	1.2	0.6	1.2	0.4	0.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	18.3	0.7	1.2	16.7	17.6	1.2	0.9	1.2	0.4	1.0	2.9
LnGrp Delay(d),s/veh	54.4	15.8	7.6	47.4	16.6	16.5	35.7	32.9	33.9	33.8	33.0	30.5
LnGrp LOS	D	B	A	D	B	B	D	C	C	C	C	C
Approach Vol, veh/h		1926			1720			134			183	
Approach Delay, s/veh		17.5			17.4			34.3			31.4	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	10.0	63.9		23.0	11.4	62.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	8.6	79.4		18.5	13.5	74.5				
Max Q Clear Time (g_c+I1), s		6.9	4.4	39.2		8.2	7.3	35.4				
Green Ext Time (p_c), s		0.9	3.4	20.2		0.9	0.1	17.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1655	11	21	1589	5	49	56	37	39	26	29
Future Volume (veh/h)	36	1655	11	21	1589	5	49	56	37	39	26	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	39	1799	12	23	1727	5	53	61	40	42	28	32
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	2210	989	42	2119	6	144	159	89	331	395	336
Arrive On Green	0.06	0.62	0.62	0.02	0.59	0.59	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	3620	10	443	752	419	1288	1863	1583
Grp Volume(v), veh/h	39	1799	12	23	844	888	154	0	0	42	28	32
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1861	1615	0	0	1288	1863	1583
Q Serve(g_s), s	2.0	37.5	0.3	1.2	36.6	36.6	3.9	0.0	0.0	0.0	1.2	1.6
Cycle Q Clear(g_c), s	2.0	37.5	0.3	1.2	36.6	36.6	7.7	0.0	0.0	3.1	1.2	1.6
Prop In Lane	1.00		1.00	1.00		0.01	0.34		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	112	2210	989	42	1036	1089	392	0	0	331	395	336
V/C Ratio(X)	0.35	0.81	0.01	0.54	0.81	0.82	0.39	0.00	0.00	0.13	0.07	0.10
Avail Cap(c_a), veh/h	138	2933	1312	108	1437	1511	392	0	0	331	395	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	13.9	6.9	46.7	15.9	15.9	32.9	0.0	0.0	31.2	30.5	30.6
Incr Delay (d2), s/veh	1.9	1.4	0.0	10.4	2.6	2.5	2.9	0.0	0.0	0.8	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	18.4	0.1	0.7	18.3	19.3	3.9	0.0	0.0	1.0	0.6	0.7
LnGrp Delay(d),s/veh	45.2	15.2	6.9	57.1	18.5	18.4	35.9	0.0	0.0	32.0	30.8	31.2
LnGrp LOS	D	B	A	E	B	B	D			C	C	C
Approach Vol, veh/h		1850			1755			154			102	
Approach Delay, s/veh		15.8			19.0			35.9			31.4	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	6.8	64.9		25.0	10.6	61.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.9	80.1		20.5	7.5	78.5				
Max Q Clear Time (g_c+I1), s		9.7	3.2	39.5		5.1	4.0	38.6				
Green Ext Time (p_c), s		0.9	0.0	20.8		1.1	3.0	18.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.5									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
























1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 				 			 			 	
Traffic Volume (veh/h)	143	0	37	0	0	1	35	1458	0	5	1518	125
Future Volume (veh/h)	143	0	37	0	0	1	35	1458	0	5	1518	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	155	0	40	0	0	1	38	1585	0	5	1650	136
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	0	114	0	0	2	61	2442	0	59	2283	186
Arrive On Green	0.07	0.00	0.07	0.00	0.00	0.00	0.03	0.69	0.00	0.03	0.69	0.69
Sat Flow, veh/h	3442	0	1583	0	0	1583	1774	3632	0	1774	3314	271
Grp Volume(v), veh/h	155	0	40	0	0	1	38	1585	0	5	874	912
Grp Sat Flow(s),veh/h/ln	1721	0	1583	0	0	1583	1774	1770	0	1774	1770	1815
Q Serve(g_s), s	3.9	0.0	2.1	0.0	0.0	0.1	1.9	22.2	0.0	0.2	26.8	27.8
Cycle Q Clear(g_c), s	3.9	0.0	2.1	0.0	0.0	0.1	1.9	22.2	0.0	0.2	26.8	27.8
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		0.15
Lane Grp Cap(c), veh/h	248	0	114	0	0	2	61	2442	0	59	1219	1250
V/C Ratio(X)	0.63	0.00	0.35	0.00	0.00	0.46	0.62	0.65	0.00	0.08	0.72	0.73
Avail Cap(c_a), veh/h	701	0	322	0	0	322	102	2442	0	100	1219	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	39.1	0.0	0.0	44.1	42.1	7.7	0.0	41.4	8.5	8.6
Incr Delay (d2), s/veh	2.6	0.0	1.8	0.0	0.0	106.2	10.0	1.4	0.0	0.6	3.6	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.0	0.0	0.0	0.1	1.1	11.0	0.0	0.1	14.1	15.0
LnGrp Delay(d),s/veh	42.5	0.0	40.9	0.0	0.0	150.3	52.2	9.1	0.0	42.1	12.1	12.4
LnGrp LOS	D		D			F	D	A		D	B	B
Approach Vol, veh/h		195			1			1623			1791	
Approach Delay, s/veh		42.1			150.3			10.1			12.3	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	65.5		10.9	7.5	65.4		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	2.2	24.2		5.9	3.9	29.8		2.1				
Green Ext Time (p_c), s	0.0	16.1		0.5	0.0	17.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			13.0									
HCM 2010 LOS			B									






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	24	33	10	19	44	31	1319	5	72	1431	113
Future Volume (veh/h)	113	24	33	10	19	44	31	1319	5	72	1431	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	123	26	36	11	21	48	34	1434	5	78	1555	123
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	209	178	51	61	111	53	2444	9	150	2429	191
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.03	0.68	0.68	0.08	0.73	0.73
Sat Flow, veh/h	1326	1863	1583	113	544	986	1774	3618	13	1774	3325	261
Grp Volume(v), veh/h	123	26	36	80	0	0	34	701	738	78	823	855
Grp Sat Flow(s),veh/h/ln	1326	1863	1583	1644	0	0	1774	1770	1861	1774	1770	1817
Q Serve(g_s), s	4.4	1.3	2.2	0.0	0.0	0.0	2.0	22.5	22.6	4.5	24.8	25.4
Cycle Q Clear(g_c), s	9.1	1.3	2.2	4.7	0.0	0.0	2.0	22.5	22.6	4.5	24.8	25.4
Prop In Lane	1.00		1.00	0.14		0.60	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	223	209	178	223	0	0	53	1196	1257	150	1293	1327
V/C Ratio(X)	0.55	0.12	0.20	0.36	0.00	0.00	0.64	0.59	0.59	0.52	0.64	0.64
Avail Cap(c_a), veh/h	356	396	337	384	0	0	112	1196	1257	210	1293	1327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	42.3	42.7	43.8	0.0	0.0	50.8	9.2	9.2	46.4	7.2	7.3
Incr Delay (d2), s/veh	2.1	0.3	0.6	1.0	0.0	0.0	12.2	2.1	2.0	2.8	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.7	1.0	2.2	0.0	0.0	1.2	11.6	12.2	2.3	12.7	13.5
LnGrp Delay(d),s/veh	47.8	42.6	43.2	44.8	0.0	0.0	63.0	11.3	11.2	49.1	9.6	9.7
LnGrp LOS	D	D	D	D			E	B	B	D	A	A
Approach Vol, veh/h		185			80			1473			1756	
Approach Delay, s/veh		46.1			44.8			12.5			11.4	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.5	76.0		16.4	7.7	81.8		16.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	71.5		22.5	6.7	77.3		22.5				
Max Q Clear Time (g_c+I1), s	6.5	24.6		11.1	4.0	27.4		6.7				
Green Ext Time (p_c), s	0.1	13.4		0.8	0.1	18.5		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			14.5									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1374	101	92	1270	23	70	50	69	21	43	159
Future Volume (veh/h)	112	1374	101	92	1270	23	70	50	69	21	43	159
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	122	1493	110	100	1380	25	76	54	75	23	47	173
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	1876	839	209	1996	36	293	387	329	308	387	467
Arrive On Green	0.09	0.53	0.53	0.12	0.56	0.56	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	3557	64	1156	1863	1583	1256	1863	1583
Grp Volume(v), veh/h	122	1493	110	100	686	719	76	54	75	23	47	173
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1851	1156	1863	1583	1256	1863	1583
Q Serve(g_s), s	6.3	32.2	3.3	4.9	26.1	26.1	5.4	2.2	3.7	1.4	1.9	8.1
Cycle Q Clear(g_c), s	6.3	32.2	3.3	4.9	26.1	26.1	7.3	2.2	3.7	3.6	1.9	8.1
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	1876	839	209	993	1039	293	387	329	308	387	467
V/C Ratio(X)	0.79	0.80	0.13	0.48	0.69	0.69	0.26	0.14	0.23	0.07	0.12	0.37
Avail Cap(c_a), veh/h	331	2736	1224	274	1311	1372	293	387	329	308	387	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	17.9	11.1	38.7	14.7	14.8	33.1	30.3	30.9	31.8	30.2	26.2
Incr Delay (d2), s/veh	8.8	1.1	0.1	1.7	1.0	1.0	2.1	0.8	1.6	0.5	0.6	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	15.8	1.5	2.5	12.9	13.5	1.9	1.2	1.8	0.5	1.1	3.8
LnGrp Delay(d),s/veh	50.8	19.0	11.2	40.3	15.8	15.7	35.3	31.0	32.5	32.3	30.8	28.4
LnGrp LOS	D	B	B	D	B	B	D	C	C	C	C	C
Approach Vol, veh/h		1725			1505			205			243	
Approach Delay, s/veh		20.7			17.4			33.1			29.3	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	15.6	54.2		24.0	12.6	57.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	14.5	72.5		19.5	17.5	69.5				
Max Q Clear Time (g_c+I1), s		9.3	6.9	34.2		10.1	8.3	28.1				
Green Ext Time (p_c), s		1.3	5.0	15.6		1.3	0.2	13.0				
Intersection Summary												
HCM 2010 Ctrl Delay			20.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1350	47	27	1378	18	77	45	42	41	64	25
Future Volume (veh/h)	43	1350	47	27	1378	18	77	45	42	41	64	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	47	1467	51	29	1498	20	84	49	46	45	70	27
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	1954	874	50	1853	25	229	132	105	413	511	434
Arrive On Green	0.06	0.55	0.55	0.03	0.52	0.52	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1774	3539	1583	1774	3576	48	626	483	383	1295	1863	1583
Grp Volume(v), veh/h	47	1467	51	29	741	777	179	0	0	45	70	27
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1854	1492	0	0	1295	1863	1583
Q Serve(g_s), s	2.4	29.5	1.4	1.5	32.2	32.3	6.5	0.0	0.0	0.0	2.6	1.2
Cycle Q Clear(g_c), s	2.4	29.5	1.4	1.5	32.2	32.3	9.1	0.0	0.0	2.9	2.6	1.2
Prop In Lane	1.00		1.00	1.00		0.03	0.47		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	111	1954	874	50	917	961	466	0	0	413	511	434
V/C Ratio(X)	0.43	0.75	0.06	0.58	0.81	0.81	0.38	0.00	0.00	0.11	0.14	0.06
Avail Cap(c_a), veh/h	181	2836	1269	124	1361	1426	466	0	0	413	511	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	15.9	9.6	44.6	18.6	18.6	27.7	0.0	0.0	25.5	25.4	24.9
Incr Delay (d2), s/veh	2.6	0.7	0.0	10.0	2.3	2.2	2.4	0.0	0.0	0.5	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	14.4	0.6	0.9	16.2	17.0	4.1	0.0	0.0	0.9	1.4	0.5
LnGrp Delay(d),s/veh	44.6	16.6	9.7	54.6	20.9	20.8	30.1	0.0	0.0	26.1	26.0	25.2
LnGrp LOS	D	B	A	D	C	C	C			C	C	C
Approach Vol, veh/h		1565			1547			179			142	
Approach Delay, s/veh		17.2			21.5			30.1			25.9	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	7.1	55.8		30.0	10.3	52.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	74.5		25.5	9.5	71.5				
Max Q Clear Time (g_c+I1), s		11.1	3.5	31.5		4.9	4.4	34.3				
Green Ext Time (p_c), s		1.4	0.0	15.6		1.6	3.9	13.9				
Intersection Summary												
HCM 2010 Ctrl Delay			20.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
























1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							 			 	
Traffic Volume (veh/h)	165	0	52	2	0	1	19	1695	0	0	1723	50
Future Volume (veh/h)	165	0	52	2	0	1	19	1695	0	0	1723	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	179	0	57	2	0	1	21	1842	0	0	1873	54
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	0	128	5	0	2	40	2442	0	38	2421	69
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.02	0.69	0.00	0.00	0.69	0.69
Sat Flow, veh/h	3442	0	1583	1137	0	569	1774	3632	0	1774	3514	101
Grp Volume(v), veh/h	179	0	57	3	0	0	21	1842	0	0	939	988
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1706	0	0	1774	1770	0	1774	1770	1845
Q Serve(g_s), s	4.5	0.0	3.0	0.2	0.0	0.0	1.0	29.7	0.0	0.0	31.1	31.7
Cycle Q Clear(g_c), s	4.5	0.0	3.0	0.2	0.0	0.0	1.0	29.7	0.0	0.0	31.1	31.7
Prop In Lane	1.00		1.00	0.67		0.33	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	277	0	128	7	0	0	40	2442	0	38	1219	1271
V/C Ratio(X)	0.65	0.00	0.45	0.44	0.00	0.00	0.52	0.75	0.00	0.00	0.77	0.78
Avail Cap(c_a), veh/h	701	0	322	347	0	0	102	2442	0	100	1219	1271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	38.8	43.9	0.0	0.0	42.7	8.9	0.0	0.0	9.1	9.2
Incr Delay (d2), s/veh	2.5	0.0	2.4	38.4	0.0	0.0	9.9	2.2	0.0	0.0	4.7	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.4	0.1	0.0	0.0	0.6	15.1	0.0	0.0	16.5	17.6
LnGrp Delay(d),s/veh	41.9	0.0	41.2	82.3	0.0	0.0	52.7	11.1	0.0	0.0	13.8	13.9
LnGrp LOS	D		D	F			D	B			B	B
Approach Vol, veh/h		236			3			1863			1927	
Approach Delay, s/veh		41.7			82.3			11.5			13.9	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	65.5		11.6	6.5	65.4		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	0.0	31.7		6.5	3.0	33.7		2.2				
Green Ext Time (p_c), s	0.0	17.7		0.7	0.0	17.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				14.5								
HCM 2010 LOS				B								






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	15	25	10	20	68	51	1550	1	14	1731	43
Future Volume (veh/h)	129	15	25	10	20	68	51	1550	1	14	1731	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	140	16	27	11	22	74	55	1685	1	15	1882	47
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	261	221	46	59	158	71	2539	2	77	2481	62
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.04	0.70	0.70	0.04	0.70	0.70
Sat Flow, veh/h	1294	1863	1583	80	424	1130	1774	3630	2	1774	3529	88
Grp Volume(v), veh/h	140	16	27	107	0	0	55	821	865	15	940	989
Grp Sat Flow(s),veh/h/ln	1294	1863	1583	1634	0	0	1774	1770	1862	1774	1770	1847
Q Serve(g_s), s	6.7	0.9	1.7	0.0	0.0	0.0	3.5	30.0	30.0	0.9	38.7	39.4
Cycle Q Clear(g_c), s	13.6	0.9	1.7	6.8	0.0	0.0	3.5	30.0	30.0	0.9	38.7	39.4
Prop In Lane	1.00		1.00	0.10		0.69	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	228	261	221	263	0	0	71	1238	1303	77	1244	1299
V/C Ratio(X)	0.61	0.06	0.12	0.41	0.00	0.00	0.78	0.66	0.66	0.20	0.76	0.76
Avail Cap(c_a), veh/h	278	332	282	324	0	0	79	1238	1303	85	1244	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	42.9	43.3	45.5	0.0	0.0	54.7	9.7	9.7	53.1	10.8	10.9
Incr Delay (d2), s/veh	2.8	0.1	0.2	1.0	0.0	0.0	35.1	2.8	2.7	1.2	4.3	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.4	0.8	3.2	0.0	0.0	2.4	15.3	16.1	0.5	20.0	21.3
LnGrp Delay(d),s/veh	51.5	43.0	43.6	46.5	0.0	0.0	89.8	12.5	12.4	54.3	15.1	15.2
LnGrp LOS	D	D	D	D			F	B	B	D	B	B
Approach Vol, veh/h		183			107			1741			1944	
Approach Delay, s/veh		49.6			46.5			14.9			15.5	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	85.0		20.6	9.1	85.4		20.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	80.5		20.5	5.1	80.9		20.5				
Max Q Clear Time (g_c+I1), s	2.9	32.0		15.6	5.5	41.4		8.8				
Green Ext Time (p_c), s	0.0	18.3		0.5	0.0	21.8		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			17.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1646	59	41	1559	7	43	34	46	16	37	116
Future Volume (veh/h)	91	1646	59	41	1559	7	43	34	46	16	37	116
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	99	1789	64	45	1695	8	47	37	50	17	40	126
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	2187	979	100	2179	10	280	351	298	297	351	411
Arrive On Green	0.07	0.62	0.62	0.06	0.60	0.60	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3612	17	1215	1863	1583	1305	1863	1583
Grp Volume(v), veh/h	99	1789	64	45	830	873	47	37	50	17	40	126
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1215	1863	1583	1305	1863	1583
Q Serve(g_s), s	5.4	38.4	1.6	2.4	34.4	34.5	3.3	1.6	2.6	1.1	1.8	6.3
Cycle Q Clear(g_c), s	5.4	38.4	1.6	2.4	34.4	34.5	5.0	1.6	2.6	2.7	1.8	6.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	2187	979	100	1068	1122	280	351	298	297	351	411
V/C Ratio(X)	0.78	0.82	0.07	0.45	0.78	0.78	0.17	0.11	0.17	0.06	0.11	0.31
Avail Cap(c_a), veh/h	244	2860	1279	155	1342	1410	280	351	298	297	351	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	14.5	7.5	44.9	14.6	14.6	35.2	33.0	33.4	34.1	33.1	29.3
Incr Delay (d2), s/veh	10.2	1.5	0.0	3.2	2.3	2.2	1.3	0.6	1.2	0.4	0.7	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	19.1	0.7	1.3	17.3	18.2	1.2	0.9	1.2	0.4	1.0	3.0
LnGrp Delay(d),s/veh	55.1	16.0	7.5	48.0	16.9	16.8	36.5	33.6	34.6	34.5	33.7	31.2
LnGrp LOS	E	B	A	D	B	B	D	C	C	C	C	C
Approach Vol, veh/h		1952			1748			134			183	
Approach Delay, s/veh		17.7			17.6			35.0			32.1	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	10.0	65.2		23.0	11.5	63.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	8.6	79.4		18.5	13.5	74.5				
Max Q Clear Time (g_c+I1), s		7.0	4.4	40.4		8.3	7.4	36.5				
Green Ext Time (p_c), s		0.9	3.4	20.4		0.9	0.1	17.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.9									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1679	11	21	1614	5	49	56	37	39	26	29
Future Volume (veh/h)	36	1679	11	21	1614	5	49	56	37	39	26	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	39	1825	12	23	1754	5	53	61	40	42	28	32
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	2227	996	42	2141	6	142	157	88	325	390	331
Arrive On Green	0.06	0.63	0.63	0.02	0.59	0.59	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	3620	10	443	752	419	1288	1863	1583
Grp Volume(v), veh/h	39	1825	12	23	857	902	154	0	0	42	28	32
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1861	1615	0	0	1288	1863	1583
Q Serve(g_s), s	2.1	38.7	0.3	1.3	37.6	37.7	4.1	0.0	0.0	0.0	1.2	1.6
Cycle Q Clear(g_c), s	2.1	38.7	0.3	1.3	37.6	37.7	7.8	0.0	0.0	3.2	1.2	1.6
Prop In Lane	1.00		1.00	1.00		0.01	0.34		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	110	2227	996	42	1046	1100	387	0	0	325	390	331
V/C Ratio(X)	0.36	0.82	0.01	0.55	0.82	0.82	0.40	0.00	0.00	0.13	0.07	0.10
Avail Cap(c_a), veh/h	136	2893	1294	107	1418	1491	387	0	0	325	390	331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	13.9	6.8	47.3	15.9	15.9	33.6	0.0	0.0	31.9	31.1	31.3
Incr Delay (d2), s/veh	2.0	1.5	0.0	10.6	2.9	2.7	3.0	0.0	0.0	0.8	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	19.2	0.1	0.7	18.9	19.9	4.0	0.0	0.0	1.0	0.6	0.8
LnGrp Delay(d),s/veh	46.1	15.4	6.8	57.9	18.7	18.6	36.7	0.0	0.0	32.7	31.5	31.9
LnGrp LOS	D	B	A	E	B	B	D			C	C	C
Approach Vol, veh/h		1876			1782			154			102	
Approach Delay, s/veh		16.0			19.2			36.7			32.1	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	6.8	66.2		25.0	10.5	62.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.9	80.1		20.5	7.5	78.5				
Max Q Clear Time (g_c+I1), s		9.8	3.3	40.7		5.2	4.1	39.7				
Green Ext Time (p_c), s		0.9	0.0	21.0		1.1	3.0	18.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.7									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
























1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 				 			 			 	
Traffic Volume (veh/h)	143	0	37	0	0	1	35	1485	0	5	1546	125
Future Volume (veh/h)	143	0	37	0	0	1	35	1485	0	5	1546	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	155	0	40	0	0	1	38	1614	0	5	1680	136
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	0	114	0	0	2	61	2442	0	59	2286	183
Arrive On Green	0.07	0.00	0.07	0.00	0.00	0.00	0.03	0.69	0.00	0.03	0.69	0.69
Sat Flow, veh/h	3442	0	1583	0	0	1583	1774	3632	0	1774	3319	266
Grp Volume(v), veh/h	155	0	40	0	0	1	38	1614	0	5	888	928
Grp Sat Flow(s),veh/h/ln	1721	0	1583	0	0	1583	1774	1770	0	1774	1770	1816
Q Serve(g_s), s	3.9	0.0	2.1	0.0	0.0	0.1	1.9	23.0	0.0	0.2	27.7	28.8
Cycle Q Clear(g_c), s	3.9	0.0	2.1	0.0	0.0	0.1	1.9	23.0	0.0	0.2	27.7	28.8
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		0.15
Lane Grp Cap(c), veh/h	248	0	114	0	0	2	61	2442	0	59	1219	1251
V/C Ratio(X)	0.63	0.00	0.35	0.00	0.00	0.46	0.62	0.66	0.00	0.08	0.73	0.74
Avail Cap(c_a), veh/h	701	0	322	0	0	322	102	2442	0	100	1219	1251
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	39.1	0.0	0.0	44.1	42.1	7.8	0.0	41.4	8.6	8.8
Incr Delay (d2), s/veh	2.6	0.0	1.8	0.0	0.0	106.2	10.0	1.4	0.0	0.6	3.8	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.0	0.0	0.0	0.1	1.1	11.5	0.0	0.1	14.6	15.6
LnGrp Delay(d),s/veh	42.5	0.0	40.9	0.0	0.0	150.3	52.2	9.2	0.0	42.1	12.4	12.8
LnGrp LOS	D		D			F	D	A		D	B	B
Approach Vol, veh/h		195			1			1652			1821	
Approach Delay, s/veh		42.1			150.3			10.2			12.7	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	65.5		10.9	7.5	65.4		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	2.2	25.0		5.9	3.9	30.8		2.1				
Green Ext Time (p_c), s	0.0	16.4		0.5	0.0	17.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			13.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	28	33	10	23	44	76	1319	5	72	1474	113
Future Volume (veh/h)	156	28	33	10	23	44	76	1319	5	72	1474	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	170	30	36	11	25	48	83	1434	5	78	1602	123
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	276	234	50	90	140	104	2260	8	194	2252	172
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.06	0.62	0.62	0.11	0.68	0.68
Sat Flow, veh/h	1322	1863	1583	101	609	946	1774	3618	13	1774	3334	254
Grp Volume(v), veh/h	170	30	36	84	0	0	83	701	738	78	845	880
Grp Sat Flow(s),veh/h/ln	1322	1863	1583	1655	0	0	1774	1770	1861	1774	1770	1818
Q Serve(g_s), s	9.2	1.6	2.3	0.0	0.0	0.0	5.3	28.2	28.2	4.7	33.9	34.9
Cycle Q Clear(g_c), s	14.2	1.6	2.3	5.1	0.0	0.0	5.3	28.2	28.2	4.7	33.9	34.9
Prop In Lane	1.00		1.00	0.13		0.57	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	260	276	234	281	0	0	104	1106	1163	194	1195	1228
V/C Ratio(X)	0.65	0.11	0.15	0.30	0.00	0.00	0.80	0.63	0.63	0.40	0.71	0.72
Avail Cap(c_a), veh/h	324	366	311	359	0	0	104	1106	1163	194	1195	1228
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	42.2	42.5	43.7	0.0	0.0	53.2	13.3	13.3	47.5	11.5	11.7
Incr Delay (d2), s/veh	3.3	0.2	0.3	0.6	0.0	0.0	34.2	2.8	2.6	1.3	3.5	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.8	1.0	2.4	0.0	0.0	3.6	14.5	15.2	2.4	17.6	18.6
LnGrp Delay(d),s/veh	50.8	42.4	42.8	44.3	0.0	0.0	87.4	16.1	16.0	48.8	15.1	15.3
LnGrp LOS	D	D	D	D			F	B	B	D	B	B
Approach Vol, veh/h		236			84			1522			1803	
Approach Delay, s/veh		48.5			44.3			19.9			16.6	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	76.0		21.4	11.2	81.8		21.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	71.5		22.5	6.7	77.3		22.5				
Max Q Clear Time (g_c+I1), s	6.7	30.2		16.2	7.3	36.9		7.1				
Green Ext Time (p_c), s	0.2	13.0		0.7	0.0	18.1		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			20.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1401	101	92	1298	23	70	50	69	21	43	159
Future Volume (veh/h)	112	1401	101	92	1298	23	70	50	69	21	43	159
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	122	1523	110	100	1411	25	76	54	75	23	47	173
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	1900	850	209	2020	36	288	380	323	302	380	461
Arrive On Green	0.09	0.54	0.54	0.12	0.57	0.57	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3558	63	1156	1863	1583	1256	1863	1583
Grp Volume(v), veh/h	122	1523	110	100	701	735	76	54	75	23	47	173
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1852	1156	1863	1583	1256	1863	1583
Q Serve(g_s), s	6.4	33.4	3.3	5.0	27.1	27.2	5.5	2.3	3.8	1.5	2.0	8.3
Cycle Q Clear(g_c), s	6.4	33.4	3.3	5.0	27.1	27.2	7.5	2.3	3.8	3.7	2.0	8.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	1900	850	209	1005	1051	288	380	323	302	380	461
V/C Ratio(X)	0.79	0.80	0.13	0.48	0.70	0.70	0.26	0.14	0.23	0.08	0.12	0.38
Avail Cap(c_a), veh/h	325	2687	1202	269	1288	1348	288	380	323	302	380	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	18.0	11.0	39.4	14.8	14.8	34.1	31.1	31.7	32.7	31.0	27.0
Incr Delay (d2), s/veh	8.9	1.2	0.1	1.7	1.2	1.1	2.2	0.8	1.7	0.5	0.7	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	16.6	1.5	2.6	13.4	14.0	1.9	1.3	1.8	0.5	1.1	3.9
LnGrp Delay(d),s/veh	51.6	19.2	11.1	41.1	15.9	15.9	36.3	31.9	33.4	33.2	31.7	29.3
LnGrp LOS	D	B	B	D	B	B	D	C	C	C	C	C
Approach Vol, veh/h		1755			1536			205			243	
Approach Delay, s/veh		20.9			17.6			34.1			30.1	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	15.7	55.7		24.0	12.8	58.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	14.5	72.5		19.5	17.5	69.5				
Max Q Clear Time (g_c+I1), s		9.5	7.0	35.4		10.3	8.4	29.2				
Green Ext Time (p_c), s		1.3	5.1	15.8		1.2	0.2	13.4				
Intersection Summary												
HCM 2010 Ctrl Delay			20.9									
HCM 2010 LOS			C									




















HCM 2010 Signalized Intersection Summary

4: 12th Street/Balboa Drive & Pacific Coast Highway






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1377	47	27	1406	18	77	45	42	41	64	25
Future Volume (veh/h)	43	1377	47	27	1406	18	77	45	42	41	64	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	47	1497	51	29	1528	20	84	49	46	45	70	27
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	110	1980	886	50	1879	25	224	130	103	404	502	427
Arrive On Green	0.06	0.56	0.56	0.03	0.53	0.53	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1774	3539	1583	1774	3577	47	624	482	383	1295	1863	1583
Grp Volume(v), veh/h	47	1497	51	29	755	793	179	0	0	45	70	27
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1854	1488	0	0	1295	1863	1583
Q Serve(g_s), s	2.4	30.5	1.4	1.5	33.4	33.5	6.7	0.0	0.0	0.0	2.7	1.2
Cycle Q Clear(g_c), s	2.4	30.5	1.4	1.5	33.4	33.5	9.4	0.0	0.0	3.0	2.7	1.2
Prop In Lane	1.00		1.00	1.00		0.03	0.47		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	110	1980	886	50	930	974	457	0	0	404	502	427
V/C Ratio(X)	0.43	0.76	0.06	0.58	0.81	0.81	0.39	0.00	0.00	0.11	0.14	0.06
Avail Cap(c_a), veh/h	178	2788	1247	122	1338	1402	457	0	0	404	502	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	15.9	9.5	45.4	18.6	18.6	28.6	0.0	0.0	26.3	26.2	25.7
Incr Delay (d2), s/veh	2.6	0.8	0.0	10.2	2.6	2.5	2.5	0.0	0.0	0.6	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	15.0	0.6	0.9	16.8	17.6	4.2	0.0	0.0	1.0	1.5	0.6
LnGrp Delay(d),s/veh	45.3	16.7	9.5	55.6	21.2	21.1	31.1	0.0	0.0	26.9	26.8	25.9
LnGrp LOS	D	B	A	E	C	C	C			C	C	C
Approach Vol, veh/h		1595			1577			179			142	
Approach Delay, s/veh		17.3			21.8			31.1			26.7	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	7.2	57.4		30.0	10.4	54.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	74.5		25.5	9.5	71.5				
Max Q Clear Time (g_c+I1), s		11.4	3.5	32.5		5.0	4.4	35.5				
Green Ext Time (p_c), s		1.4	0.0	16.0		1.6	3.9	14.2				
Intersection Summary												
HCM 2010 Ctrl Delay			20.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
























1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	0	53	2	0	1	19	1756	0	0	1781	56
Future Volume (veh/h)	179	0	53	2	0	1	19	1756	0	0	1781	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	195	0	58	2	0	1	21	1909	0	0	1936	61
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	0	135	5	0	2	40	2429	0	38	2400	75
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.02	0.69	0.00	0.00	0.69	0.69
Sat Flow, veh/h	3442	0	1583	1137	0	569	1774	3632	0	1774	3503	110
Grp Volume(v), veh/h	195	0	58	3	0	0	21	1909	0	0	973	1024
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1706	0	0	1774	1770	0	1774	1770	1843
Q Serve(g_s), s	4.9	0.0	3.1	0.2	0.0	0.0	1.0	32.6	0.0	0.0	34.2	35.0
Cycle Q Clear(g_c), s	4.9	0.0	3.1	0.2	0.0	0.0	1.0	32.6	0.0	0.0	34.2	35.0
Prop In Lane	1.00		1.00	0.67		0.33	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	294	0	135	7	0	0	40	2429	0	38	1213	1263
V/C Ratio(X)	0.66	0.00	0.43	0.44	0.00	0.00	0.52	0.79	0.00	0.00	0.80	0.81
Avail Cap(c_a), veh/h	697	0	321	345	0	0	102	2429	0	100	1213	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	38.6	44.2	0.0	0.0	42.9	9.5	0.0	0.0	9.8	9.9
Incr Delay (d2), s/veh	2.6	0.0	2.1	38.4	0.0	0.0	10.0	2.6	0.0	0.0	5.7	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.4	0.1	0.0	0.0	0.6	16.5	0.0	0.0	18.1	19.4
LnGrp Delay(d),s/veh	42.0	0.0	40.7	82.6	0.0	0.0	52.9	12.1	0.0	0.0	15.4	15.6
LnGrp LOS	D		D	F			D	B			B	B
Approach Vol, veh/h		253			3			1930			1997	
Approach Delay, s/veh		41.7			82.6			12.6			15.5	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	65.5		12.1	6.5	65.4		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	0.0	34.6		6.9	3.0	37.0		2.2				
Green Ext Time (p_c), s	0.0	17.3		0.7	0.0	16.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.8									
HCM 2010 LOS			B									






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	12	26	10	16	69	11	1627	1	14	1771	44
Future Volume (veh/h)	92	12	26	10	16	69	11	1627	1	14	1771	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	100	13	28	11	17	75	12	1768	1	15	1925	48
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	204	173	47	39	129	25	2713	2	31	2651	66
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.01	0.75	0.75	0.02	0.75	0.75
Sat Flow, veh/h	1299	1863	1583	88	353	1181	1774	3630	2	1774	3529	88
Grp Volume(v), veh/h	100	13	28	103	0	0	12	862	907	15	961	1012
Grp Sat Flow(s),veh/h/ln	1299	1863	1583	1622	0	0	1774	1770	1862	1774	1770	1847
Q Serve(g_s), s	2.7	0.7	1.7	0.7	0.0	0.0	0.7	25.8	25.8	0.9	31.9	32.5
Cycle Q Clear(g_c), s	9.1	0.7	1.7	6.4	0.0	0.0	0.7	25.8	25.8	0.9	31.9	32.5
Prop In Lane	1.00		1.00	0.11		0.73	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	197	204	173	215	0	0	25	1323	1392	31	1329	1388
V/C Ratio(X)	0.51	0.06	0.16	0.48	0.00	0.00	0.48	0.65	0.65	0.48	0.72	0.73
Avail Cap(c_a), veh/h	302	355	301	344	0	0	84	1323	1392	91	1329	1388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	43.0	43.5	45.5	0.0	0.0	52.7	6.7	6.7	52.4	7.3	7.4
Incr Delay (d2), s/veh	2.0	0.1	0.4	1.7	0.0	0.0	13.8	2.5	2.4	10.8	3.4	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.4	0.8	3.0	0.0	0.0	0.4	13.4	14.0	0.5	16.5	17.6
LnGrp Delay(d),s/veh	48.9	43.1	43.9	47.2	0.0	0.0	66.5	9.2	9.1	63.2	10.7	10.8
LnGrp LOS	D	D	D	D			E	A	A	E	B	B
Approach Vol, veh/h		141			103			1781			1988	
Approach Delay, s/veh		47.4			47.2			9.5			11.2	
Approach LOS		D			D			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	85.0		16.3	6.0	85.4		16.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	80.5		20.5	5.1	80.9		20.5				
Max Q Clear Time (g_c+I1), s	2.9	27.8		11.1	2.7	34.5		8.4				
Green Ext Time (p_c), s	0.0	20.8		0.7	0.0	24.8		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			12.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	1692	64	42	1608	7	50	35	47	16	38	118
Future Volume (veh/h)	104	1692	64	42	1608	7	50	35	47	16	38	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	113	1839	70	46	1748	8	54	38	51	17	41	128
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	2218	992	101	2181	10	271	341	290	287	341	416
Arrive On Green	0.08	0.63	0.63	0.06	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3613	17	1211	1863	1583	1303	1863	1583
Grp Volume(v), veh/h	113	1839	70	46	856	900	54	38	51	17	41	128
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1211	1863	1583	1303	1863	1583
Q Serve(g_s), s	6.3	40.8	1.7	2.5	37.5	37.6	3.9	1.7	2.7	1.1	1.9	6.6
Cycle Q Clear(g_c), s	6.3	40.8	1.7	2.5	37.5	37.6	5.8	1.7	2.7	2.8	1.9	6.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2218	992	101	1068	1123	271	341	290	287	341	416
V/C Ratio(X)	0.80	0.83	0.07	0.46	0.80	0.80	0.20	0.11	0.18	0.06	0.12	0.31
Avail Cap(c_a), veh/h	237	2780	1243	151	1304	1370	271	341	290	287	341	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	14.7	7.4	46.2	15.4	15.4	36.9	34.4	34.9	35.6	34.5	29.9
Incr Delay (d2), s/veh	9.8	1.8	0.0	3.2	3.0	2.9	1.7	0.7	1.3	0.4	0.7	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	20.2	0.8	1.3	19.0	19.9	1.4	0.9	1.3	0.4	1.0	3.1
LnGrp Delay(d),s/veh	55.5	16.5	7.4	49.4	18.4	18.3	38.6	35.1	36.2	36.0	35.2	31.8
LnGrp LOS	E	B	A	D	B	B	D	D	D	D	D	C
Approach Vol, veh/h		2022			1802			143			186	
Approach Delay, s/veh		18.3			19.1			36.8			32.9	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	10.2	67.9		23.0	12.6	65.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	8.6	79.4		18.5	13.5	74.5				
Max Q Clear Time (g_c+I1), s		7.8	4.5	42.8		8.6	8.3	39.6				
Green Ext Time (p_c), s		0.9	3.4	20.5		0.9	0.1	17.6				
Intersection Summary												
HCM 2010 Ctrl Delay			20.0									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1726	11	21	1664	5	50	57	38	40	27	30
Future Volume (veh/h)	37	1726	11	21	1664	5	50	57	38	40	27	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	40	1876	12	23	1809	5	54	62	41	43	29	33
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	2259	1011	42	2184	6	138	153	86	313	380	323
Arrive On Green	0.06	0.64	0.64	0.02	0.60	0.60	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3621	10	442	750	421	1286	1863	1583
Grp Volume(v), veh/h	40	1876	12	23	884	930	157	0	0	43	29	33
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1861	1613	0	0	1286	1863	1583
Q Serve(g_s), s	2.2	41.0	0.3	1.3	39.8	39.9	4.6	0.0	0.0	0.0	1.3	1.7
Cycle Q Clear(g_c), s	2.2	41.0	0.3	1.3	39.8	39.9	8.3	0.0	0.0	3.5	1.3	1.7
Prop In Lane	1.00		1.00	1.00		0.01	0.34		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	104	2259	1011	42	1067	1122	377	0	0	313	380	323
V/C Ratio(X)	0.38	0.83	0.01	0.55	0.83	0.83	0.42	0.00	0.00	0.14	0.08	0.10
Avail Cap(c_a), veh/h	132	2819	1261	104	1381	1453	377	0	0	313	380	323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	14.0	6.6	48.6	15.8	15.8	35.1	0.0	0.0	33.3	32.4	32.5
Incr Delay (d2), s/veh	2.3	1.8	0.0	10.8	3.4	3.2	3.4	0.0	0.0	0.9	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	20.4	0.1	0.8	20.2	21.2	4.2	0.0	0.0	1.1	0.7	0.8
LnGrp Delay(d),s/veh	47.9	15.8	6.6	59.4	19.2	19.1	38.4	0.0	0.0	34.2	32.8	33.2
LnGrp LOS	D	B	A	E	B	B	D			C	C	C
Approach Vol, veh/h		1928			1837			157			105	
Approach Delay, s/veh		16.4			19.6			38.4			33.5	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	6.9	68.7		25.0	10.4	65.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.9	80.1		20.5	7.5	78.5				
Max Q Clear Time (g_c+I1), s		10.3	3.3	43.0		5.5	4.2	41.9				
Green Ext Time (p_c), s		0.9	0.0	21.2		1.1	2.9	18.8				
Intersection Summary												
HCM 2010 Ctrl Delay			19.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

1: Pacific Coast Highway & 1st Street
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	0	38	0	0	1	36	1575	0	5	1645	141
Future Volume (veh/h)	156	0	38	0	0	1	36	1575	0	5	1645	141
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	170	0	41	0	0	1	39	1712	0	5	1788	153
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	0	121	0	0	2	62	2428	0	60	2263	191
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.03	0.69	0.00	0.03	0.68	0.68
Sat Flow, veh/h	3442	0	1583	0	0	1583	1774	3632	0	1774	3304	279
Grp Volume(v), veh/h	170	0	41	0	0	1	39	1712	0	5	946	995
Grp Sat Flow(s),veh/h/ln	1721	0	1583	0	0	1583	1774	1770	0	1774	1770	1814
Q Serve(g_s), s	4.3	0.0	2.2	0.0	0.0	0.1	1.9	26.2	0.0	0.2	32.2	34.1
Cycle Q Clear(g_c), s	4.3	0.0	2.2	0.0	0.0	0.1	1.9	26.2	0.0	0.2	32.2	34.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		0.15
Lane Grp Cap(c), veh/h	264	0	121	0	0	2	62	2428	0	60	1212	1242
V/C Ratio(X)	0.64	0.00	0.34	0.00	0.00	0.46	0.63	0.71	0.00	0.08	0.78	0.80
Avail Cap(c_a), veh/h	697	0	320	0	0	320	102	2428	0	100	1212	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	38.9	0.0	0.0	44.4	42.4	8.5	0.0	41.6	9.5	9.8
Incr Delay (d2), s/veh	2.6	0.0	1.6	0.0	0.0	106.2	10.2	1.8	0.0	0.6	5.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.0	0.0	0.0	0.1	1.1	13.2	0.0	0.1	17.2	18.8
LnGrp Delay(d),s/veh	42.5	0.0	40.5	0.0	0.0	150.6	52.6	10.2	0.0	42.2	14.5	15.3
LnGrp LOS	D		D			F	D	B		D	B	B
Approach Vol, veh/h		211			1			1751			1946	
Approach Delay, s/veh		42.1			150.6			11.2			15.0	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	65.5		11.3	7.6	65.4		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	2.2	28.2		6.3	3.9	36.1		2.1				
Green Ext Time (p_c), s	0.0	17.1		0.6	0.0	16.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			14.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	24	34	10	19	45	32	1423	5	73	1549	115
Future Volume (veh/h)	115	24	34	10	19	45	32	1423	5	73	1549	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	125	26	37	11	21	49	35	1547	5	79	1684	125
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	213	181	51	61	114	54	2437	8	151	2435	179
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.03	0.67	0.67	0.08	0.73	0.73
Sat Flow, veh/h	1325	1863	1583	111	538	994	1774	3619	12	1774	3343	246
Grp Volume(v), veh/h	125	26	37	81	0	0	35	756	796	79	884	925
Grp Sat Flow(s),veh/h/ln	1325	1863	1583	1643	0	0	1774	1770	1861	1774	1770	1819
Q Serve(g_s), s	4.6	1.3	2.2	0.0	0.0	0.0	2.1	25.9	25.9	4.5	28.8	29.8
Cycle Q Clear(g_c), s	9.3	1.3	2.2	4.8	0.0	0.0	2.1	25.9	25.9	4.5	28.8	29.8
Prop In Lane	1.00		1.00	0.14		0.60	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	225	213	181	226	0	0	54	1192	1253	151	1289	1325
V/C Ratio(X)	0.56	0.12	0.20	0.36	0.00	0.00	0.65	0.63	0.63	0.52	0.69	0.70
Avail Cap(c_a), veh/h	354	395	336	383	0	0	112	1192	1253	209	1289	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	42.2	42.6	43.7	0.0	0.0	50.9	9.9	9.9	46.5	7.8	8.0
Incr Delay (d2), s/veh	2.2	0.3	0.6	1.0	0.0	0.0	12.5	2.6	2.5	2.8	3.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.7	1.0	2.3	0.0	0.0	1.2	13.3	13.9	2.3	14.8	15.8
LnGrp Delay(d),s/veh	47.8	42.5	43.2	44.7	0.0	0.0	63.4	12.5	12.3	49.3	10.8	11.0
LnGrp LOS	D	D	D	D			E	B	B	D	B	B
Approach Vol, veh/h		188			81			1587			1888	
Approach Delay, s/veh		46.2			44.7			13.5			12.5	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.5	76.0		16.6	7.7	81.8		16.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	71.5		22.5	6.7	77.3		22.5				
Max Q Clear Time (g_c+I1), s	6.5	27.9		11.3	4.1	31.8		6.8				
Green Ext Time (p_c), s	0.1	15.1		0.8	0.1	20.8		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

3: Main Street/Bolsa Avenue & Pacific Coast Highway
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	1465	111	94	1373	23	81	51	70	21	44	162
Future Volume (veh/h)	135	1465	111	94	1373	23	81	51	70	21	44	162
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	1592	121	102	1492	25	88	55	76	23	48	176
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	1950	873	209	2020	34	273	365	310	287	365	471
Arrive On Green	0.10	0.55	0.55	0.12	0.57	0.57	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3562	60	1152	1863	1583	1254	1863	1583
Grp Volume(v), veh/h	147	1592	121	102	741	776	88	55	76	23	48	176
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1852	1152	1863	1583	1254	1863	1583
Q Serve(g_s), s	8.1	36.6	3.7	5.4	31.0	31.1	6.8	2.4	4.0	1.5	2.1	8.8
Cycle Q Clear(g_c), s	8.1	36.6	3.7	5.4	31.0	31.1	8.9	2.4	4.0	4.0	2.1	8.8
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	180	1950	873	209	1004	1051	273	365	310	287	365	471
V/C Ratio(X)	0.82	0.82	0.14	0.49	0.74	0.74	0.32	0.15	0.25	0.08	0.13	0.37
Avail Cap(c_a), veh/h	312	2576	1153	258	1235	1293	273	365	310	287	365	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	18.2	10.9	41.1	16.0	16.1	36.7	33.2	33.8	34.8	33.1	27.7
Incr Delay (d2), s/veh	8.7	1.6	0.1	1.8	1.8	1.8	3.1	0.9	1.9	0.5	0.7	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	18.1	1.6	2.7	15.5	16.3	2.4	1.3	1.9	0.6	1.2	4.1
LnGrp Delay(d),s/veh	52.5	19.9	10.9	42.9	17.9	17.8	39.8	34.1	35.7	35.4	33.8	29.9
LnGrp LOS	D	B	B	D	B	B	D	C	D	D	C	C
Approach Vol, veh/h		1860			1619			219			247	
Approach Delay, s/veh		21.9			19.4			37.0			31.2	
Approach LOS		C			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	16.2	59.4		24.0	14.6	61.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	14.5	72.5		19.5	17.5	69.5				
Max Q Clear Time (g_c+I1), s		10.9	7.4	38.6		10.8	10.1	33.1				
Green Ext Time (p_c), s		1.3	5.1	16.3		1.3	0.2	14.3				
Intersection Summary												
HCM 2010 Ctrl Delay			22.3									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1441	48	28	1484	18	79	46	43	42	65	26
Future Volume (veh/h)	44	1441	48	28	1484	18	79	46	43	42	65	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	48	1566	52	30	1613	20	86	50	47	46	71	28
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	2047	916	50	1948	24	212	123	97	378	479	407
Arrive On Green	0.06	0.58	0.58	0.03	0.54	0.54	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	3539	1583	1774	3580	44	618	477	378	1293	1863	1583
Grp Volume(v), veh/h	48	1566	52	30	796	837	183	0	0	46	71	28
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1855	1473	0	0	1293	1863	1583
Q Serve(g_s), s	2.6	33.2	1.4	1.7	37.0	37.1	7.7	0.0	0.0	0.0	2.9	1.3
Cycle Q Clear(g_c), s	2.6	33.2	1.4	1.7	37.0	37.1	10.6	0.0	0.0	3.4	2.9	1.3
Prop In Lane	1.00		1.00	1.00		0.02	0.47		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	111	2047	916	50	963	1009	432	0	0	378	479	407
V/C Ratio(X)	0.43	0.76	0.06	0.60	0.83	0.83	0.42	0.00	0.00	0.12	0.15	0.07
Avail Cap(c_a), veh/h	170	2658	1189	116	1276	1337	432	0	0	378	479	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	15.8	9.1	47.6	18.7	18.8	31.3	0.0	0.0	28.6	28.5	27.9
Incr Delay (d2), s/veh	2.6	1.0	0.0	10.8	3.5	3.4	3.0	0.0	0.0	0.7	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	16.4	0.6	1.0	18.9	19.8	4.6	0.0	0.0	1.1	1.6	0.6
LnGrp Delay(d),s/veh	47.4	16.8	9.1	58.4	22.2	22.2	34.3	0.0	0.0	29.3	29.1	28.2
LnGrp LOS	D	B	A	E	C	C	C			C	C	C
Approach Vol, veh/h		1666			1663			183			145	
Approach Delay, s/veh		17.5			22.9			34.3			29.0	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	7.3	61.9		30.0	10.7	58.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	74.5		25.5	9.5	71.5				
Max Q Clear Time (g_c+I1), s		12.6	3.7	35.2		5.4	4.6	39.1				
Green Ext Time (p_c), s		1.4	0.0	16.8		1.7	3.9	14.8				
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary























1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 				 			 			 	
Traffic Volume (veh/h)	179	0	53	2	0	1	19	1780	0	0	1806	56
Future Volume (veh/h)	179	0	53	2	0	1	19	1780	0	0	1806	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	195	0	58	2	0	1	21	1935	0	0	1963	61
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	0	135	5	0	2	40	2429	0	38	2402	74
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.02	0.69	0.00	0.00	0.69	0.69
Sat Flow, veh/h	3442	0	1583	1137	0	569	1774	3632	0	1774	3505	108
Grp Volume(v), veh/h	195	0	58	3	0	0	21	1935	0	0	986	1038
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1706	0	0	1774	1770	0	1774	1770	1844
Q Serve(g_s), s	4.9	0.0	3.1	0.2	0.0	0.0	1.0	33.6	0.0	0.0	35.2	36.0
Cycle Q Clear(g_c), s	4.9	0.0	3.1	0.2	0.0	0.0	1.0	33.6	0.0	0.0	35.2	36.0
Prop In Lane	1.00		1.00	0.67		0.33	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	294	0	135	7	0	0	40	2429	0	38	1213	1263
V/C Ratio(X)	0.66	0.00	0.43	0.44	0.00	0.00	0.52	0.80	0.00	0.00	0.81	0.82
Avail Cap(c_a), veh/h	697	0	321	345	0	0	102	2429	0	100	1213	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	38.6	44.2	0.0	0.0	42.9	9.6	0.0	0.0	9.9	10.1
Incr Delay (d2), s/veh	2.6	0.0	2.1	38.4	0.0	0.0	10.0	2.8	0.0	0.0	6.0	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.4	0.1	0.0	0.0	0.6	17.1	0.0	0.0	18.7	20.0
LnGrp Delay(d),s/veh	42.0	0.0	40.7	82.6	0.0	0.0	52.9	12.5	0.0	0.0	16.0	16.2
LnGrp LOS	D		D	F			D	B			B	B
Approach Vol, veh/h		253			3			1956			2024	
Approach Delay, s/veh		41.7			82.6			12.9			16.1	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	65.5		12.1	6.5	65.4		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	0.0	35.6		6.9	3.0	38.0		2.2				
Green Ext Time (p_c), s	0.0	17.1		0.7	0.0	16.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				16.2								
HCM 2010 LOS				B								






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	15	26	10	20	69	51	1627	1	14	1810	44
Future Volume (veh/h)	131	15	26	10	20	69	51	1627	1	14	1810	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	142	16	28	11	22	75	55	1768	1	15	1967	48
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	264	225	46	60	161	71	2533	1	77	2477	60
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.04	0.70	0.70	0.04	0.70	0.70
Sat Flow, veh/h	1293	1863	1583	79	420	1134	1774	3630	2	1774	3531	86
Grp Volume(v), veh/h	142	16	28	108	0	0	55	862	907	15	982	1033
Grp Sat Flow(s),veh/h/ln	1293	1863	1583	1633	0	0	1774	1770	1862	1774	1770	1848
Q Serve(g_s), s	7.0	0.9	1.8	0.0	0.0	0.0	3.5	33.1	33.1	0.9	42.9	43.7
Cycle Q Clear(g_c), s	13.8	0.9	1.8	6.9	0.0	0.0	3.5	33.1	33.1	0.9	42.9	43.7
Prop In Lane	1.00		1.00	0.10		0.69	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	230	264	225	266	0	0	71	1235	1300	77	1241	1296
V/C Ratio(X)	0.62	0.06	0.12	0.41	0.00	0.00	0.78	0.70	0.70	0.20	0.79	0.80
Avail Cap(c_a), veh/h	276	331	281	324	0	0	78	1235	1300	85	1241	1296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	42.8	43.2	45.4	0.0	0.0	54.9	10.3	10.3	53.2	11.6	11.7
Incr Delay (d2), s/veh	3.0	0.1	0.2	1.0	0.0	0.0	35.2	3.3	3.1	1.2	5.2	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.4	0.8	3.2	0.0	0.0	2.4	17.2	18.0	0.5	22.5	24.0
LnGrp Delay(d),s/veh	51.8	42.9	43.5	46.4	0.0	0.0	90.1	13.6	13.4	54.5	16.8	16.9
LnGrp LOS	D	D	D	D			F	B	B	D	B	B
Approach Vol, veh/h		186			108			1824			2030	
Approach Delay, s/veh		49.8			46.4			15.8			17.1	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	85.0		20.9	9.1	85.4		20.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	80.5		20.5	5.1	80.9		20.5				
Max Q Clear Time (g_c+I1), s	2.9	35.1		15.8	5.5	45.7		8.9				
Green Ext Time (p_c), s	0.0	19.7		0.5	0.0	22.0		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.7									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	1716	64	42	1633	7	50	35	47	16	38	118
Future Volume (veh/h)	104	1716	64	42	1633	7	50	35	47	16	38	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	113	1865	70	46	1775	8	54	38	51	17	41	128
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	2233	999	101	2196	10	267	336	286	283	336	412
Arrive On Green	0.08	0.63	0.63	0.06	0.61	0.61	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3613	16	1211	1863	1583	1303	1863	1583
Grp Volume(v), veh/h	113	1865	70	46	869	914	54	38	51	17	41	128
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1211	1863	1583	1303	1863	1583
Q Serve(g_s), s	6.4	42.1	1.7	2.6	38.7	38.8	4.0	1.7	2.8	1.1	1.9	6.7
Cycle Q Clear(g_c), s	6.4	42.1	1.7	2.6	38.7	38.8	5.9	1.7	2.8	2.9	1.9	6.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	2233	999	101	1076	1131	267	336	286	283	336	412
V/C Ratio(X)	0.80	0.84	0.07	0.46	0.81	0.81	0.20	0.11	0.18	0.06	0.12	0.31
Avail Cap(c_a), veh/h	234	2743	1227	149	1287	1353	267	336	286	283	336	412
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	14.7	7.3	46.8	15.5	15.5	37.6	35.1	35.5	36.3	35.2	30.5
Incr Delay (d2), s/veh	9.8	2.0	0.0	3.2	3.3	3.2	1.7	0.7	1.4	0.4	0.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	21.1	0.8	1.4	19.8	20.8	1.5	1.0	1.3	0.4	1.0	3.1
LnGrp Delay(d),s/veh	56.2	16.7	7.3	50.0	18.8	18.7	39.3	35.8	36.9	36.7	35.9	32.4
LnGrp LOS	E	B	A	D	B	B	D	D	D	D	D	C
Approach Vol, veh/h		2048			1829			143			186	
Approach Delay, s/veh		18.6			19.5			37.5			33.6	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	10.3	69.1		23.0	12.7	66.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	8.6	79.4		18.5	13.5	74.5				
Max Q Clear Time (g_c+I1), s		7.9	4.6	44.1		8.7	8.4	40.8				
Green Ext Time (p_c), s		0.9	3.4	20.5		0.9	0.1	17.7				
Intersection Summary												
HCM 2010 Ctrl Delay			20.3									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1750	11	21	1689	5	50	57	38	40	27	30
Future Volume (veh/h)	37	1750	11	21	1689	5	50	57	38	40	27	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	40	1902	12	23	1836	5	54	62	41	43	29	33
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	2274	1017	42	2204	6	137	151	85	308	375	319
Arrive On Green	0.06	0.64	0.64	0.02	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3621	10	442	750	421	1286	1863	1583
Grp Volume(v), veh/h	40	1902	12	23	897	944	157	0	0	43	29	33
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1861	1613	0	0	1286	1863	1583
Q Serve(g_s), s	2.2	42.3	0.3	1.3	41.0	41.0	4.7	0.0	0.0	0.0	1.3	1.7
Cycle Q Clear(g_c), s	2.2	42.3	0.3	1.3	41.0	41.0	8.5	0.0	0.0	3.6	1.3	1.7
Prop In Lane	1.00		1.00	1.00		0.01	0.34		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	102	2274	1017	42	1077	1133	372	0	0	308	375	319
V/C Ratio(X)	0.39	0.84	0.01	0.55	0.83	0.83	0.42	0.00	0.00	0.14	0.08	0.10
Avail Cap(c_a), veh/h	131	2784	1246	103	1364	1435	372	0	0	308	375	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	14.1	6.6	49.2	15.8	15.8	35.7	0.0	0.0	33.9	33.0	33.2
Incr Delay (d2), s/veh	2.4	2.0	0.0	10.9	3.7	3.5	3.5	0.0	0.0	0.9	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	21.0	0.1	0.8	20.8	21.8	4.2	0.0	0.0	1.1	0.7	0.8
LnGrp Delay(d),s/veh	48.7	16.0	6.6	60.1	19.5	19.3	39.2	0.0	0.0	34.9	33.4	33.8
LnGrp LOS	D	B	A	E	B	B	D			C	C	C
Approach Vol, veh/h		1954			1864			157			105	
Approach Delay, s/veh		16.6			19.9			39.2			34.1	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	6.9	69.9		25.0	10.4	66.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.9	80.1		20.5	7.5	78.5				
Max Q Clear Time (g_c+I1), s		10.5	3.3	44.3		5.6	4.2	43.0				
Green Ext Time (p_c), s		0.9	0.0	21.2		1.1	2.9	18.9				
Intersection Summary												
HCM 2010 Ctrl Delay			19.5									
HCM 2010 LOS			B									






















HCM 2010 Signalized Intersection Summary

1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	0	38	0	0	1	36	1602	0	5	1673	141
Future Volume (veh/h)	156	0	38	0	0	1	36	1602	0	5	1673	141
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	170	0	41	0	0	1	39	1741	0	5	1818	153
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	0	121	0	0	2	62	2428	0	60	2266	188
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.03	0.69	0.00	0.03	0.68	0.68
Sat Flow, veh/h	3442	0	1583	0	0	1583	1774	3632	0	1774	3309	275
Grp Volume(v), veh/h	170	0	41	0	0	1	39	1741	0	5	960	1011
Grp Sat Flow(s),veh/h/ln	1721	0	1583	0	0	1583	1774	1770	0	1774	1770	1814
Q Serve(g_s), s	4.3	0.0	2.2	0.0	0.0	0.1	1.9	27.0	0.0	0.2	33.3	35.3
Cycle Q Clear(g_c), s	4.3	0.0	2.2	0.0	0.0	0.1	1.9	27.0	0.0	0.2	33.3	35.3
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		0.15
Lane Grp Cap(c), veh/h	264	0	121	0	0	2	62	2428	0	60	1212	1242
V/C Ratio(X)	0.64	0.00	0.34	0.00	0.00	0.46	0.63	0.72	0.00	0.08	0.79	0.81
Avail Cap(c_a), veh/h	697	0	320	0	0	320	102	2428	0	100	1212	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	38.9	0.0	0.0	44.4	42.4	8.6	0.0	41.6	9.7	10.0
Incr Delay (d2), s/veh	2.6	0.0	1.6	0.0	0.0	106.2	10.2	1.9	0.0	0.6	5.4	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.0	0.0	0.0	0.1	1.1	13.7	0.0	0.1	17.8	19.4
LnGrp Delay(d),s/veh	42.5	0.0	40.5	0.0	0.0	150.6	52.6	10.5	0.0	42.2	15.0	15.9
LnGrp LOS	D		D			F	D	B		D	B	B
Approach Vol, veh/h		211			1			1780			1976	
Approach Delay, s/veh		42.1			150.6			11.4			15.5	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	65.5		11.3	7.6	65.4		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	2.2	29.0		6.3	3.9	37.3		2.1				
Green Ext Time (p_c), s	0.0	17.3		0.6	0.0	16.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.1									
HCM 2010 LOS			B									
























HCM 2010 Signalized Intersection Summary

2: Pacific Coast Highway & 5th Street/Marvista Drive






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	28	34	10	23	45	77	1423	5	73	1592	115
Future Volume (veh/h)	158	28	34	10	23	45	77	1423	5	73	1592	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	172	30	37	11	25	49	84	1547	5	79	1730	125
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	279	237	50	90	143	104	2256	7	193	2258	162
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.06	0.62	0.62	0.11	0.67	0.67
Sat Flow, veh/h	1320	1863	1583	99	601	954	1774	3619	12	1774	3350	240
Grp Volume(v), veh/h	172	30	37	85	0	0	84	756	796	79	906	949
Grp Sat Flow(s),veh/h/ln	1320	1863	1583	1655	0	0	1774	1770	1861	1774	1770	1820
Q Serve(g_s), s	9.4	1.6	2.3	0.0	0.0	0.0	5.4	32.2	32.3	4.8	39.2	40.8
Cycle Q Clear(g_c), s	14.5	1.6	2.3	5.2	0.0	0.0	5.4	32.2	32.3	4.8	39.2	40.8
Prop In Lane	1.00		1.00	0.13		0.58	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	262	279	237	284	0	0	104	1103	1160	193	1193	1227
V/C Ratio(X)	0.66	0.11	0.16	0.30	0.00	0.00	0.81	0.69	0.69	0.41	0.76	0.77
Avail Cap(c_a), veh/h	323	365	311	358	0	0	104	1103	1160	193	1193	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	42.1	42.4	43.6	0.0	0.0	53.4	14.2	14.2	47.7	12.5	12.7
Incr Delay (d2), s/veh	3.5	0.2	0.3	0.6	0.0	0.0	36.6	3.5	3.3	1.4	4.6	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.8	1.0	2.5	0.0	0.0	3.7	16.6	17.4	2.4	20.4	21.9
LnGrp Delay(d),s/veh	51.1	42.3	42.7	44.2	0.0	0.0	89.9	17.7	17.5	49.0	17.1	17.5
LnGrp LOS	D	D	D	D			F	B	B	D	B	B
Approach Vol, veh/h		239			85			1636			1934	
Approach Delay, s/veh		48.7			44.2			21.3			18.6	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	76.0		21.7	11.2	81.8		21.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	71.5		22.5	6.7	77.3		22.5				
Max Q Clear Time (g_c+I1), s	6.8	34.3		16.5	7.4	42.8		7.2				
Green Ext Time (p_c), s	0.2	14.4		0.7	0.0	19.1		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			22.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

3: Main Street/Bolsa Avenue & Pacific Coast Highway





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	1492	111	94	1401	23	81	51	70	21	44	162
Future Volume (veh/h)	135	1492	111	94	1401	23	81	51	70	21	44	162
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	1622	121	102	1523	25	88	55	76	23	48	176
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	1971	882	208	2041	33	268	359	305	282	359	465
Arrive On Green	0.10	0.56	0.56	0.12	0.57	0.57	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3564	58	1152	1863	1583	1254	1863	1583
Grp Volume(v), veh/h	147	1622	121	102	756	792	88	55	76	23	48	176
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1852	1152	1863	1583	1254	1863	1583
Q Serve(g_s), s	8.2	37.9	3.7	5.5	32.2	32.3	6.9	2.5	4.1	1.6	2.2	8.9
Cycle Q Clear(g_c), s	8.2	37.9	3.7	5.5	32.2	32.3	9.1	2.5	4.1	4.1	2.2	8.9
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	180	1971	882	208	1014	1061	268	359	305	282	359	465
V/C Ratio(X)	0.82	0.82	0.14	0.49	0.75	0.75	0.33	0.15	0.25	0.08	0.13	0.38
Avail Cap(c_a), veh/h	307	2535	1134	254	1215	1272	268	359	305	282	359	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	18.3	10.8	41.9	16.1	16.1	37.6	34.0	34.7	35.7	33.9	28.4
Incr Delay (d2), s/veh	8.8	1.8	0.1	1.8	2.1	2.0	3.2	0.9	1.9	0.6	0.8	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	19.0	1.6	2.8	16.1	16.9	2.4	1.4	2.0	0.6	1.2	4.2
LnGrp Delay(d),s/veh	53.4	20.2	10.8	43.7	18.2	18.2	40.9	34.9	36.6	36.3	34.6	30.7
LnGrp LOS	D	C	B	D	B	B	D	C	D	D	C	C
Approach Vol, veh/h		1890			1650			219			247	
Approach Delay, s/veh		22.1			19.8			37.9			32.0	
Approach LOS		C			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	16.4	60.9		24.0	14.7	62.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	14.5	72.5		19.5	17.5	69.5				
Max Q Clear Time (g_c+I1), s		11.1	7.5	39.9		10.9	10.2	34.3				
Green Ext Time (p_c), s		1.2	5.1	16.4		1.2	0.2	14.6				
Intersection Summary												
HCM 2010 Ctrl Delay			22.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1468	48	28	1512	18	79	46	43	42	65	26
Future Volume (veh/h)	44	1468	48	28	1512	18	79	46	43	42	65	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	48	1596	52	30	1643	20	86	50	47	46	71	28
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	2069	926	50	1971	24	209	120	96	370	471	401
Arrive On Green	0.06	0.58	0.58	0.03	0.55	0.55	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3581	44	617	476	377	1293	1863	1583
Grp Volume(v), veh/h	48	1596	52	30	811	852	183	0	0	46	71	28
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1855	1470	0	0	1293	1863	1583
Q Serve(g_s), s	2.6	34.4	1.4	1.7	38.3	38.5	7.9	0.0	0.0	0.0	3.0	1.4
Cycle Q Clear(g_c), s	2.6	34.4	1.4	1.7	38.3	38.5	10.9	0.0	0.0	3.5	3.0	1.4
Prop In Lane	1.00		1.00	1.00		0.02	0.47		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	111	2069	926	50	974	1021	425	0	0	370	471	401
V/C Ratio(X)	0.43	0.77	0.06	0.60	0.83	0.83	0.43	0.00	0.00	0.12	0.15	0.07
Avail Cap(c_a), veh/h	167	2617	1171	114	1256	1316	425	0	0	370	471	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	15.8	9.0	48.4	18.8	18.8	32.2	0.0	0.0	29.4	29.2	28.6
Incr Delay (d2), s/veh	2.7	1.1	0.0	11.0	3.9	3.8	3.2	0.0	0.0	0.7	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	16.9	0.6	1.0	19.5	20.5	4.7	0.0	0.0	1.1	1.6	0.6
LnGrp Delay(d),s/veh	48.2	16.9	9.0	59.4	22.7	22.6	35.4	0.0	0.0	30.1	29.9	28.9
LnGrp LOS	D	B	A	E	C	C	D			C	C	C
Approach Vol, veh/h		1696			1693			183			145	
Approach Delay, s/veh		17.6			23.3			35.4			29.8	
Approach LOS		B			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	7.3	63.4		30.0	10.8	60.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	74.5		25.5	9.5	71.5				
Max Q Clear Time (g_c+I1), s		12.9	3.7	36.4		5.5	4.6	40.5				
Green Ext Time (p_c), s		1.4	0.0	17.1		1.7	3.9	15.0				
Intersection Summary												
HCM 2010 Ctrl Delay			21.5									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	0	58	2	0	1	21	1865	0	0	1895	56
Future Volume (veh/h)	184	0	58	2	0	1	21	1865	0	0	1895	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	200	0	63	2	0	1	23	2027	0	0	2060	61
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	0	138	5	0	2	43	2420	0	41	2397	71
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.02	0.68	0.00	0.00	0.68	0.68
Sat Flow, veh/h	3442	0	1583	1137	0	569	1774	3632	0	1774	3511	103
Grp Volume(v), veh/h	200	0	63	3	0	0	23	2027	0	0	1033	1088
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1706	0	0	1774	1770	0	1774	1770	1844
Q Serve(g_s), s	5.0	0.0	3.4	0.2	0.0	0.0	1.1	37.8	0.0	0.0	39.7	40.7
Cycle Q Clear(g_c), s	5.0	0.0	3.4	0.2	0.0	0.0	1.1	37.8	0.0	0.0	39.7	40.7
Prop In Lane	1.00		1.00	0.67		0.33	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	300	0	138	7	0	0	43	2420	0	41	1208	1259
V/C Ratio(X)	0.67	0.00	0.46	0.44	0.00	0.00	0.53	0.84	0.00	0.00	0.86	0.86
Avail Cap(c_a), veh/h	694	0	319	344	0	0	101	2420	0	99	1208	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	38.7	44.3	0.0	0.0	43.0	10.4	0.0	0.0	10.8	10.9
Incr Delay (d2), s/veh	2.5	0.0	2.3	38.4	0.0	0.0	9.8	3.7	0.0	0.0	7.9	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.6	0.1	0.0	0.0	0.7	19.2	0.0	0.0	21.6	23.0
LnGrp Delay(d),s/veh	42.0	0.0	41.0	82.7	0.0	0.0	52.8	14.1	0.0	0.0	18.7	19.0
LnGrp LOS	D		D	F			D	B			B	B
Approach Vol, veh/h		263			3			2050			2121	
Approach Delay, s/veh		41.8			82.7			14.5			18.8	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	65.5		12.3	6.7	65.4		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	0.0	39.8		7.0	3.1	42.7		2.2				
Green Ext Time (p_c), s	0.0	15.7		0.8	0.0	14.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	13	28	11	18	76	12	1730	1	16	1888	48
Future Volume (veh/h)	100	13	28	11	18	76	12	1730	1	16	1888	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	109	14	30	12	20	83	13	1880	1	17	2052	52
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	229	195	47	45	144	26	2669	1	33	2607	66
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.01	0.74	0.74	0.02	0.74	0.74
Sat Flow, veh/h	1286	1863	1583	86	366	1172	1774	3630	2	1774	3528	89
Grp Volume(v), veh/h	109	14	30	115	0	0	13	916	965	17	1025	1079
Grp Sat Flow(s),veh/h/ln	1286	1863	1583	1624	0	0	1774	1770	1862	1774	1770	1847
Q Serve(g_s), s	3.5	0.7	1.9	0.7	0.0	0.0	0.8	31.1	31.1	1.0	39.3	40.2
Cycle Q Clear(g_c), s	10.8	0.7	1.9	7.2	0.0	0.0	0.8	31.1	31.1	1.0	39.3	40.2
Prop In Lane	1.00		1.00	0.10		0.72	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	204	229	195	236	0	0	26	1301	1369	33	1308	1365
V/C Ratio(X)	0.54	0.06	0.15	0.49	0.00	0.00	0.49	0.70	0.70	0.52	0.78	0.79
Avail Cap(c_a), veh/h	287	349	296	339	0	0	83	1301	1369	89	1308	1365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	42.4	42.9	45.3	0.0	0.0	53.5	8.0	8.0	53.2	8.9	9.0
Incr Delay (d2), s/veh	2.2	0.1	0.4	1.6	0.0	0.0	13.4	3.2	3.1	11.9	4.8	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.4	0.8	3.4	0.0	0.0	0.5	16.2	17.0	0.6	20.5	21.9
LnGrp Delay(d),s/veh	49.3	42.5	43.3	46.8	0.0	0.0	66.9	11.2	11.0	65.2	13.6	13.7
LnGrp LOS	D	D	D	D			E	B	B	E	B	B
Approach Vol, veh/h		153			115			1894			2121	
Approach Delay, s/veh		47.5			46.8			11.5			14.1	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	85.0		17.9	6.1	85.4		17.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	80.5		20.5	5.1	80.9		20.5				
Max Q Clear Time (g_c+I1), s	3.0	33.1		12.8	2.8	42.2		9.2				
Green Ext Time (p_c), s	0.0	22.7		0.7	0.0	25.0		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			15.0									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1810	66	46	1712	8	48	38	51	18	41	129
Future Volume (veh/h)	102	1810	66	46	1712	8	48	38	51	18	41	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	111	1967	72	50	1861	9	52	41	55	20	45	140
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	2282	1021	104	2258	11	247	320	272	265	320	395
Arrive On Green	0.08	0.64	0.64	0.06	0.63	0.63	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1774	3539	1583	1774	3612	17	1194	1863	1583	1294	1863	1583
Grp Volume(v), veh/h	111	1967	72	50	911	959	52	41	55	20	45	140
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1194	1863	1583	1294	1863	1583
Q Serve(g_s), s	6.6	47.9	1.8	2.9	42.9	43.0	4.2	2.0	3.2	1.4	2.2	7.9
Cycle Q Clear(g_c), s	6.6	47.9	1.8	2.9	42.9	43.0	6.4	2.0	3.2	3.4	2.2	7.9
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	2282	1021	104	1106	1163	247	320	272	265	320	395
V/C Ratio(X)	0.80	0.86	0.07	0.48	0.82	0.82	0.21	0.13	0.20	0.08	0.14	0.35
Avail Cap(c_a), veh/h	222	2606	1166	141	1222	1285	247	320	272	265	320	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	15.3	7.1	49.2	15.6	15.6	40.6	37.8	38.3	39.3	37.9	33.3
Incr Delay (d2), s/veh	10.2	2.9	0.0	3.5	4.3	4.2	1.9	0.8	1.7	0.6	0.9	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	23.9	0.8	1.5	22.1	23.2	1.5	1.1	1.5	0.6	1.2	3.7
LnGrp Delay(d),s/veh	59.1	18.2	7.2	52.7	19.9	19.8	42.6	38.7	40.0	39.9	38.9	35.8
LnGrp LOS	E	B	A	D	B	B	D	D	D	D	D	D
Approach Vol, veh/h		2150			1920			148			205	
Approach Delay, s/veh		19.9			20.7			40.5			36.9	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	10.8	74.1		23.0	12.9	71.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	8.6	79.4		18.5	13.5	74.5				
Max Q Clear Time (g_c+I1), s		8.4	4.9	49.9		9.9	8.6	45.0				
Green Ext Time (p_c), s		1.0	3.2	19.6		0.9	0.1	17.7				
Intersection Summary												
HCM 2010 Ctrl Delay			21.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1847	12	23	1773	6	55	62	41	44	29	32
Future Volume (veh/h)	40	1847	12	23	1773	6	55	62	41	44	29	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	43	2008	13	25	1927	7	60	67	45	48	32	35
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	2327	1041	43	2257	8	132	141	81	279	357	303
Arrive On Green	0.06	0.66	0.66	0.02	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3617	13	449	738	421	1276	1863	1583
Grp Volume(v), veh/h	43	2008	13	25	942	992	172	0	0	48	32	35
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1608	0	0	1276	1863	1583
Q Serve(g_s), s	2.5	48.0	0.3	1.5	45.8	45.9	6.4	0.0	0.0	0.0	1.5	2.0
Cycle Q Clear(g_c), s	2.5	48.0	0.3	1.5	45.8	45.9	10.1	0.0	0.0	4.7	1.5	2.0
Prop In Lane	1.00		1.00	1.00		0.01	0.35		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	103	2327	1041	43	1104	1161	354	0	0	279	357	303
V/C Ratio(X)	0.42	0.86	0.01	0.58	0.85	0.85	0.49	0.00	0.00	0.17	0.09	0.12
Avail Cap(c_a), veh/h	124	2651	1186	98	1299	1365	354	0	0	279	357	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	14.5	6.3	51.6	16.2	16.2	38.9	0.0	0.0	36.8	35.6	35.7
Incr Delay (d2), s/veh	2.7	2.9	0.0	11.4	5.0	4.8	4.7	0.0	0.0	1.3	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	24.1	0.1	0.9	23.8	25.0	5.1	0.0	0.0	1.3	0.8	0.9
LnGrp Delay(d),s/veh	51.3	17.4	6.3	63.0	21.2	21.0	43.6	0.0	0.0	38.2	36.0	36.5
LnGrp LOS	D	B	A	E	C	C	D			D	D	D
Approach Vol, veh/h		2064			1959			172			115	
Approach Delay, s/veh		18.0			21.6			43.6			37.1	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	7.1	74.8		25.0	10.7	71.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.9	80.1		20.5	7.5	78.5				
Max Q Clear Time (g_c+I1), s		12.1	3.5	50.0		6.7	4.5	47.9				
Green Ext Time (p_c), s		0.9	0.0	20.3		1.2	2.7	18.8				
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
























1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 				 			 		 	 	
Traffic Volume (veh/h)	160	0	41	0	0	1	39	1627	0	6	1694	139
Future Volume (veh/h)	160	0	41	0	0	1	39	1627	0	6	1694	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	174	0	45	0	0	1	42	1768	0	7	1841	151
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	269	0	124	0	0	2	64	2420	0	62	2264	183
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.04	0.68	0.00	0.04	0.68	0.68
Sat Flow, veh/h	3442	0	1583	0	0	1583	1774	3632	0	1774	3317	268
Grp Volume(v), veh/h	174	0	45	0	0	1	42	1768	0	7	970	1022
Grp Sat Flow(s),veh/h/ln	1721	0	1583	0	0	1583	1774	1770	0	1774	1770	1815
Q Serve(g_s), s	4.4	0.0	2.4	0.0	0.0	0.1	2.1	28.2	0.0	0.3	34.4	36.4
Cycle Q Clear(g_c), s	4.4	0.0	2.4	0.0	0.0	0.1	2.1	28.2	0.0	0.3	34.4	36.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		0.15
Lane Grp Cap(c), veh/h	269	0	124	0	0	2	64	2420	0	62	1208	1239
V/C Ratio(X)	0.65	0.00	0.36	0.00	0.00	0.46	0.65	0.73	0.00	0.11	0.80	0.82
Avail Cap(c_a), veh/h	694	0	319	0	0	319	101	2420	0	99	1208	1239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	39.0	0.0	0.0	44.5	42.4	8.9	0.0	41.7	10.0	10.3
Incr Delay (d2), s/veh	2.6	0.0	1.8	0.0	0.0	106.3	10.7	2.0	0.0	0.8	5.7	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.1	0.0	0.0	0.1	1.2	14.2	0.0	0.2	18.4	20.1
LnGrp Delay(d),s/veh	42.6	0.0	40.8	0.0	0.0	150.8	53.1	10.9	0.0	42.5	15.7	16.6
LnGrp LOS	D		D			F	D	B		D	B	B
Approach Vol, veh/h		219			1			1810			1999	
Approach Delay, s/veh		42.2			150.8			11.9			16.2	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	65.5		11.5	7.7	65.4		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	2.3	30.2		6.4	4.1	38.4		2.1				
Green Ext Time (p_c), s	0.0	17.3		0.6	0.0	16.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	15.7											
HCM 2010 LOS	B											






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	27	37	11	21	49	35	1472	6	80	1597	126
Future Volume (veh/h)	126	27	37	11	21	49	35	1472	6	80	1597	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	29	40	12	23	53	38	1600	7	87	1736	137
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	236	201	52	69	126	56	2395	10	151	2384	186
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.03	0.66	0.66	0.09	0.72	0.72
Sat Flow, veh/h	1318	1863	1583	111	542	990	1774	3614	16	1774	3327	260
Grp Volume(v), veh/h	137	29	40	88	0	0	38	783	824	87	914	959
Grp Sat Flow(s),veh/h/ln	1318	1863	1583	1643	0	0	1774	1770	1860	1774	1770	1817
Q Serve(g_s), s	5.7	1.5	2.4	0.0	0.0	0.0	2.3	28.9	28.9	5.1	32.7	34.2
Cycle Q Clear(g_c), s	10.9	1.5	2.4	5.2	0.0	0.0	2.3	28.9	28.9	5.1	32.7	34.2
Prop In Lane	1.00		1.00	0.14		0.60	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	235	236	201	246	0	0	56	1173	1233	151	1268	1302
V/C Ratio(X)	0.58	0.12	0.20	0.36	0.00	0.00	0.68	0.67	0.67	0.58	0.72	0.74
Avail Cap(c_a), veh/h	342	388	330	377	0	0	110	1173	1233	206	1268	1302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	41.8	42.2	43.4	0.0	0.0	51.7	11.0	11.0	47.5	9.0	9.2
Incr Delay (d2), s/veh	2.3	0.2	0.5	0.9	0.0	0.0	13.5	3.0	2.9	3.4	3.6	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.8	1.1	2.5	0.0	0.0	1.3	14.9	15.6	2.6	17.0	18.1
LnGrp Delay(d),s/veh	48.1	42.0	42.7	44.3	0.0	0.0	65.2	14.0	13.9	50.9	12.5	12.9
LnGrp LOS	D	D	D	D			E	B	B	D	B	B
Approach Vol, veh/h		206			88			1645			1960	
Approach Delay, s/veh		46.2			44.3			15.2			14.4	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	76.0		18.2	7.9	81.8		18.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	71.5		22.5	6.7	77.3		22.5				
Max Q Clear Time (g_c+I1), s	7.1	30.9		12.9	4.3	36.2		7.2				
Green Ext Time (p_c), s	0.1	15.8		0.8	0.1	21.3		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			17.1									
HCM 2010 LOS			B									





















HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	1533	113	103	1417	26	78	56	77	23	48	177
Future Volume (veh/h)	125	1533	113	103	1417	26	78	56	77	23	48	177
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	136	1666	123	112	1540	28	85	61	84	25	52	192
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	1996	893	211	2094	38	255	349	297	267	349	446
Arrive On Green	0.09	0.56	0.56	0.12	0.59	0.59	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3556	65	1131	1863	1583	1238	1863	1583
Grp Volume(v), veh/h	136	1666	123	112	765	803	85	61	84	25	52	192
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1851	1131	1863	1583	1238	1863	1583
Q Serve(g_s), s	7.8	40.4	3.8	6.2	32.6	32.8	7.1	2.9	4.7	1.8	2.4	10.3
Cycle Q Clear(g_c), s	7.8	40.4	3.8	6.2	32.6	32.8	9.5	2.9	4.7	4.7	2.4	10.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	1996	893	211	1042	1090	255	349	297	267	349	446
V/C Ratio(X)	0.81	0.83	0.14	0.53	0.73	0.74	0.33	0.17	0.28	0.09	0.15	0.43
Avail Cap(c_a), veh/h	298	2464	1102	247	1181	1236	255	349	297	267	349	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	18.7	10.7	43.1	15.5	15.5	39.4	35.6	36.3	37.5	35.4	30.6
Incr Delay (d2), s/veh	9.1	2.2	0.1	2.1	2.1	2.0	3.5	1.1	2.4	0.7	0.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	20.0	1.7	3.1	16.3	17.1	2.5	1.6	2.3	0.7	1.3	4.9
LnGrp Delay(d),s/veh	55.4	20.9	10.8	45.2	17.6	17.6	42.9	36.6	38.7	38.2	36.3	33.6
LnGrp LOS	E	C	B	D	B	B	D	D	D	D	D	C
Approach Vol, veh/h		1925			1680			230			269	
Approach Delay, s/veh		22.7			19.4			39.7			34.6	
Approach LOS		C			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	16.9	63.2		24.0	14.3	65.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	14.5	72.5		19.5	17.5	69.5				
Max Q Clear Time (g_c+I1), s		11.5	8.2	42.4		12.3	9.8	34.8				
Green Ext Time (p_c), s		1.3	4.7	16.4		1.2	0.2	14.9				
Intersection Summary												
HCM 2010 Ctrl Delay			23.1									
HCM 2010 LOS			C									






















HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1506	52	30	1538	20	86	50	47	46	71	28
Future Volume (veh/h)	48	1506	52	30	1538	20	86	50	47	46	71	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	52	1637	57	33	1672	22	93	54	51	50	77	30
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	2093	936	53	1989	26	201	116	92	351	462	392
Arrive On Green	0.07	0.59	0.59	0.03	0.56	0.56	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3577	47	604	468	372	1284	1863	1583
Grp Volume(v), veh/h	52	1637	57	33	826	868	198	0	0	50	77	30
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1854	1444	0	0	1284	1863	1583
Q Serve(g_s), s	2.9	36.2	1.6	1.9	40.0	40.2	9.3	0.0	0.0	0.0	3.3	1.5
Cycle Q Clear(g_c), s	2.9	36.2	1.6	1.9	40.0	40.2	12.7	0.0	0.0	4.2	3.3	1.5
Prop In Lane	1.00		1.00	1.00		0.03	0.47		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	115	2093	936	53	984	1031	409	0	0	351	462	392
V/C Ratio(X)	0.45	0.78	0.06	0.63	0.84	0.84	0.48	0.00	0.00	0.14	0.17	0.08
Avail Cap(c_a), veh/h	164	2563	1146	112	1230	1289	409	0	0	351	462	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	16.0	8.9	49.4	19.0	19.1	34.0	0.0	0.0	30.7	30.4	29.7
Incr Delay (d2), s/veh	2.7	1.3	0.0	11.6	4.4	4.3	4.0	0.0	0.0	0.9	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	17.9	0.7	1.1	20.5	21.7	5.4	0.0	0.0	1.2	1.8	0.7
LnGrp Delay(d),s/veh	49.1	17.3	8.9	61.0	23.4	23.3	38.0	0.0	0.0	31.5	31.1	30.0
LnGrp LOS	D	B	A	E	C	C	D			C	C	C
Approach Vol, veh/h		1746			1727			198			157	
Approach Delay, s/veh		18.0			24.1			38.0			31.1	
Approach LOS		B			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	7.6	65.3		30.0	11.2	61.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	74.5		25.5	9.5	71.5				
Max Q Clear Time (g_c+I1), s		14.7	3.9	38.2		6.2	4.9	42.2				
Green Ext Time (p_c), s		1.4	0.0	17.4		1.8	3.7	15.0				
Intersection Summary												
HCM 2010 Ctrl Delay			22.3									
HCM 2010 LOS			C									
























HCM 2010 Signalized Intersection Summary
 1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	0	58	2	0	1	21	1889	0	0	1920	56
Future Volume (veh/h)	184	0	58	2	0	1	21	1889	0	0	1920	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	200	0	63	2	0	1	23	2053	0	0	2087	61
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	0	138	5	0	2	43	2420	0	41	2398	70
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.02	0.68	0.00	0.00	0.68	0.68
Sat Flow, veh/h	3442	0	1583	1137	0	569	1774	3632	0	1774	3512	102
Grp Volume(v), veh/h	200	0	63	3	0	0	23	2053	0	0	1046	1102
Grp Sat Flow(s),veh/h/ln	1721	0	1583	1706	0	0	1774	1770	0	1774	1770	1845
Q Serve(g_s), s	5.0	0.0	3.4	0.2	0.0	0.0	1.1	39.0	0.0	0.0	41.0	42.0
Cycle Q Clear(g_c), s	5.0	0.0	3.4	0.2	0.0	0.0	1.1	39.0	0.0	0.0	41.0	42.0
Prop In Lane	1.00		1.00	0.67		0.33	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	300	0	138	7	0	0	43	2420	0	41	1208	1259
V/C Ratio(X)	0.67	0.00	0.46	0.44	0.00	0.00	0.53	0.85	0.00	0.00	0.87	0.87
Avail Cap(c_a), veh/h	694	0	319	344	0	0	101	2420	0	99	1208	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	38.7	44.3	0.0	0.0	43.0	10.6	0.0	0.0	11.0	11.2
Incr Delay (d2), s/veh	2.5	0.0	2.3	38.4	0.0	0.0	9.8	3.9	0.0	0.0	8.5	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.6	0.1	0.0	0.0	0.7	20.1	0.0	0.0	22.6	24.1
LnGrp Delay(d),s/veh	42.0	0.0	41.0	82.7	0.0	0.0	52.8	14.6	0.0	0.0	19.5	19.8
LnGrp LOS	D		D	F			D	B			B	B
Approach Vol, veh/h		263			3			2076			2148	
Approach Delay, s/veh		41.8			82.7			15.0			19.6	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	65.5		12.3	6.7	65.4		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	0.0	41.0		7.0	3.1	44.0		2.2				
Green Ext Time (p_c), s	0.0	15.2		0.8	0.0	13.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.8									
HCM 2010 LOS			B									






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	16	28	11	22	76	52	1730	1	16	1927	48
Future Volume (veh/h)	139	16	28	11	22	76	52	1730	1	16	1927	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	151	17	30	12	24	83	57	1880	1	17	2095	52
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	287	244	46	64	175	73	2492	1	79	2435	60
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.04	0.69	0.69	0.04	0.69	0.69
Sat Flow, veh/h	1281	1863	1583	79	414	1138	1774	3630	2	1774	3530	87
Grp Volume(v), veh/h	151	17	30	119	0	0	57	916	965	17	1046	1101
Grp Sat Flow(s),veh/h/ln	1281	1863	1583	1632	0	0	1774	1770	1862	1774	1770	1847
Q Serve(g_s), s	8.0	0.9	1.9	0.0	0.0	0.0	3.7	39.5	39.5	1.1	52.6	53.7
Cycle Q Clear(g_c), s	15.7	0.9	1.9	7.7	0.0	0.0	3.7	39.5	39.5	1.1	52.6	53.7
Prop In Lane	1.00		1.00	0.10		0.70	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	235	287	244	285	0	0	73	1215	1278	79	1221	1274
V/C Ratio(X)	0.64	0.06	0.12	0.42	0.00	0.00	0.78	0.75	0.75	0.21	0.86	0.86
Avail Cap(c_a), veh/h	262	326	277	318	0	0	77	1215	1278	83	1221	1274
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	42.4	42.8	45.2	0.0	0.0	55.7	12.0	12.0	54.0	13.8	14.0
Incr Delay (d2), s/veh	4.5	0.1	0.2	1.0	0.0	0.0	37.2	4.4	4.2	1.3	7.9	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.5	0.9	3.6	0.0	0.0	2.6	20.6	21.6	0.6	27.9	29.7
LnGrp Delay(d),s/veh	53.7	42.5	43.0	46.2	0.0	0.0	92.9	16.3	16.1	55.4	21.7	21.9
LnGrp LOS	D	D	D	D			F	B	B	E	C	C
Approach Vol, veh/h		198			119			1938			2164	
Approach Delay, s/veh		51.1			46.2			18.5			22.1	
Approach LOS		D			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	85.0		22.5	9.3	85.4		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	80.5		20.5	5.1	80.9		20.5				
Max Q Clear Time (g_c+I1), s	3.1	41.5		17.7	5.7	55.7		9.7				
Green Ext Time (p_c), s	0.0	20.7		0.4	0.0	19.0		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			22.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1834	66	46	1737	8	48	38	51	18	41	129
Future Volume (veh/h)	102	1834	66	46	1737	8	48	38	51	18	41	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	111	1993	72	50	1888	9	52	41	55	20	45	140
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	2294	1026	103	2270	11	244	316	269	262	316	392
Arrive On Green	0.08	0.65	0.65	0.06	0.63	0.63	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1774	3539	1583	1774	3612	17	1194	1863	1583	1294	1863	1583
Grp Volume(v), veh/h	111	1993	72	50	924	973	52	41	55	20	45	140
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1194	1863	1583	1294	1863	1583
Q Serve(g_s), s	6.7	49.4	1.8	3.0	44.3	44.4	4.2	2.0	3.3	1.5	2.2	8.0
Cycle Q Clear(g_c), s	6.7	49.4	1.8	3.0	44.3	44.4	6.5	2.0	3.3	3.5	2.2	8.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	2294	1026	103	1112	1169	244	316	269	262	316	392
V/C Ratio(X)	0.80	0.87	0.07	0.48	0.83	0.83	0.21	0.13	0.20	0.08	0.14	0.36
Avail Cap(c_a), veh/h	220	2578	1153	140	1209	1271	244	316	269	262	316	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	15.4	7.1	49.7	15.7	15.8	41.3	38.4	38.9	39.9	38.5	33.8
Incr Delay (d2), s/veh	10.6	3.2	0.0	3.5	4.7	4.6	2.0	0.8	1.7	0.6	0.9	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	24.8	0.8	1.6	22.8	23.9	1.5	1.1	1.6	0.6	1.2	3.7
LnGrp Delay(d),s/veh	60.0	18.6	7.1	53.2	20.5	20.3	43.2	39.3	40.6	40.5	39.4	36.4
LnGrp LOS	E	B	A	D	C	C	D	D	D	D	D	D
Approach Vol, veh/h		2176			1947			148			205	
Approach Delay, s/veh		20.3			21.2			41.2			37.4	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	10.8	75.2		23.0	13.0	73.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	8.6	79.4		18.5	13.5	74.5				
Max Q Clear Time (g_c+I1), s		8.5	5.0	51.4		10.0	8.7	46.4				
Green Ext Time (p_c), s		1.0	3.2	19.2		0.9	0.1	17.5				
Intersection Summary												
HCM 2010 Ctrl Delay			22.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1871	12	23	1798	6	55	62	41	44	29	32
Future Volume (veh/h)	40	1871	12	23	1798	6	55	62	41	44	29	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	43	2034	13	25	1954	7	60	67	45	48	32	35
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	2339	1046	43	2273	8	130	140	80	275	353	300
Arrive On Green	0.06	0.66	0.66	0.02	0.63	0.63	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3617	13	449	738	421	1276	1863	1583
Grp Volume(v), veh/h	43	2034	13	25	955	1006	172	0	0	48	32	35
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1860	1608	0	0	1276	1863	1583
Q Serve(g_s), s	2.5	49.5	0.3	1.5	47.1	47.2	6.5	0.0	0.0	0.0	1.5	2.0
Cycle Q Clear(g_c), s	2.5	49.5	0.3	1.5	47.1	47.2	10.2	0.0	0.0	4.8	1.5	2.0
Prop In Lane	1.00		1.00	1.00		0.01	0.35		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	101	2339	1046	43	1112	1169	350	0	0	275	353	300
V/C Ratio(X)	0.43	0.87	0.01	0.58	0.86	0.86	0.49	0.00	0.00	0.17	0.09	0.12
Avail Cap(c_a), veh/h	123	2624	1174	97	1286	1352	350	0	0	275	353	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	14.6	6.3	52.2	16.2	16.2	39.5	0.0	0.0	37.4	36.1	36.3
Incr Delay (d2), s/veh	2.8	3.2	0.0	11.5	5.4	5.2	4.9	0.0	0.0	1.4	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	24.8	0.1	0.9	24.5	25.7	5.1	0.0	0.0	1.3	0.8	0.9
LnGrp Delay(d),s/veh	52.1	17.8	6.3	63.7	21.6	21.5	44.3	0.0	0.0	38.8	36.6	37.1
LnGrp LOS	D	B	A	E	C	C	D			D	D	D
Approach Vol, veh/h		2090			1986			172			115	
Approach Delay, s/veh		18.4			22.1			44.3			37.7	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	7.1	75.9		25.0	10.6	72.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.9	80.1		20.5	7.5	78.5				
Max Q Clear Time (g_c+I1), s		12.2	3.5	51.5		6.8	4.5	49.2				
Green Ext Time (p_c), s		0.9	0.0	19.9		1.2	2.7	18.7				
Intersection Summary												
HCM 2010 Ctrl Delay			21.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
























1: Pacific Coast Highway & 1st Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							 			 	
Traffic Volume (veh/h)	160	0	41	0	0	1	39	1654	0	6	1722	139
Future Volume (veh/h)	160	0	41	0	0	1	39	1654	0	6	1722	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	174	0	45	0	0	1	42	1798	0	7	1872	151
Adj No. of Lanes	2	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	269	0	124	0	0	2	64	2420	0	62	2267	180
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.04	0.68	0.00	0.04	0.68	0.68
Sat Flow, veh/h	3442	0	1583	0	0	1583	1774	3632	0	1774	3321	264
Grp Volume(v), veh/h	174	0	45	0	0	1	42	1798	0	7	986	1037
Grp Sat Flow(s),veh/h/ln	1721	0	1583	0	0	1583	1774	1770	0	1774	1770	1816
Q Serve(g_s), s	4.4	0.0	2.4	0.0	0.0	0.1	2.1	29.1	0.0	0.3	35.6	37.7
Cycle Q Clear(g_c), s	4.4	0.0	2.4	0.0	0.0	0.1	2.1	29.1	0.0	0.3	35.6	37.7
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		0.15
Lane Grp Cap(c), veh/h	269	0	124	0	0	2	64	2420	0	62	1208	1240
V/C Ratio(X)	0.65	0.00	0.36	0.00	0.00	0.46	0.65	0.74	0.00	0.11	0.82	0.84
Avail Cap(c_a), veh/h	694	0	319	0	0	319	101	2420	0	99	1208	1240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	39.0	0.0	0.0	44.5	42.4	9.1	0.0	41.7	10.1	10.5
Incr Delay (d2), s/veh	2.6	0.0	1.8	0.0	0.0	106.3	10.7	2.1	0.0	0.8	6.2	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.1	0.0	0.0	0.1	1.2	14.7	0.0	0.2	19.0	20.8
LnGrp Delay(d),s/veh	42.6	0.0	40.8	0.0	0.0	150.8	53.1	11.2	0.0	42.5	16.3	17.3
LnGrp LOS	D		D			F	D	B		D	B	B
Approach Vol, veh/h		219			1			1840			2030	
Approach Delay, s/veh		42.2			150.8			12.1			16.9	
Approach LOS		D			F			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	65.5		11.5	7.7	65.4		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.1	60.9		18.0				
Max Q Clear Time (g_c+I1), s	2.3	31.1		6.4	4.1	39.7		2.1				
Green Ext Time (p_c), s	0.0	17.4		0.6	0.0	15.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			16.1									
HCM 2010 LOS			B									






















HCM 2010 Signalized Intersection Summary
 2: Pacific Coast Highway & 5th Street/Marvista Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	31	37	11	25	49	80	1472	6	80	1640	126
Future Volume (veh/h)	169	31	37	11	25	49	80	1472	6	80	1640	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	184	34	40	12	27	53	87	1600	7	87	1783	137
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	301	256	51	97	154	102	2221	10	191	2216	168
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.06	0.61	0.61	0.11	0.66	0.66
Sat Flow, veh/h	1313	1863	1583	102	599	952	1774	3614	16	1774	3335	253
Grp Volume(v), veh/h	184	34	40	92	0	0	87	783	824	87	936	984
Grp Sat Flow(s),veh/h/ln	1313	1863	1583	1653	0	0	1774	1770	1860	1774	1770	1818
Q Serve(g_s), s	10.6	1.8	2.5	0.0	0.0	0.0	5.7	35.6	35.6	5.4	43.8	46.0
Cycle Q Clear(g_c), s	16.2	1.8	2.5	5.6	0.0	0.0	5.7	35.6	35.6	5.4	43.8	46.0
Prop In Lane	1.00		1.00	0.13		0.58	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	271	301	256	302	0	0	102	1088	1143	191	1176	1208
V/C Ratio(X)	0.68	0.11	0.16	0.30	0.00	0.00	0.85	0.72	0.72	0.46	0.80	0.81
Avail Cap(c_a), veh/h	312	360	306	353	0	0	102	1088	1143	191	1176	1208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	41.6	41.9	43.2	0.0	0.0	54.3	15.5	15.5	48.7	13.9	14.3
Incr Delay (d2), s/veh	4.8	0.2	0.3	0.6	0.0	0.0	45.9	4.1	3.9	1.7	5.6	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.9	1.1	2.7	0.0	0.0	4.1	18.4	19.3	2.7	22.9	25.0
LnGrp Delay(d),s/veh	52.6	41.8	42.2	43.8	0.0	0.0	100.2	19.6	19.4	50.4	19.5	20.4
LnGrp LOS	D	D	D	D			F	B	B	D	B	C
Approach Vol, veh/h		258			92			1694			2007	
Approach Delay, s/veh		49.6			43.8			23.7			21.3	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	76.0		23.3	11.2	81.8		23.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	71.5		22.5	6.7	77.3		22.5				
Max Q Clear Time (g_c+I1), s	7.4	37.6		18.2	7.7	48.0		7.6				
Green Ext Time (p_c), s	0.2	14.7		0.6	0.0	18.2		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 3: Main Street/Bolsa Avenue & Pacific Coast Highway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	1560	113	103	1445	26	78	56	77	23	48	177
Future Volume (veh/h)	125	1560	113	103	1445	26	78	56	77	23	48	177
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	136	1696	123	112	1571	28	85	61	84	25	52	192
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	2015	901	210	2112	38	250	344	292	262	344	441
Arrive On Green	0.09	0.57	0.57	0.12	0.59	0.59	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3558	63	1131	1863	1583	1238	1863	1583
Grp Volume(v), veh/h	136	1696	123	112	780	819	85	61	84	25	52	192
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1852	1131	1863	1583	1238	1863	1583
Q Serve(g_s), s	7.9	41.9	3.8	6.3	33.9	34.0	7.2	2.9	4.8	1.8	2.5	10.5
Cycle Q Clear(g_c), s	7.9	41.9	3.8	6.3	33.9	34.0	9.7	2.9	4.8	4.8	2.5	10.5
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	2015	901	210	1050	1099	250	344	292	262	344	441
V/C Ratio(X)	0.82	0.84	0.14	0.53	0.74	0.74	0.34	0.18	0.29	0.10	0.15	0.44
Avail Cap(c_a), veh/h	294	2429	1086	243	1164	1218	250	344	292	262	344	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	18.8	10.6	43.8	15.6	15.6	40.2	36.3	37.1	38.3	36.1	31.3
Incr Delay (d2), s/veh	9.2	2.4	0.1	2.1	2.3	2.3	3.6	1.1	2.5	0.7	0.9	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	20.9	1.7	3.2	17.2	18.0	2.5	1.6	2.3	0.7	1.4	5.0
LnGrp Delay(d),s/veh	56.2	21.2	10.7	45.9	18.0	17.9	43.8	37.4	39.6	39.0	37.1	34.4
LnGrp LOS	E	C	B	D	B	B	D	D	D	D	D	C
Approach Vol, veh/h		1955			1711			230			269	
Approach Delay, s/veh		23.0			19.8			40.6			35.3	
Approach LOS		C			B			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	17.0	64.6		24.0	14.4	67.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.5	14.5	72.5		19.5	17.5	69.5				
Max Q Clear Time (g_c+I1), s		11.7	8.3	43.9		12.5	9.9	36.0				
Green Ext Time (p_c), s		1.3	4.7	16.3		1.2	0.2	15.1				
Intersection Summary												
HCM 2010 Ctrl Delay			23.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 4: 12th Street/Balboa Drive & Pacific Coast Highway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1533	52	30	1566	20	86	50	47	46	71	28
Future Volume (veh/h)	48	1533	52	30	1566	20	86	50	47	46	71	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	52	1666	57	33	1702	22	93	54	51	50	77	30
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	2113	945	52	2009	26	198	114	91	344	455	387
Arrive On Green	0.06	0.60	0.60	0.03	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3539	1583	1774	3578	46	602	467	371	1284	1863	1583
Grp Volume(v), veh/h	52	1666	57	33	841	883	198	0	0	50	77	30
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1855	1440	0	0	1284	1863	1583
Q Serve(g_s), s	2.9	37.4	1.6	1.9	41.4	41.6	9.6	0.0	0.0	0.0	3.4	1.5
Cycle Q Clear(g_c), s	2.9	37.4	1.6	1.9	41.4	41.6	13.0	0.0	0.0	4.3	3.4	1.5
Prop In Lane	1.00		1.00	1.00		0.02	0.47		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	115	2113	945	52	994	1042	403	0	0	344	455	387
V/C Ratio(X)	0.45	0.79	0.06	0.63	0.85	0.85	0.49	0.00	0.00	0.15	0.17	0.08
Avail Cap(c_a), veh/h	161	2526	1130	110	1212	1270	403	0	0	344	455	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	16.0	8.8	50.1	19.1	19.2	34.8	0.0	0.0	31.4	31.1	30.4
Incr Delay (d2), s/veh	2.8	1.5	0.0	11.8	4.8	4.7	4.3	0.0	0.0	0.9	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	18.5	0.7	1.1	21.4	22.5	5.5	0.0	0.0	1.2	1.9	0.7
LnGrp Delay(d),s/veh	49.8	17.5	8.8	61.9	23.9	23.9	39.1	0.0	0.0	32.3	31.9	30.8
LnGrp LOS	D	B	A	E	C	C	D			C	C	C
Approach Vol, veh/h		1775			1757			198			157	
Approach Delay, s/veh		18.2			24.6			39.1			31.8	
Approach LOS		B			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	7.6	66.8		30.0	11.3	63.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	74.5		25.5	9.5	71.5				
Max Q Clear Time (g_c+I1), s		15.0	3.9	39.4		6.3	4.9	43.6				
Green Ext Time (p_c), s		1.4	0.0	17.6		1.8	3.7	15.0				
Intersection Summary												
HCM 2010 Ctrl Delay			22.7									
HCM 2010 LOS			C									

APPENDIX **E**

ROADWAY ANALYSIS
WORKSHEETS

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1708	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	944
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1749	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	967
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.0
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1476	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	816
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1616	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	894
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing WP AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1747	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	966
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.0
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing WP AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1788	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	988
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing WP PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1519	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	840
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing WP PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1659	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	917
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1788	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	988
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1829	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1011
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1583	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	875
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Agency	KHA	Analysis Year	OPENING YEAR PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1737	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	960
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1827	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1010
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1868	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	1032
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/4/2017
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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1626	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	899
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.2
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/4/2017
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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1780	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	984
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1906	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1054
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.2
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1952	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1079
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1647	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	910
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1803	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	997
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1945	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1076
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1991	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1100
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	28.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1690	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	934
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound PCH Between 1st and 5th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1846	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1020
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1772	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	980
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1693	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	936
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.2
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1587	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	878
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1499	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	828
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1796	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	993
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1718	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	950
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1614	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	892
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.0
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1527	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	844
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1860	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1028
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1776	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	982
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1711	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	946
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1616	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	894
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1884	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	1042
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1801	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	996
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1738	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	961
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
Agency	KHA	Analysis Year	OPENING YEAR WITH PROJECT PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1644	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	909
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1978	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1094
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	28.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1889	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1044
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.0
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1771	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	979
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Analyst	TC	Date	12/2017
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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1672	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	924
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	2002	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1107
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	28.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1914	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1058
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1798	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	994
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 5th and Main		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1700	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	940
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1702	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	941
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1667	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	922
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1440	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	796
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	20.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1480	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	818
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Agency	KHA	Analysis Year	Existing WP AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1726	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	954
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1692	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	936
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.2
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1467	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	811
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.43

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.0
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
Agency	KHA	Analysis Year	Existing WP PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1508	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	834
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1774	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	981
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1744	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	964
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1533	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	848
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1589	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	878
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Agency	KHA	Analysis Year	OPENING YEAR WITH PROJECT AM
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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1798	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	994
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1769	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	978
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1560	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	862
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1617	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	894
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1899	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1050
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1860	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1028
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Jurisdiction	Seal Beach	Time Period Analyzed	
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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1606	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	888
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1652	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	914
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1923	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1063
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1885	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1042
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Analyst	TC	Date	12/2017
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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1633	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	903
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between Main and 12th		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1680	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	929
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.0
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1731	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	957
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1615	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	893
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1433	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	792
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	20.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1423	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	786
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.41

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	20.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1755	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	970
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.51

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1640	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	906
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.4
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1460	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	807
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	20.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1451	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	802
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.42

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	20.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Agency	KHA	Analysis Year	OPENING YEAR AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1804	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	998
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1690	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	934
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.49

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1526	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	844
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1530	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	846
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	21.9
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1828	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1010
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1715	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	948
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.50

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	24.5
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1553	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	858
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.2
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1558	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	862
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.3
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1932	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1068
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	27.6
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1802	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	996
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	25.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1599	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	884
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.8
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Analyst	TC	Date	12/4/2017
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Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	190	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	105
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.8
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1588	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	878
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.46

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	22.7
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1956	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1082
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.57

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	28.0
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/2017
Agency	KHA	Analysis Year	Build-Out WP AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1827	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	1010
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	26.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	D
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
Agency	KHA	Analysis Year	Build-Out WP PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Eastbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	1626	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	899
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.2
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/2017
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Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Westbound PCH Between 12th and Seal Beach Blvd		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Divided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	38.7

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	1616	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	894
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.47

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	38.7
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	23.1
Median Type Adjustment (f _M)	0.0	Level of Service (LOS)	C
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	Existing AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	127	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	70
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.9
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/4/2017
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Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	70	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	38
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.0
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	170	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	94
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.5
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	163	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	90
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.4
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/4/2017
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Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	169	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	94
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.5
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	114	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	63
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.03

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.7
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	217	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	120
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	3.2
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

Analyst	TC	Date	12/4/2017
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Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	212	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	117
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	3.2
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	130	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	72
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.9
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Project Information

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Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	71	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	40
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.1
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

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Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	173	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	96
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.6
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	166	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	92
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.5
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR WITH PROJECT AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	172	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	95
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.6
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR WITH PROJECT AM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	115	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	64
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.03

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.7
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR WITH PROJECT PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	220	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	122
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	3.3
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	KHA	Analysis Year	OPENING YEAR WITH PROJECT PM
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	215	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	119
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	3.2
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	BUILD-OUT AM	Analysis Year	
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	141	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	78
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.1
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	BUILD-OUT AM	Analysis Year	
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	78	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	43
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.2
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	BUILD-OUT PM	Analysis Year	
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	182	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	100
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.7
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	BUILD-OUT WITH PROJECT AM	Analysis Year	
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	183	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	101
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	2.7
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	BUILD-OUT WITH PROJECT AM	Analysis Year	
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume (V), veh/h	122	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _P), pc/h/ln	68
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	1.8
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	BUILD-OUT WITH PROJECT PM	Analysis Year	
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 1 Geometric Data

Direction 1 Description	Northbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V), veh/h	237	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	131
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07

Direction 1 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	3.5
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

HCS7 Multilane Highway Report

Project Information

Analyst	TC	Date	12/4/2017
Agency	BUILD-OUT WITH PROJECT PM	Analysis Year	
Jurisdiction	Seal Beach	Time Period Analyzed	
Project Description	490 Pacific Coast Highway		

Direction 2 Geometric Data

Direction 2 Description	Southbound 5th St Between Marina and PCH		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Right-Side Lateral Clearance (LC _R), ft	6
Lane Width, ft	12	Left-Side Lateral Clearance (LC _L), ft	0
Median Type	Undivided	Total Lateral Clearance (TLC), ft	6.00
Access Point Density, pts/mi	20.0	Free-Flow Speed (FFS), mi/h	37.1

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

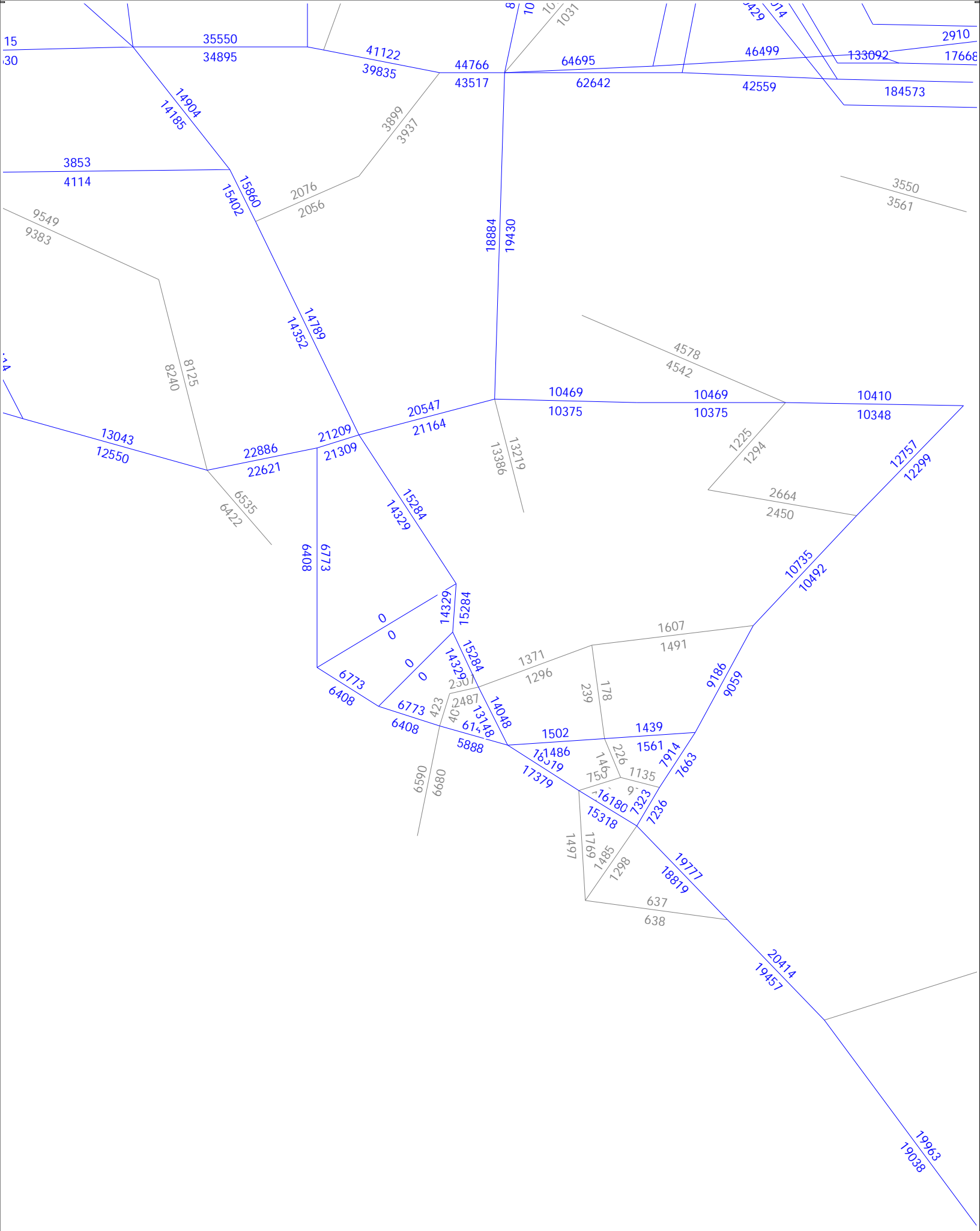
Volume (V), veh/h	231	Heavy Vehicle Adjustment Factor (f _{HV})	0.952
Peak Hour Factor (PHF)	0.95	Flow Rate (v _p), pc/h/ln	128
Total Trucks, %	5.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07

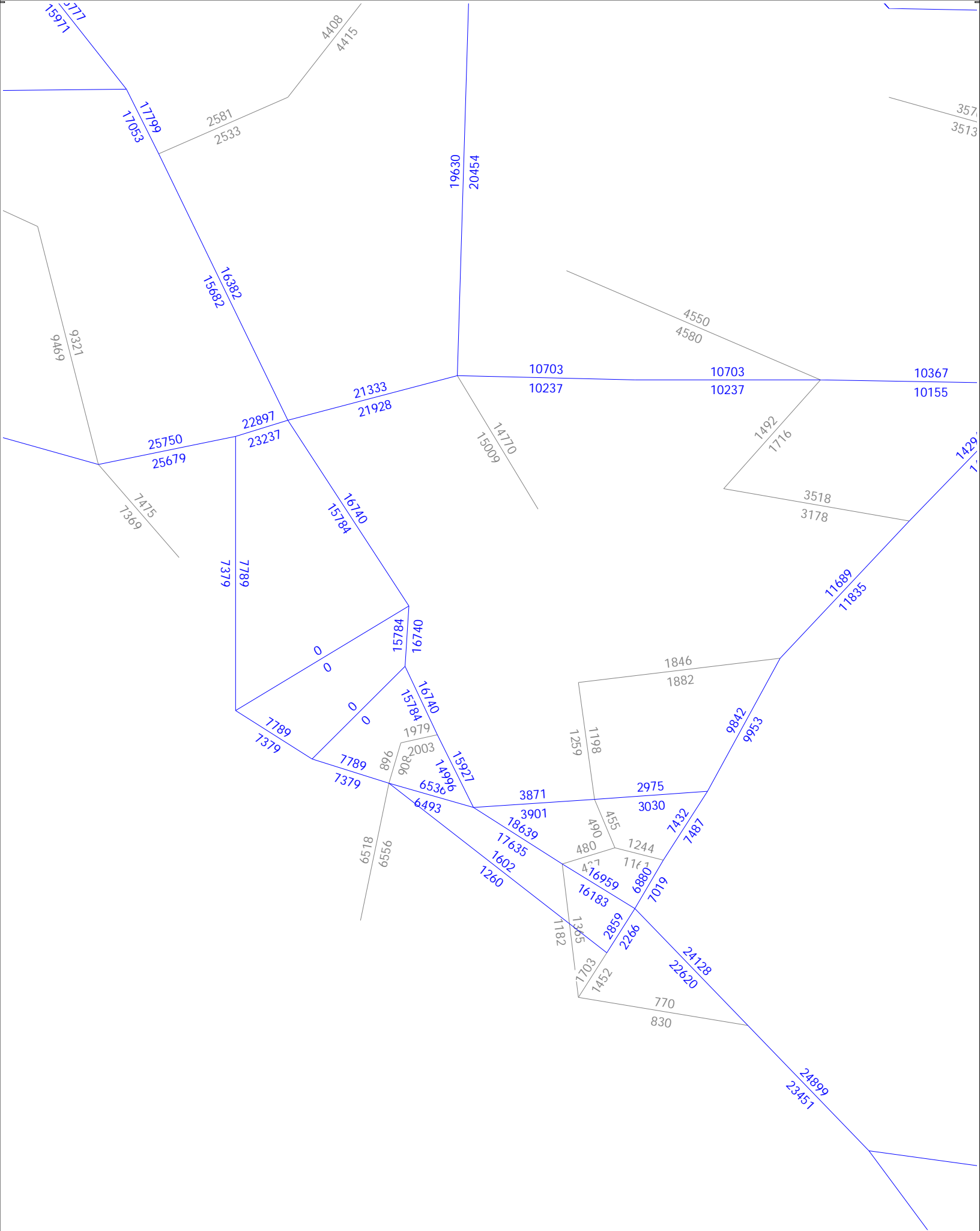
Direction 2 Speed and Density

Lane Width Adjustment (f _{LW})	0.0	Average Speed (S), mi/h	37.1
Total Lateral Clearance Adj. (f _{TLC})	1.3	Density (D), pc/mi/ln	3.5
Median Type Adjustment (f _M)	1.6	Level of Service (LOS)	A
Access Point Density Adjustment (f _A)	5.0		

APPENDIX **F**

OCTAM PLOTS







January 7, 2020

Ahmad Ghaderi
A & S Engineering, Inc.
28405 Sand Canyon Rd., Suite "B"
Canyon Country, CA 91387

Subject: *Vehicle Miles Traveled (VMT) Assessment - 490 Pacific Coast Highway Project*

Dear Mr. Ghaderi:

This letter documents a Vehicle Miles Traveled (VMT) assessment for a proposed gas station and convenience market project located at 490 Pacific Coast Highway in the City of Seal Beach. With the passage of SB 743, VMT has become an important indicator for determining if a new development will result in a "significant transportation impact" as required by the California Environmental Quality Act (CEQA).

SB 743 was approved by the California legislature in September 2013. SB 743 requires changes to CEQA, specifically directing the Governor's Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular "level of service" (LOS) for evaluating transportation projects. OPR has updated guidelines for CEQA and written a technical advisory for evaluating transportation impacts in CEQA and has set a deadline of July 2020 for local agencies to update their CEQA transportation procedures. OPR has recommended that VMT replace LOS as the primary measure of transportation impacts.

The City of Seal Beach has until July 2020 to update their traffic impact study guidelines to comply with SB 743. Since Seal Beach guidelines are not in place, the traffic impact study has not conducted a quantitative VMT analysis. Rather, this letter refers to the guidance provided by the OPR within the Technical Advisory on Evaluating Transportation Impacts in CEQA document.

The Technical Advisory establishes that, for local-serving urban commercial uses, impact should be established based on the net increase in VMT. However, the document further establishes that local-serving commercial uses, such as a gas station and convenience market in this case, can be determined to result in an overall VMT reduction.

Local-serving commercial uses, particularly in urban areas, primarily serve pre-existing needs and as a result do not generate new trips because there are existing demands. As a result, local-serving commercial uses can be presumed to reduce trip lengths when a new site is proposed. For instance, a customer may travel to the new development because of a closer proximity from other gas stations in the area and is therefore not a new trip. These customers will access the proposed site because it is closer to their origin, or because the site is more convenient than similar sites in the vicinity. This results in an existing trip on the roadway network becoming shorter, rather than a new trip being added to the roadway network. In accordance with the Technical Advisory, it is appropriate that the proposed gas station and convenience market be presumed to result in a VMT reduction and support the goals of SB 743.