Appendix F

Traffic Study

LINSCOTT
LAW &
GREENSPAN
engineers

TRAFFIC IMPACT STUDY

SKECHERS DESIGN CENTER AND OFFICES PROJECT

Cities of Hermosa Beach and Manhattan Beach, California
August 25, 2016

Prepared for:
Sepulveda Design Center, LLC
228 Manhattan Beach Boulevard
Manhattan Beach, California 90266

LLG Ref. 1-14-4065-2

REGISTERED PROFESSIONAL ENGINEER
CLARE M. LOOK-JAEGER
TR1878
EXP. 06/30/17
TRAFFIC
STATE OF CALIFORNIA

Under the Supervision of:

Clare M. Look-Jaeger

Clare M. Look-Jaeger, P.E.
Principal

Linscott, Law & Greenspan, Engineers
600 S. Lake Avenue
Suite 500
Pasadena, CA 91106
626.796.2322 T
626.792.0941 F
www.llgengineers.com

TABLE OF CONTENTS

SECTION PAGE

TABLE OF CONTENTS (CONTINUED)

SECTION PAGE

TABLE OF CONTENTS (CONTINUED)

SECTION PAGE

TABLE OF CONTENTS (CONTINUED)

SECTION PAGE

LIST OF TABLES

SECTION—TABLE # PAGE

TABLE OF CONTENTS (CONTINUED)
LIST OF TABLES

LIST OF FIGURES

TABLE OF CONTENTS (CONTINUED)

APPENDICES

TRAFFIC IMPACT STUDY

SKECHERS DESIGN CENTER AND OFFICES PROJECT

Cities of Hermosa Beach and Manhattan Beach, California

August 25, 2016

1.0 INTRODUCTION

This traffic impact study addresses the potential traffic impacts and parking requirements associated with the proposed Skechers Design Center and Offices project ("proposed project"). The proposed project consists of three discrete developments; one in Hermosa Beach (consisting of two buildings) and two in Manhattan Beach. Each of these projects are independent of each other and as such they are being analyzed for traffic impact purposes both on a combined basis as well as independently of each other in order to comply with the requirements of the California Environmental Quality Act (CEQA). Both agencies, the City of Hermosa Beach and the City of Manhattan Beach, have discretionary approval for each of the projects in their jurisdiction. As proposed, the approval of the Hermosa Beach project is not dependent on approval of the Manhattan Beach projects and vice versa. Specifically, the project applicant proposes to develop the proposed project as follows:

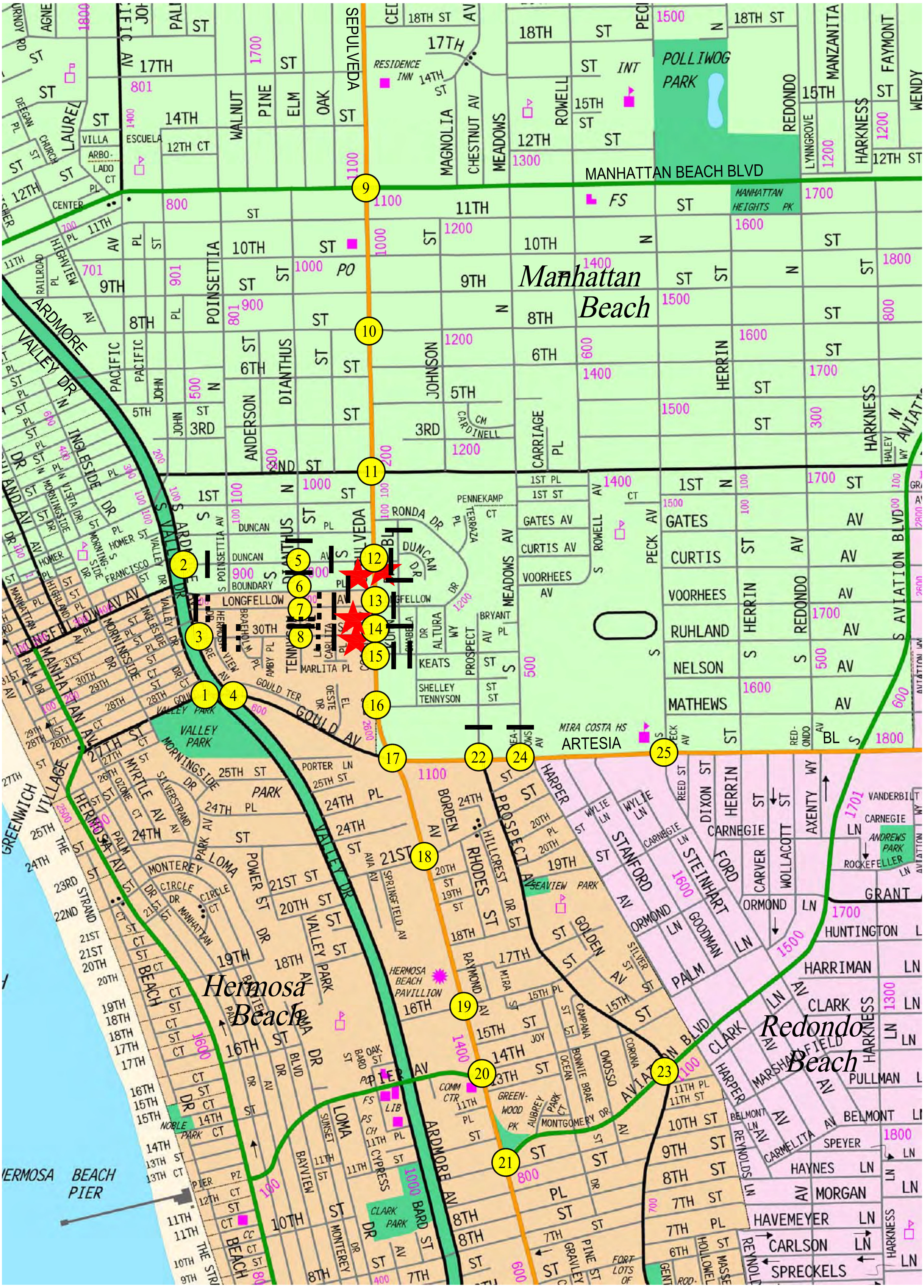
- The proposed project consists of three new buildings and an addition to an existing building to be constructed along the Sepulveda Boulevard/Pacific Coast Highway corridor to accommodate Skechers growth and expansion into new product lines. Skechers started in Manhattan Beach and considers the local beach communities to be home.

- The buildings to be constructed include two new buildings in Hermosa Beach which are referred to as the Design Center and Executive Offices; one new building in Manhattan Beach; and an expansion of the existing 330 S. Sepulveda Boulevard building in Manhattan Beach.

The proposed Skechers Design Center and Offices project site locations and general vicinity are shown in ***Figure 1-1***.

1.1 Traffic Study Overview

This report documents the findings and recommendations of a traffic impact analysis, as well as a parking analysis, prepared by Linscott, Law & Greenspan, Engineers (LLG Engineers) to determine the potential impacts associated with the proposed Skechers Design Center and Offices project. The traffic analysis evaluates the existing operating conditions at a total of 44 study locations consisting of 25 study intersections and 19 study street segments within the project vicinity, estimates the trip generation potential of the proposed project, and forecasts future operating conditions without and with the proposed projects. Where necessary, demand management, intersection improvements



NOT TO SCALE

PROPOSED SITE
STUDY INTERSECTION
STUDY STREET SEGMENT
ADT - CONSTRUCTION RELATED

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 1-1
VICINITY MAP

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f1-1.dwg LDP 10:47:10 08/01/2016 rodriquez

and/or other mitigation measures are identified. The Scope of Work for this traffic study report has been prepared in consultation with City of Hermosa Beach staff and the City of Manhattan Beach's Traffic Engineer.

This traffic report complies with the traffic impact study requirements of the Cities of Hermosa Beach and Manhattan Beach, and is consistent with the *2010 Congestion Management Program for Los Angeles County.*[1] In addition to the above analyses, this traffic report also includes a State of California Department of Transportation (Caltrans) analysis for locations that are under joint jurisdiction between Caltrans and the Cities of Hermosa Beach and Manhattan Beach.

The project sites have been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at the 25 key study intersections on a typical weekday while school was in session (i.e., Tuesday, Wednesday, or Thursday) for use in the preparation of intersection Level of Service calculations. Information concerning cumulative projects (planned and/or approved) in the vicinity of the proposed project has been researched at the Cities of Hermosa Beach, Manhattan Beach and Redondo Beach. Based on this research, a total of 29 related projects have been included in the traffic impact study. These 29 planned and/or approved related projects were therefore considered in the cumulative traffic analysis for this project.

This traffic report analyzes existing and future weekday AM peak hour and PM peak hour traffic conditions for a future-term (year 2020) traffic setting upon completion of the proposed Skechers projects. Peak hour traffic forecasts for the year 2020 horizon year have been projected by increasing existing traffic volumes by an annual growth rate of one percent (1.0%) per year and adding traffic volumes generated by 29 related projects. In addition, the planned project parking supply is compared with the City of Hermosa Beach and City of Manhattan Beach off-street Code parking requirements for the respective project buildings.

1.2 Study Area

A total of 44 study locations, including 25 study intersections and 19 study street segments, have been identified for evaluation during the weekday morning and afternoon peak hours based upon coordination with City of Hermosa Beach staff and the City of Manhattan Beach's Traffic Engineer. The study intersections provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 4.0. Additionally, it is noted that six street segments within the City of Hermosa Beach and 13 street segments within the City of Manhattan Beach were also reviewed for potential construction-related traffic impacts.

The general location of the projects in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The traffic analysis study area is generally comprised of those locations

[1] *2010 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, 2010.

which have the greatest potential to experience significant traffic impacts due to the proposed projects as defined by the Cities of Hermosa Beach and Manhattan Beach. In the traffic engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the project site(s);

b. In the vicinity of the project site(s) that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the project site(s) that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, proposed Skechers projects peak hour vehicle trip generation, anticipated distribution of project vehicular trips and existing intersection/corridor operations. As mentioned previously, a total of 44 study locations define the extent of the boundaries for this traffic impact investigation.

The Volume-to-Capacity and Level of Service investigations at the key study intersections were used to evaluate the potential traffic-related impacts associated with area growth, cumulative projects and the proposed projects. When necessary, this report recommends intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service, and/or to mitigate the impact of the proposed Skechers Design Center and Offices project.

Included in this traffic and parking analysis are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- Estimated cumulative project traffic generation/distribution/assignment,
- Weekday AM and PM peak hour capacity analyses for existing conditions (year 2016 without and with project traffic),
- Weekday AM and PM peak hour capacity analyses for future (year 2020) conditions without and with project traffic,
- Project-specific improvements, where necessary,
- Congestion Management Program traffic impact assessment, and
- Parking analysis evaluation.

1.3 Overview of Senate Bill 743[2]

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 creates a process to change analysis of transportation impacts under the California Environmental Quality Act (Public Resources Code section 21000 and following) (CEQA), which could include analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. The intent of the original guidance documentation was geared towards projects within areas that are designated as transit priority areas first, to be followed by other areas of the State. OPR issued another draft discussion document last March, 2015, suggesting some new revisions to the formal CEQA guidelines. OPR has recently issued another guidance document (January 2016) and is requesting additional input. Therefore, these requirements are not binding at this time as the earliest adoption of formal changes to the CEQA guidelines is not expected until 2017 at the earliest.

[2] *An act to amend Sections 21181, 21186, 21187, 21189.1, and 21189.3 of, to repeal and add Section 21185 of, and to add and repeal Section 21186.6.6 of, the Public Resources Code, relating to environmental quality.*

2.0 PROJECT DESCRIPTION

2.1 Hermosa Beach Project Description

2.1.1 *Hermosa Beach Site Locations*

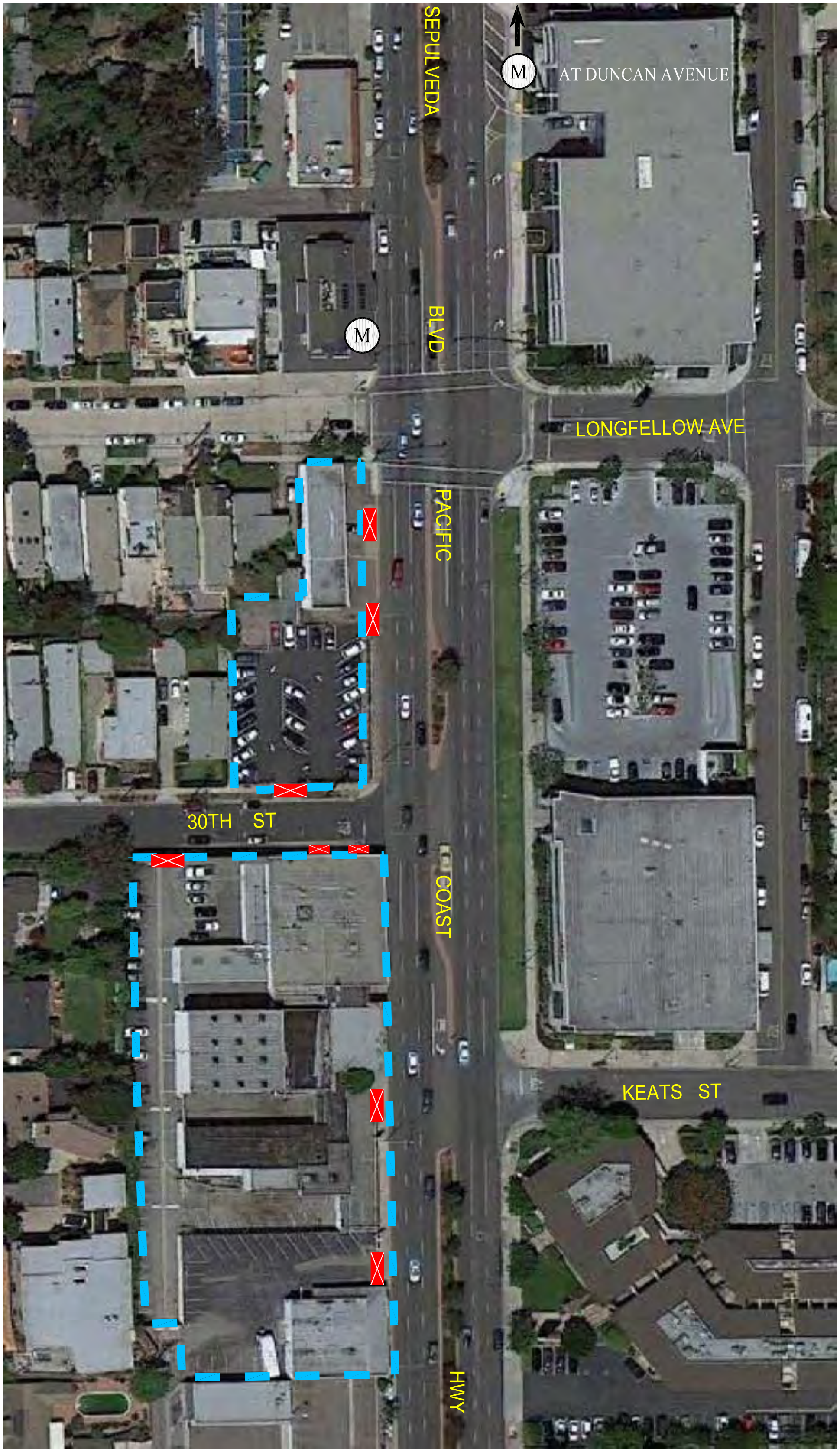
The project applicant proposes to develop two new buildings (i.e., a Design Center building and an Executive Office building) with subterranean parking located at 2851, 2901, 3001 and 3125 East PCH in the City of Hermosa Beach, California. The proposed project site is situated along the west side of Pacific Coast Highway, extending from Longfellow Avenue to the north to approximately mid-way between Keats Street and Tennyson Street to the south. The proposed Hermosa Beach project site location and general vicinity are shown in *Figure 1-1*.

The existing Hermosa Beach project site currently contains vacant buildings and surface parking lots disbursed throughout the project site. The above properties are the former locations for Midas Muffler, Vasek Polak BMW dealership and South Bay Lotus dealership. All of the existing buildings and surface parking lots on the Hermosa Beach project sites will be razed to accommodate development of the proposed project. Vehicular access to the existing Hermosa Beach project sites is provided via a total of eight driveways including four driveways on 30th Street (one driveway on the north side of the roadway and three driveways on the south side of the roadway), and four driveways on PCH (two driveways north and two driveways south of 30th Street). It should be noted that two of the existing driveways on the south side of 30th Street were used only sparingly (i.e., for the staging of new vehicles in the showroom). An aerial photograph of the existing Hermosa Beach project sites is contained in ***Figure 2-1***.

2.1.2 *Hermosa Beach Project Description*

The buildings at 2851 and 2901 Pacific Coast Highway, just south of 30th Street, will be replaced with a new Design Center and the buildings at 3001 and 3125 Pacific Coast Highway, just north of 30th Street, will be replaced with the new Executive Offices building. Each building will have a maximum building height of 35 feet. A pedestrian tunnel is proposed under 30th Street to serve as a connection between the Design Center and Executive Offices buildings. The tunnel is not only for the convenience of the employees, but also to assist in running communication lines between the two buildings so they may operate in tandem. Each building will have a subterranean parking structure approximately three levels deep.

The Design Center building (2901 Pacific Coast Highway) will be approximately 100,296 square feet of floor area and will contain: 35 to 40 showrooms with an average size of 1,000 square feet, and 35 to 40 product development rooms with an average size of 500 square feet, general offices, a private-company cafeteria (where employees pay for their food); product designer offices, conference rooms, shoe libraries, storage areas and other ancillary uses. There will be amenities such as a terrace, a water feature, and a lobby. The Design Center building could eventually accommodate 250 to 350 employees.



MAP SOURCE:
GOOGLE EARTH

o:\job_file\4065-2\dwg\f2-1.dwg LDP 08:28:26 06/01/2016 rodriquez

N
NOT TO SCALE

PROJECT SITE
EXISTING DRIVEWAY
METROPOLITAN TRANSPORTATION AUTHORITY (METRO) BUS STOP

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 2-1
AERIAL PHOTOGRAPH OF EXISTING HERMOSA BEACH PROJECT SITE
SKECHERS DESIGN CENTER AND OFFICES PROJECT

The Executive Offices building (3001 Pacific Coast Highway) will contain approximately 20,207 square feet of floor area, including 19,209 square feet of office and 998 square feet of ancillary commercial space. In addition to the office space, there will be product development rooms, a management dining area, a lobby and reception area, a WiFi lounge and an outdoor public patio. It is projected that 80 Skechers employees will occupy this building. On the bottom floor of the Executive Offices (i.e., at the northern portion of the building) a 998 square-foot ancillary commercial space will be leased to a third party business for a local serving coffee house for patronage both by the public and Skechers employees. In addition, the outdoor patio and plaza area planned to be provided for the Executive Offices building will be open for use by the public. Public access to the patio and plaza area will be provided in addition to the access from the coffee house and Skechers employees also are expected to use the outdoor patio. Therefore, for purposes of developing the vehicle trip generation and parking requirements, the total of 998 square feet of gross floor area is utilized for the coffee shop component. It is anticipated that the greatest number of people in the coffee house at one time, including employees, will be 25 persons. The Executive Office building has been set back approximately 40 to 60 feet from the northern property line to create an open space area in addition to the 200 square-foot outdoor patio. A "Welcome to Hermosa Beach" sign will be installed in this location to mark the northern entrance to the City.

The existing Skechers building at 330 S. Sepulveda Boulevard currently contains showrooms which are planned to be relocated to the Skechers Design Center. The existing showrooms are utilized by buyers from all over the world. Approximately twice a year, Skechers invites between 500 – 1,000 people to attend its Global Sales Conference (GSC) which last for three days and is traditionally held at the Redondo Beach Performing Arts Center. After lunch on the first day, approximately 450 to 500 of those attendees are transported via eight (8) buses with a 60-seat capacity to the existing Skechers building at 330 S. Sepulveda Boulevard, which is just north of the project site and on the opposite side of PCH. The numbers drop on the second and third day of the conference. The buses drop off and then are held offsite until they are needed for transportation to deliver the attendees back to their hotels. Most attendees generally stay at the Manhattan Beach Marriott, but with the move to the Design Center within Hermosa Beach, will expand into Hermosa Beach hotels. With completion of the Design Center, the attendees will visit the new showrooms in Hermosa Beach instead of the 330 S. Sepulveda Boulevard building. Use of buses minimizes the amount of traffic that could otherwise be generated by buyer visits to preview shoe lines. Therefore, while the existing bus generation and circulation will shift slightly and occurs under existing conditions, the bus trip generation has been treated as new trips in order to provide a conservative traffic analysis. In addition, it is noted that the proposed project will be an addition to, not a replacement of Skechers' 330 S. Sepulveda Boulevard building. While the showrooms at the 330 S. Sepulveda Boulevard building will remain, they will no longer be used for the GSC.

Each building contains sufficient parking for its size. The Design Center building requires 401 spaces and will contain a total of 520 spaces, including 93 tandem spaces; the Executive Offices building requires 87 spaces and will contain 89 parking spaces, including two tandem spaces. The Design Center building exceeds the required parking without counting any of the planned spaces in tandem configuration. As is practice in some of Skechers' other existing parking facilities, the incorporation of tandem spaces allows for maximizing the potential number of spaces in the parking supply within the footprint of the parking facility and will provide parking for existing Skechers employees who currently park off-site. Historically, Skechers has utilized tandem spaces in its current parking structures without negative effects. The Executive Offices building exceeds the required parking by two spaces, however the parking requirement was based on the conservative use of one (1.0) space per 100 square feet of gross floor area for the coffee house without any adjustment for internal capture (i.e., patronage from the Skechers' Design Center and Executive Offices buildings). Skechers has not sought any parking reductions for this expected synergy which does not create any additional need for parking spaces.

The vehicular entrance to the Design Center building will be from a new driveway on the west side of Pacific Coast Highway across from Keats Street. The proposed project design includes a modification to the existing raised median south of Keats Street to install a left-turn lane for vehicles traveling northbound on Pacific Coast Highway. Deliveries would be made to the Design Center off of Pacific Coast Highway and trash and recycling operations would be located within the subterranean parking structure. Further discussion of the proposed Hermosa Beach project site access and circulation scheme is provided in Section 3.0. The entrance to the Executive Offices building will be at the southwest corner of the site on 30th Street.

Construction of the proposed Skechers Design Center and Offices project is planned to begin in year 2017 with occupancy in year 2020. The ground floor level site plan for the proposed Hermosa Beach project site is illustrated in ***Figure 2-2***.

2.1.3 *Hermosa Beach Project Parking*

The City of Hermosa Beach's Code parking requirements (i.e., Section 17.44.030 Off-Street Parking – Commercial and Business Uses) for the proposed land uses associated with the proposed project are as follows:

- Offices, general: One space for each two hundred fifty (250) square feet of gross floor area.
- Restaurants (other than walk-up, drive-through and drive-in): One space for each one-hundred (100) square feet of gross floor area.

A summary of the City of Hermosa Beach vehicular Code parking requirements for the proposed Hermosa Beach project is presented in ***Table 2-1***. As indicated in *Table 2-1*, a total of 401 parking spaces is required for the Design Center building and a total of 87 parking spaces is required for the Executive Offices building. Please refer to ***Appendix A*** for a summary of the Code requirements for vehicular spaces, carpool/vanpool parking spaces, low-emitting/fuel efficient parking spaces, and bicycle parking spaces for each of the project buildings.

Based on information provided on the site plan prepared by the project architect, a total of 427 parking spaces is planned to be provided for the proposed Design Center building (not counting the spaces in tandem configuration). This planned parking supply satisfies the Code

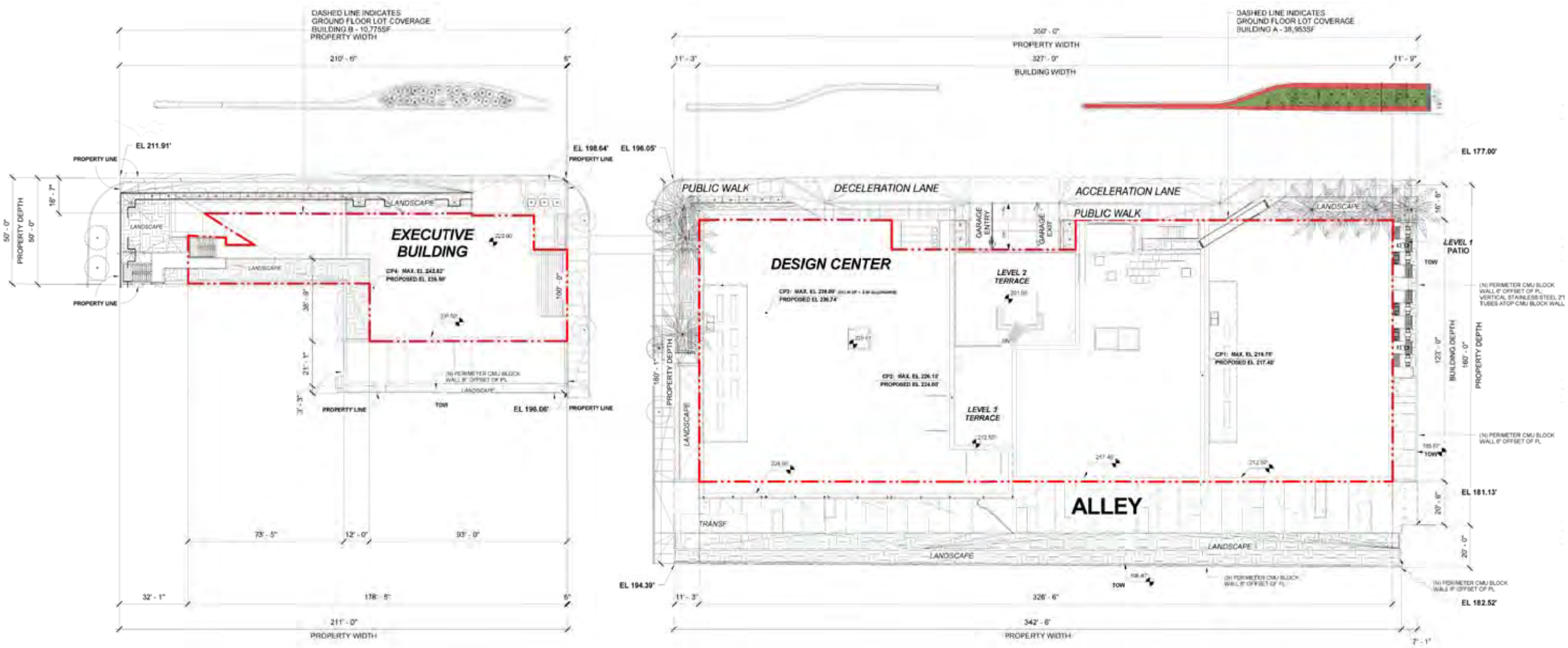
Table 2-1

SUMMARY OF VEHICULAR CODE PARKING REQUIREMENTS [1]

LAND USE	SIZE	CODE PARKING RATE [1]	NUMBER OF CODE SPACES REQUIRED	PROPOSED SUPPLY WITHOUT TANDEM	PROPOSED SUPPLY TANDEM SPACES	TOTAL PARKING SUPPLY
Hermosa Beach						
▪ Design Center Building	100,296 SF	4.0 /1,000 SF	401	427	93	520
▪ Executive Offices Building	19,209 SF	4.0 /1,000 SF	77			
Ancillary Coffee Shop	998 SF	1.0 /100 SF	10			
Total Executive Offices Building			87	87	2	89
Manhattan Beach						
▪ 305 S. Sepulveda Boulevard	37,174 SF	1.0 /300 SF	124	199	0	199
▪ 330 S. Sepulveda Boulevard						
Existing	54,875 SF	[2]	270			
Expansion	20,328 SF	1.0 /300 SF	68			
Subtotal [2]			338	389	0	389

[1] Sources: City of Hermosa Beach Municipal Code Section 17.44.030 Off-Street Parking - Commercial and Business Uses; and City of Manhattan Beach Municipal Code Chapter 10.64 - Off-Street Parking and Loading Regulations.

[2] The parking supply of 389 spaces satisfies the original requirement of a minimum of 270 spaces for the existing 330 S. Sepulveda Boulevard building and the 68 spaces required for the building addition (i.e., a total requirement of 338 spaces).



SOURCE: DAVID FORBES HIBBERT AIA

NOT TO SCALE

FIGURE 2-2
HERMOSA BEACH PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f2-2.dwg LDP 10:44:36 05/23/2016 rodriquez

parking requirement of 401 spaces. It is noted that the 93 tandem parking spaces are planned to be provided within the Design Center parking supply for use by Skechers employees. However, the tandem spaces have been counted as a single space for purposes of addressing the Code parking requirement. Also, the parking supply provided within the Design Center site will be self-contained and not interconnected with parking provided for the Executive Offices building. More parking spaces than required by City Code are being provided to address parking demand from other existing Skechers buildings (e.g., demand associated with the 225 S. Sepulveda Boulevard building).

A total of 89 parking spaces is planned to be provided for the proposed Executive Offices building. This planned parking supply satisfies the Code parking requirement of 87 spaces. It is noted that 2 tandem parking spaces (i.e., 2 total spaces) are planned to be provided within the Executive Offices building parking supply for use by Skechers employees. The tandem spaces have been counted as a single space for purposes of addressing the Code parking requirement. However, it is noted that the incorporation of tandem spaces allows for maximizing the potential number of spaces in the parking supply within the footprint of the parking facility. Historically, Skechers has utilized tandem spaces in its current parking structures without negative effects. Also, as noted previously, the parking supply provided within the Executive Offices site will be self-contained and not interconnected with parking provided for the Design Center building.

Parking for the ancillary commercial land use component (coffee house) within the Executive Offices building will be located on the P1 parking level and will be open during the coffee house business hours, but locked after hours. There will be a wrought iron gate that separates the office building parking area near the ramp heading down to the P2 parking level. Appropriate signage will direct motorists to the commercial parking spaces on the P1 parking level. All parking below the P1 parking level will be restricted to Skechers parking.

The proposed project will be dedicated as the Skechers Design Center and Executive Offices. The tandem parking spaces in the parking facilities will be reserved for Skechers' employee parking. The use of the tandem spaces within the parking facility will be operated by Skechers and its employees. No valet attendant parking will be provided as part of the proposed project. Skechers has successfully used this system in its Manhattan Beach buildings.

It is noted that the proposed project is unique due to the nature of the Design Center project configurations (e.g., showroom space and shoe libraries) and Sketchers' use of bussing to bring buyers to/from the project site twice a year as part of its GSC. Further, as discussed above, the buses are only at the existing Skechers building during drop-off and pick-up periods, and are staged off-site until needed to transport the people to their hotels. With the completion of the Design Center, the attendees will visit the new showrooms in Hermosa Beach instead of the 330 S. Sepulveda Boulevard building.

As the GSC is an atypical event (i.e., not weekly occurrences) and Skechers arranges for transport of attendees by bus, it is concluded that the appropriate City Code parking ratio for the proposed project is the general office rate as cited above. The proposed project will function as the

Skechers product design center and executive offices on a typical daily basis. For the GSC, it is understood that Skechers will arrange for bus transport of attendees.

No access control equipment (e.g., control gates and card readers) is planned to be provided at either of the entrances or exits for the parking facilities during normal business hours. Rolling gates will be provided at both of the entry/exit points to close access to the parking facilities. Uncontrolled access into and out of the parking facilities will occur during typical weekday business hours (e.g., 7:00 AM to 6:00 PM). However, Skechers security personnel will monitor the parking facilities during typical business hours to ensure that parking intrusion does not occur. Additionally, during off-peak hours and weekends, access to and from the parking facilities will be controlled by key fob; each Skechers' employee will have a key fob for access.

Skechers will not require employees to pay a monthly parking fee, nor will it require visitors to pay for parking on-site. Should Skechers request to do so in the future, appropriate access control equipment would be required and would need to be installed such that no vehicle queuing would extend into the public right-of-way.

As part of the parking supply, the project must include a minimum of American With Disabilities Act (ADA) handicap accessible spaces. As indicated in the summary worksheet provided in *Appendix A*, the number of handicap accessible spaces provided in each parking facility will comply with the requirements set forth in the ADA guidelines, including those required for van accessible spaces. Also, the handicap accessible spaces will be provided according to ADA and City of Hermosa Beach Code requirements and will be located as near as practical to the primary entrances to the two project buildings.

As required by City Code (refer to Section 17.48, Trip Reduction and Travel Management, specifically Section 17.48.030), a minimal total of "ten percent of employee parking shall be located as close as is practical to the employee entrance(s), and shall be reserved for use by potential carpool/vanpool vehicles, without displacing handicapped and customer needs." Also, electric vehicle charging stations will be required to meet City Code and Assembly Bill 1092 (electric vehicle charging infrastructure) requirements.

2.2 Manhattan Beach Project Description

2.2.1 *Manhattan Beach Site Locations*

The first Manhattan Beach site (i.e., 305 S. Sepulveda Boulevard) is located on the west side of Sepulveda Boulevard between Duncan Avenue and Boundary Place. It is comprised of three parcels and consists of an approximate 7,500 square foot office building at 1050 Duncan Avenue, Debonair Cleaners (317 S. Sepulveda Boulevard), the relocated Auto Werxstatt Auto Repair (305 S. Sepulveda Boulevard) and a now vacant copy shop (309 S. Sepulveda Boulevard). The existing development is 15,237 square feet (including the 7,500 square feet mentioned above). The buildings on Sepulveda Boulevard are directly on the sidewalk and have no cohesive design element, and will be demolished in order to accommodate development of the proposed project.

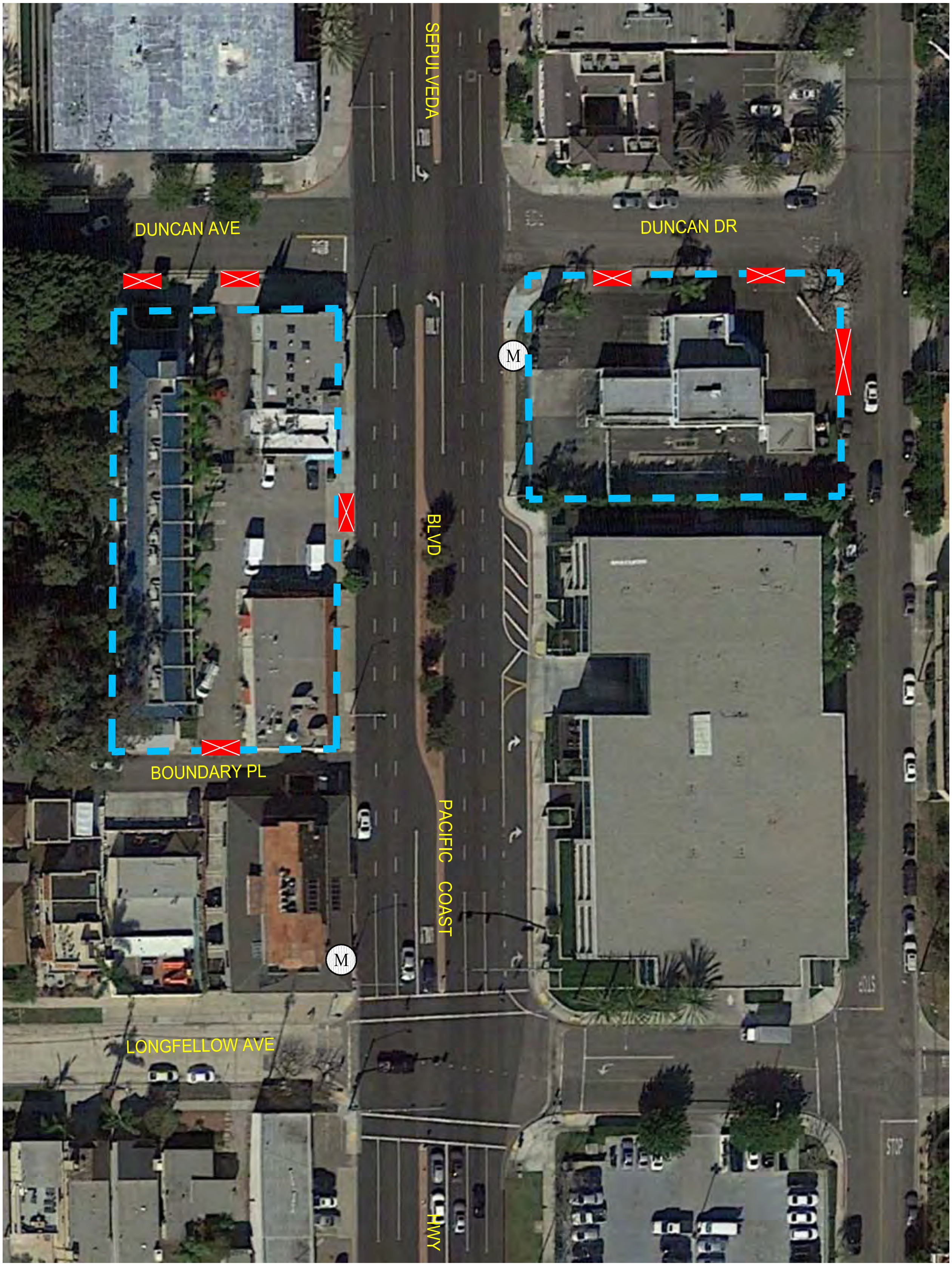
The second Manhattan Beach site is located on the east side of Sepulveda Boulevard between Duncan Drive and Longfellow Drive and will be an expansion of the existing Skechers office building at 330 S. Sepulveda Boulevard. The expansion site at 300 S. Sepulveda Boulevard is currently vacant but was formerly occupied by a car wash operation. While the car wash was in operation at the time that project applications were filed, it was not in operation during the conduct of the intersection and street segment traffic counts. Demolition of the car wash site occurred as it had become an attractive nuisance, had been broken into, had been used by homeless people as shelter and had also become a harborage for rodents. An aerial photograph of the existing Manhattan Beach project sites is contained in ***Figure 2-3***.

2.2.2 *Manhattan Beach Project Description*

The first Manhattan Beach site (i.e., 305 S. Sepulveda Boulevard) is planned to be a modern 37,174 square-foot Skechers office building that would match the design of the Skechers building at 330 S. Sepulveda Boulevard as well as the Hermosa Beach components. The building would be a 2-story, approximately 30-foot tall building over a 3-story subterranean parking garage. This height is within the height restrictions of the City of Manhattan Beach Sepulveda Boulevard Development Guide. The building would also comply with all other development standards of the General Commercial zone and the Sepulveda Boulevard Development Guide. The three existing parcels would be merged into one. The office space would be designed to house an additional 150 office workers. The building would provide office space for back office corporate functions. The building is completely independent of the new Design Center and Executive Offices that comprise the Hermosa Beach component of the project and the building expansion at 330 S. Sepulveda Boulevard. The ground floor level site plan for the proposed 305 S. Sepulveda Boulevard project is illustrated in ***Figure 2-4***.

The parking garage entry/exit for the 305 S. Sepulveda Boulevard building is planned to be on Duncan Avenue, opposite the entrance to Skechers' existing building at 225 S. Sepulveda Boulevard. For exiting, this driveway would be limited to right-turns only. Although only 124 parking spaces are required, the building would provide parking for 199 vehicles and this supply would help meet the existing parking demands associated with the existing 225 S. Sepulveda Boulevard building. One loading space is proposed along Boundary Place. The transformer, cooling towers, and refuse/recycling areas are all also along Boundary Place and would be screened by walls with a height that would be in accordance with the Manhattan Beach Municipal Code.

The second Manhattan Beach site would be an expansion of the existing Skechers office building at 330 S. Sepulveda Boulevard and is planned to match its design. The building would have an exposed concrete frame with clear and colored spandrel glass. The expansion would add a total of 20,328 square feet to the existing 54,875 square-foot office building for a total Skechers office building of 75,203 square feet. A deck is proposed on the 3rd floor for employee use, which would face Sepulveda Boulevard. Pedestrian walkways on the 2nd and 3rd floors would connect to the existing Skechers building, allowing access between the two buildings. The pedestrian entrance to the building expansion would be at the northwest corner of the building at Sepulveda Boulevard, near Duncan Drive. The ground floor level site plan for the proposed 330 S. Sepulveda Boulevard Expansion project is illustrated in ***Figure 2-5***.



MAP SOURCE: GOOGLE EARTH

N

NOT TO SCALE

PROJECT SITE

EXISTING DRIVEWAY

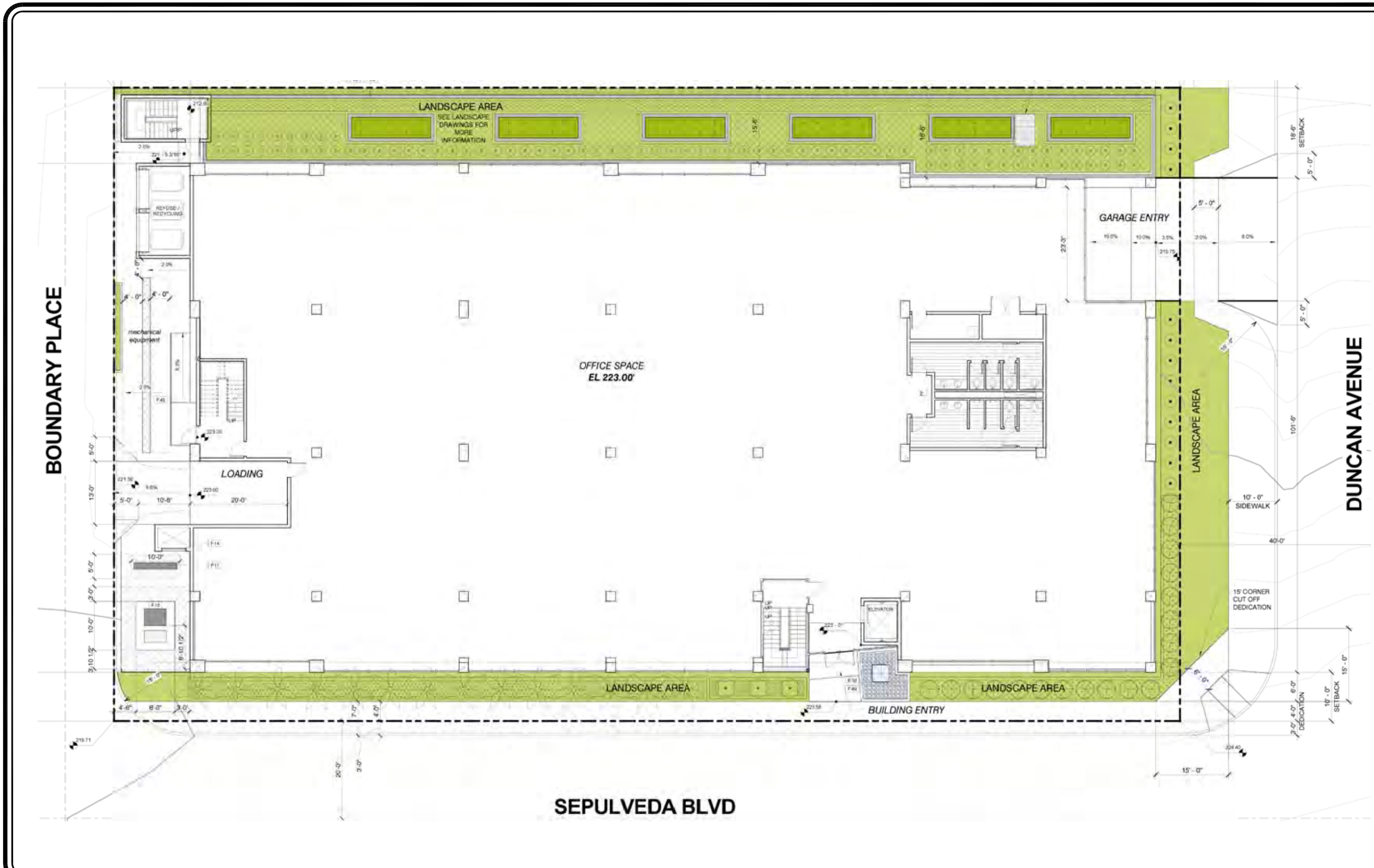
M METROPOLITAN TRANSPORTATION AUTHORITY (METRO) BUS STOP

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 2-3
AERIAL PHOTOGRAPH OF EXISTING MANHATTAN BEACH PROJECT SITES

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f2-3.dwg LDP 09:42:07 05/22/2016 rodriquez

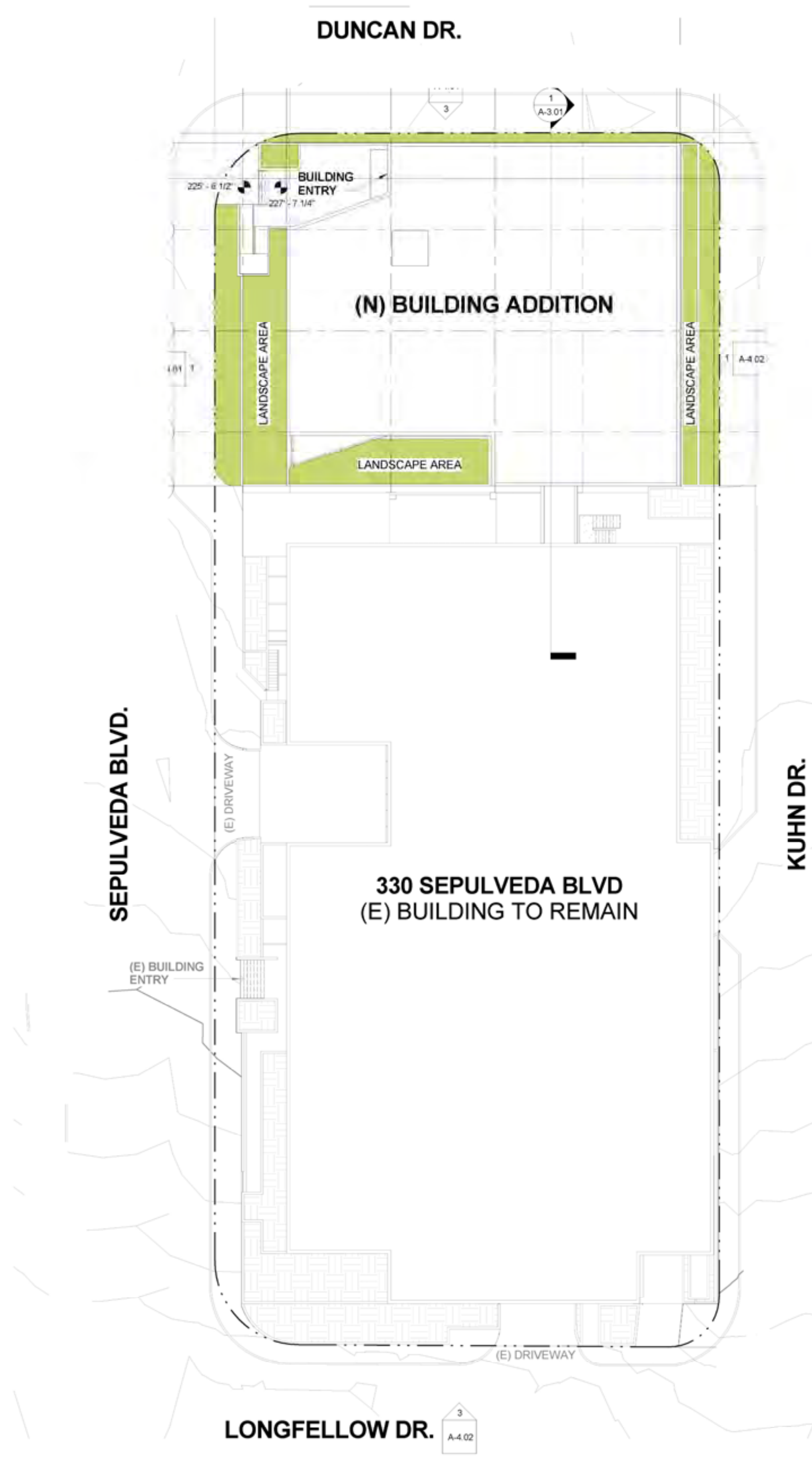


SOURCE: DAVID FORBES HIBBERT AIA

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 2-4
MANHATTAN BEACH PROJECT SITE PLAN
305 S. SEPULVEDA BOULEVARD SITE
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f2-4.dwg LDP 14:52:20 08/25/2016 rodriquez



NOT TO SCALE

SOURCE: DAVID FORBES HIBBERT AIA

FIGURE 2-5

MANHATTAN BEACH PROJECT SITE PLAN

330 S. SEPULVEDA BOULEVARD EXPANSION SITE

SKECHERS DESIGN CENTER AND OFFICES PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4065-2\dwg\f2-5.dwg LDP 08:30:21 06/01/2016 rodriquez

The office space would be designed to use for real estate, retail and construction office functions of Skechers. The existing building is currently occupied by 217 employees and with the expansion is expected to only nominally increase occupancy by 8 employees. The proposed occupancy of the new/expanded office building is expected to total 225 persons. The building is completely independent of the new Design Center and Executive Offices that comprise the Hermosa Beach component of the project and the 305 S. Sepulveda Boulevard Manhattan Beach component.

The entrance to the new parking garage would be via the existing driveways on Sepulveda Boulevard and Longfellow Avenue which provide access to the existing 330 S. Sepulveda Boulevard building. The new subterranean parking garage would provide 119 parking spaces and with the 270 parking spaces in the existing building for a total of 389 parking spaces (i.e., 51 spaces over the Code required amount). The new garage beneath the new building would connect to the existing garage at all levels.

2.2.3 *Manhattan Beach Project Parking*

The City of Manhattan Beach's Code parking requirements (i.e., Chapter 10.64 - Off-Street Parking and Loading Regulations) for the proposed land use associated with the proposed Manhattan Beach project are as follows:

- Offices, Business and Professional: One space (1.0) for each 300 square feet

A summary of the City of Manhattan Beach vehicular Code parking requirements for the proposed Manhattan Beach projects are presented in *Table 2-1*. As indicated in *Table 2-1*, a total of 124 parking spaces is required for the 305 S. Sepulveda Boulevard building and a total of 68 parking spaces is required for the 300 S. Sepulveda Boulevard building. Please refer to *Appendix A* for a summary of the Code requirements for vehicular spaces, carpool/vanpool parking spaces, low-emitting/fuel efficient parking spaces, and bicycle parking spaces for each of the project buildings.

A total of 199 parking spaces is planned to be provided for the proposed 305 S. Sepulveda Boulevard building. This planned parking supply exceeds the Code parking requirement of 124 spaces and this supply will help meet the existing parking demands associated with the existing 225 S. Sepulveda Boulevard building. Additionally, a total of 119 parking spaces is planned to be provided for the proposed 330 S. Sepulveda Boulevard Expansion project building (i.e., a total of 389 for the overall site including the 270 spaces at the existing 330 S. Sepulveda Boulevard building). This planned parking supply satisfies the Code parking requirement of 68 spaces as well as the Code requirement for the overall site of 338 spaces.

As noted previously, no access control equipment (e.g., control gates and card readers) is planned to be provided at either of the entrances or exits for the parking facilities during normal business hours. Rolling gates will be provided at both of the entry/exit points to close access to the parking facilities. Uncontrolled access into and out of the parking facilities will occur during typical weekday business hours (e.g., 7:00 AM to 6:00 PM). However, Skechers security personnel will monitor the parking facilities during typical business hours to ensure that parking intrusion does not occur. Additionally, during off-peak hours and weekends, access to and from the parking facilities will be controlled by key fob; each Skechers' employee will have a key fob for access.

Skechers will not require employees to pay a monthly parking fee, nor will it require visitors to pay for parking on-site. Should Skechers request to do so in the future, appropriate access control equipment would be required and would need to be installed such that no vehicle queuing would extend into the public right-of-way.

As part of the parking supply, the project must include a minimum of American With Disabilities Act (ADA) handicap accessible spaces. As indicated in the summary worksheet provided in *Appendix A*, the number of handicap accessible spaces provided in each parking facility will comply with the requirements set forth in the ADA guidelines, including those required for van accessible spaces. Also, the handicap accessible spaces will be provided according to ADA and City of Manhattan Beach Code requirements and will be located as near as practical to the primary entrances to the two project buildings.

3.0 MOBILITY REVIEW

3.1 Overview of the Mobility Goals of the City of Hermosa Beach General Plan and Hermosa Beach Project Access

The City of Hermosa Beach has long committed to promote and develop efficient and convenient travel by all appropriate modes. As stated in the Final Circulation Transportation and Parking (Final CTP) Element of the City of Hermosa Beach General Plan (March 1990), "OVERALL GOAL: Provide a balanced transportation system for the safe and efficient transport of people and goods consistent with the goals of the Land Use Element." The objectives of the Final CTP Element include maximizing use of alternative transportation modes and minimizing residential neighborhood traffic intrusion. The goals and policies in the General Plan recognize the built-out character of Hermosa Beach and reflect the constraints imposed by a long-established street network, as well as relatively fixed land use patterns. However, the City's chief aim is to work creatively within these constraints to enhance all modes of transportation and to provide for safe and efficient circulation for all City residents and visitors.

The City of Hermosa Beach is currently in the process of updating their General Plan, PLAN Hermosa, and a public review draft was circulated in December 2015. Similar to the existing General Plan, the draft PLAN Hermosa Mobility Element is intended to facilitate mobility of people and goods throughout Hermosa Beach by a variety of modes, with balanced emphasis on automobiles, bicycles, pedestrians, and alternative fuel vehicles. The draft PLAN Hermosa Mobility Element outlines the many benefits of a multi-modal transportation system, including quality of life, public health, sustainability, economic vitality, and public safety. The draft PLAN Hermosa Mobility Element includes the following eight (8) goals:

Goal 1: Complete Streets that serve the diverse functions of mobility, commerce, recreation, and community engagement for all users whether they travel by walking, bicycling, transit, or driving.

Goal 2: A public realm that is safe, comfortable, and convenient for travel via foot, bicycle, public transit, and automobile and creates vibrant, people-oriented public spaces that encourage active living.

Goal 3: Public right-of-ways supporting a multi-modal and people-oriented transportation system that provides diversity and flexibility on how users choose to be mobile.

Goal 4: A parking system that meets the parking needs and demand of residents, visitors, and employees in an efficient and cost-effective manner.

Goal 5: A robust low cost and low carbon transportation system that promotes the City's environmental sustainability and stewardship goals in support of social and economic objectives.

Goal 6: A regionally integrated transportation system that provides local and regional connections to regional transit services, bicycle facilities, and other inter-modal facilities.

Goal 7: A transportation system that results in zero transportation-related fatalities and which minimizes injuries.

Goal 8: Facilitate sustainable, effective, and safe movement of goods and commercial vehicles.

A comprehensive review has been prepared of access to the project site in terms of mobility for all travel modes including vehicular, pedestrian, bicycle, goods movement (i.e., service/delivery for the proposed project), and transit. The mobility review includes consideration of vehicular access to and from the project site, pedestrian and bicycle access in the project vicinity, and service/delivery access to the project site. Brief summaries of the key mobility and access features associated with the project are provided in the following subsections.

3.1.1 *Hermosa Beach Project Site Existing Vehicular Access*

Vehicular access to the existing project sites is provided via a total of eight driveways including four driveways on 30th Street (one driveway on the north side of the roadway and three driveways on the south side of the roadway), and four driveways on PCH (two driveways north and two driveways south of 30th Street). It should be noted that two of the existing driveways on the south side of 30th Street were used only sparingly (i.e., for the staging of new vehicles in the showroom). An aerial photograph of the existing Hermosa Beach project sites with the existing driveways highlighted is contained in *Figure 2-1*. It is noted that both of the existing site driveways for the portion of the project site between Longfellow Avenue and 30th Street will be closed pursuant to City of Hermosa Beach standards (i.e., construction of Portland cement concrete curbs, gutters and sidewalks) as part of the proposed project. The southernmost driveway (south of 30th Street) will also be closed pursuant to City of Hermosa Beach standards (i.e., construction of Portland cement concrete curbs, gutters and sidewalks) as part of the proposed project and the existing driveway across from Keats Street will be reconstructed as part of the proposed project.

3.1.2 *Hermosa Beach Project Site Proposed Vehicular Access*

The proposed site access scheme for the proposed Hermosa Beach project is displayed in *Figure 2-2*. Public vehicular access to the proposed Hermosa Beach project site will be provided via a total of two driveways including one driveway on PCH (i.e., south of 30th Street) and one driveway on 30th Street (i.e., on the north side of 30th Street serving the Executive Offices building). Service/delivery access is planned to be accommodated via the PCH driveway (south of 30th Street) and use of the planned southbound deceleration lane along PCH. Service and loading activities will occur within the parking structure at a designated area. It is important to note that the fire lane located along the west side of the Design Center building will be accessible via the planned installation of retractable bollards to be located near the north and south property lines of the Design Center site. Descriptions of the planned project site access points are provided in the following paragraphs.

- *30th Street Executive Offices Building Driveway*

  This project driveway will be located on the north side of 30th Street in essentially the same location as the existing site driveway on 30th Street which provides access to the surface parking lot at the northwest corner of the PCH/30th Street intersection. The planned 30th Street project Executive Offices building driveway will accommodate access to the subterranean parking levels for Skechers' executives (e.g., President and CEO) and employees only. The planned project site driveway will be constructed to City of Hermosa Beach design standards.

- *30th Street Fire Lane Access*

  A fire lane is planned to be located along the west side of the Design Center building and will be accessible via the planned installation of retractable bollards to be located near the north and south property lines of the Design Center site. The alleyway will be blocked during normal operations preventing through traffic between Gould Avenue and 30th Street, except for emergency vehicle access.

- *PCH Project Driveway*

  This project driveway will be located on the west side of PCH, along the easterly property frontage, in essentially the same location as the existing site driveway which forms the west leg of the PCH/Keats Street intersection. The planned PCH project driveway is expected to accommodate left-turn and right-turn ingress turning movements and right-turn only egress turning movements into and out of the site, without signalization. Also, as indicated in *Figure 2-2*, a southbound deceleration/acceleration lane is planned to be provided at the PCH project driveway. It is noted that the existing raised median island on PCH south of Keats Street will need to be modified to provide a northbound left-turn pocket for access into the site. This project site driveway will be the primary access point for employees, guests, and visitors. The planned project site driveway will be constructed to City of Hermosa Beach design standards. The northbound left-turn pocket design will involve the review and require the approval from Caltrans as PCH is under the jurisdiction of the State. The northbound left-turn pocket will be designed to be an adequate length to accommodate the anticipated peak inbound left-turn demand and to preclude queue spillback into the northbound through travel lanes. Additionally, it is noted that the existing turn restriction (i.e., posted "NO TURNS" which applies to northbound left-turns and northbound U-turns) for the northbound approach on PCH at Keats Street would need to be rescinded as part of the recommended access measures. This project driveway will also provide access to the trash/recycling area within a designated area of the parking facility. Head-in and head-out maneuvers for these vehicles and delivery vans will be provided.

Vehicular access to the proposed project site will be accommodated via the two driveways as described above (i.e., one driveway on 30th Street for access to/from the Executive Offices building and one driveway on PCH for access to/from the Design Center). With this site access configuration, potential vehicle-pedestrian-bicycle conflicts are essentially the same or less as when the site was previously occupied for the portion of the project site located south of 30th Street. For the portion of the project site situated north of 30th Street, any potential vehicle-pedestrian-bicycle conflicts are considerably reduced as two of the existing site driveways in this area will be closed as part of the proposed project. Therefore, as the total number of site driveways would be reduced compared to the existing conditions, potential vehicle-pedestrian-bicycle conflicts also would be expected to be reduced with the proposed project.

3.1.3 *Hermosa Beach Project Site Pedestrian Access Review*

The proposed project site has been designed to encourage pedestrian activity and walking as a transportation mode[3]. As indicated in *Figure 2-2*, pedestrian walkways are planned throughout the site, as well as connect to the adjacent sidewalks, in a manner that promotes walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. Pedestrian connectivity is needed between the existing and proposed Skechers project sites due to shared workspaces, company meetings, cafeteria lunches, etc. The related activities between buildings also result in a reduction of vehicle trips due to the proximity of the business, executive and design offices.

There are five basic requirements that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The five primary characteristics of walkability are as follows:

Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.

Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.

Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the project site plan and pedestrian walkways indicates that these five primary characteristics are accommodated as part of the proposed project. The project site is adjacent to and accessible from nearby retail, restaurant and entertainment opportunities along the PCH corridor. The pedestrian walkways within the site will be appropriately landscaped and adorned to provide a

[3] For example, refer to http://www.walkscore.com/, which generates a walkability score of approximately 63 (Somewhat Walkable – most errands can be accomplished on foot) out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, and other amenities. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.

friendly walking environment. Additionally, the walkways and connections with the external environment will be well lit and include a wayfinding signage program.

Pedestrian project access to the site will be provided along the PCH property frontage. Pedestrian circulation around the periphery of the project site will be accommodated by the public sidewalks. The main Design Center lobby entrance for pedestrians will be accessed along PCH just north of the PCH project driveway (i.e., primary site access point for employees, guests and visitors). The main Executive Offices lobby entrance for pedestrians will be accessed along PCH, just north of 30th Street. It is important to note that a continuous sidewalk is provided along the north side of 30th Street between PCH and Ardmore Avenue and a discontinuous sidewalk is provided west of the project site along the south side of 30th Street.

It is noted that the City of Hermosa Beach has excellent pedestrian amenities and facilities, such as The Strand and the Hermosa Valley Greenbelt. The Strand is a paved pathway that runs along the entire length of Hermosa's beach, and extends north into Manhattan Beach and south into Redondo Beach. The Strand is an iconic feature of Hermosa Beach that is used by pedestrians, runners, bicyclists, roller bladers and skateboarders throughout all hours of the day. The Strand also is part of the Marvin Braude Bikeway as designated on the Los Angeles Bicycle Coalition, South Bay Bicycle Coalition, South Bay Bicycle Master Plan. The Hermosa Valley Greenbelt, which is a short walking distance away from the project site, is a narrow linear park that was at one time part of a railroad easement. The Hermosa Valley Greenbelt (Veterans Parkway) is part of the Federal Rails-to-Trails network and includes a landscaped running and walking trail that is extremely popular both with residents of and visitors to Hermosa Beach. The Greenbelt also extends into Manhattan Beach.

Pedestrian access to bus transit service in the project vicinity is accommodated via bus stops located on Sepulveda Boulevard just north of the project site. As noted in *Figure 2-1*, a Los Angeles County Metropolitan Transportation Authority (Metro) near-side bus stop is located on the southbound Sepulveda Boulevard approach to Longfellow Avenue/Longfellow Drive for Metro Route 232. Also, a near-side bus stop is provided on the northbound Sepulveda Boulevard approach to Duncan Avenue/Duncan Drive for Metro Route 232.

3.1.4 *Hermosa Beach Project Site Bicycle Access Review*

Bicycle access to the proposed Hermosa Beach project site is facilitated by the City of Hermosa Beach bicycle roadway network. A total of 10 existing or proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, and Proposed Bicycle Routes) in the City's bicycle network are located within an approximate one-half mile radius from the project site. The following bicycle facilities are located in the vicinity of the proposed Hermosa Beach project site:

- North-South Routes
  - Hermosa Avenue: Class III Bicycle Route with Sharrows/Share the Road Signs
  - Monterey Boulevard: Proposed Bike Friendly Street
  - Valley Drive: Proposed Class III Bicycle Route
  - Ardmore Avenue: Proposed Class III Bicycle Route
  - Prospect Avenue: Proposed Bike Friendly Street
  - The Strand (Marvin Braude Bikeway): Class I Shared Bicycle-Pedestrian Facility
- East-West Routes
  - Longfellow Avenue: Proposed Class III Bicycle Route
  - 27th St.-Gould Ave.: Proposed Class III Bicycle Route
  - 21st Street: Proposed Bike Friendly Street
  - Pier Avenue: Proposed Class III Bicycle Route

In 2011, the City of Hermosa Beach adopted the South Bay Bicycle Master Plan[4] which proposes to add 9.2 miles of bicycle facilities within the City and connects to neighboring networks in the Cities of Manhattan Beach and Redondo Beach. A map which shows the existing and proposed bicycle facilities in the Hermosa Beach area is provided in ***Figure 3-1A***. ***Figure 3-1B*** shows the bicycle and multi-use facilities per the draft PLAN Hermosa Mobility Element.

The Federal and State transportation system recognizes three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped line separating vehicular travel lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

Use of bicycles as a transportation mode to and from the project site should be encouraged by the provision of ample and safe parking. Refer to ***Appendix A*** for a summary of the bicycle requirements for the Hermosa Beach project buildings. The bicycle spaces should be provided in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

[4] *The South Bay Bicycle Master Plan, August 2011*, prepared by Alta Planning + Design for the Los Angeles County Bicycle Coalition and the South Bay Bicycle Coalition.

MAP SOURCE: LOS ANGELES COUNTY BICYCLE COALITION, SOUTH BAY BICYCLE COALITION, SOUTH BAY BICYCLE MASTER PLAN

o:\job_file\4065-2\dwg\f3-1a.dwg LDP 07/28/2016 11:36:56 turney

N

NOT TO SCALE

★ PROJECT SITE

FIGURE 3-1A
EXISTING AND PROPOSED BICYCLE FACILITIES IN HERMOSA BEACH

LINSCOTT, LAW & GREENSPAN, engineers

SKECHERS DESIGN CENTER AND OFFICES PROJECT

MAP SOURCE: Draft PLAN Hermosa Mobility Element, December 2015

o:\job_file\4065-2\dwg\f3-1b.dwg LDP 12:09:55 07/20/2016 turney

N
NOT TO SCALE

★ PROJECT SITE

FIGURE 3-1B
EXISTING AND PROPOSED BICYCLE FACILITIES IN HERMOSA BEACH

LINSCOTT, LAW & GREENSPAN, engineers

SKECHERS DESIGN CENTER AND OFFICES PROJECT

3.1.5 *Hermosa Beach Project Site Service and Delivery Operations*

As previously described (refer to Subsection 3.1.2, Hermosa Beach Project Site Proposed Vehicular Access Review), service and delivery operations are planned to occur along PCH and via the PCH driveway and a designated area within the Design Center parking facility. Head-in and head-out maneuvers for service/delivery vans will be accommodated. Deliveries are anticipated to occur mid-morning and mid-afternoon so as to avoid the morning and afternoon peak commute hours. Based on information provided by the project applicant, some deliveries also could be made via panel type trucks (e.g., UPS and Federal Express trucks) and would occur on a daily basis.

3.1.6 *Hermosa Beach Project Site Access Recommendations*

The following measures are recommended to facilitate access to and from the planned project site:

<u>Design Center Building</u>

- Direct project site guests and visitors to utilize the PCH project driveway to access the site.
- Direct vendors to access the PCH driveway only via PCH to preclude site-related service/delivery vehicles from traveling through the residential neighborhood.
- Develop a parking management plan for the proposed project, including details on the internal parking operations to ensure that any potential queuing onto public right-of-way will not occur.
- Install appropriate pavement markings (i.e., stop bar with STOP legend) on the project drive aisle at the public sidewalk to ensure that motorists stop prior to the sidewalk along PCH before exiting the site.
- Install a pavement right-turn arrow prior to the stop bar/STOP legend and appropriate, corresponding signage at the PCH project driveway to reinforce the right-turn only movement for motorists exiting the site. Should a traffic signal be approved in the future by the City and Caltrans at the PCH driveway across from Keats Street, the exiting approach at the traffic signal will be restriped to allow for left, through and right-turn egress turning movements.
- Provide bicycle parking within the parking facility of the project site in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

<u>Executive Offices Building</u>

- Direct project site guests and patrons of the coffee house to utilize the 30th Street project driveway to access the site.

- Develop a parking management plan for the proposed project, including details on the internal parking operations to ensure that any potential queuing onto public right-of-way will not occur.

- Install appropriate pavement markings (i.e., stop bar with STOP legend) on the project drive aisle at the public sidewalk to ensure that motorists stop prior to the sidewalk along 30th Street before exiting the site.

- Provide bicycle parking within the parking facility of the project site in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

3.2 Overview of the Mobility Goals of the City of Manhattan Beach General Plan and Manhattan Beach Project Access

The City of Manhattan Beach updated the 2003 Circulation Element of its General Plan as in recent years there has been a shift in the prioritization of various modes of transportation throughout the region and nation. The Manhattan Beach Mobility Plan focuses on providing a well-balanced, connected, safe, and convenient multi-modal transportation network, as opposed to a mostly-centric plan that focused on building and widening roads. The updated Mobility Plan was prepared in response to the State of California Assembly Bill (AB) 1358 which is the California Complete Streets Act. AB 1358 requires cities and counties to integrate multi-modal transportation network policies into their General Plan, and plan for, design and building transportation networks that allow all users to effectively travel by motor vehicle, foot, bicycle, or transit. The City is currently preparing an updated General Plan Mobility Plan which is focused on integrating an emphasis on Complete Street and Living Streets to enhance all travel modes.

A review has been prepared of access to the project sites in terms of mobility for all travel modes including vehicular, pedestrian, bicycle, goods movement (i.e., service/delivery for the proposed project), and transit. The mobility review includes consideration of vehicular access to and from the project site, pedestrian and bicycle access in the project vicinity, and service/delivery access to the project site. Brief summaries of the key mobility and access features associated with the project are provided in the following subsections.

3.2.1 *Manhattan Beach Project Sites - Existing Vehicular Access*

Vehicular access to the existing 305 S. Sepulveda Boulevard project site is currently provided via a total of four driveways including two driveways on Duncan Avenue, one driveway on Sepulveda Boulevard, and one driveway on Boundary Place. An aerial photograph of the existing 305 S. Sepulveda Boulevard project site is contained in *Figure 2-3*. It is noted that all four of the existing site driveways will be closed pursuant to City of Manhattan Beach standards (i.e., construction of cement concrete curbs, gutters and sidewalks) as part of the proposed project.

Vehicular access to the existing 300 S. Sepulveda Boulevard project site is currently provided via a total of three driveways including two driveways on Duncan Drive and one extended driveway on Kuhn Drive. An aerial photograph of the existing 300 S. Sepulveda Boulevard project site is contained in *Figure 2-3*. It is noted that all three of the existing site driveways will be closed pursuant to City of Manhattan Beach standards (i.e., construction of cement concrete curbs, gutters and sidewalks) as part of the proposed project.

3.2.2 *Manhattan Beach Project Sites - Proposed Vehicular Access*

Vehicular access to the 305 S. Sepulveda Boulevard project site will be accommodated via a single driveway located on Duncan Avenue, west of Sepulveda Boulevard. The proposed project site driveway, which will be located in essentially the same location as the existing westerly driveway on Duncan Avenue, will accommodate left-turn and right-turn ingress traffic movements, however, only right-turn egress traffic movements.With this site access configuration, potential vehicle-pedestrian-bicycle conflicts along Sepulveda Boulevard are essentially the same or less due to the closure of the existing site driveway on Sepulveda Boulevard. Additionally, as the total number of site driveways would be reduced compared to the existing conditions, potential vehicle-pedestrian-bicycle conflicts also would be expected to be reduced with the proposed project.

As noted previously, the entrance to the new parking garage at the 300 S. Sepulveda Boulevard project site would be via the existing driveways on Sepulveda Boulevard and Longfellow Drive which provide access to the 330 S. Sepulveda Boulevard building. No changes to the existing site access scheme at the 330 S. Sepulveda Boulevard building is planned as part of the proposed project. The intent is to take advantage of the existing deceleration/acceleration lane provided on Sepulveda Boulevard at the 330 S. Sepulveda Boulevard building to access the new parking garage at the 300 S. Sepulveda Boulevard project site which will be interconnected with the existing parking garage.

3.2.3 *Manhattan Beach Project Sites - Pedestrian Access Review*

The 305 S. Sepulveda Boulevard and 330 S. Sepulveda Boulevard Expansion project sites are adjacent to and accessible from nearby retail, restaurant and entertainment opportunities along the Sepulveda Boulevard/PCH corridor. The pedestrian walkways/corridors within the site will be appropriately landscaped and adorned to provide a friendly walking environment. Additionally, the walkways and connections with the external environment will be well lit and include a wayfinding signage program. Pedestrian connectivity is needed between the existing and proposed Skechers project sites due to shared workspaces, company meetings, cafeteria lunches, etc. The related activities between buildings also result in a reduction of vehicle trips due to the proximity of the business, executive and design offices.

Pedestrian access to the site will be provided along the Sepulveda Boulevard property frontages. Pedestrian circulation around the periphery of the project sites will be accommodated by the public sidewalks. Public sidewalks and curb ramps will be reconstructed as necessary to provide full ADA access along the project frontages and connecting intersections. The main lobby entrance for pedestrians at the 305 S. Sepulveda Boulevard project site will be accessed along Sepulveda Boulevard just south of Duncan Avenue (i.e., primary site access point for employees, guests and visitors). Also, the pedestrian entrance to the 330 S. Sepulveda Boulevard building expansion would be at the northwest corner of the building at Sepulveda Boulevard, near Duncan Drive.

Pedestrian access to bus transit service in the project vicinity is accommodated via bus stops located on Sepulveda Boulevard just south of the project site. As noted in *Figure 2-3*, a Los Angeles County Metropolitan Transportation Authority (Metro) near-side bus stop is located on the southbound Sepulveda Boulevard approach to Longfellow Avenue/Longfellow Drive for Metro Route 232. Also, a near-side bus stop is provided on the northbound Sepulveda Boulevard approach to Duncan Avenue/Duncan Drive for Metro Route 232.

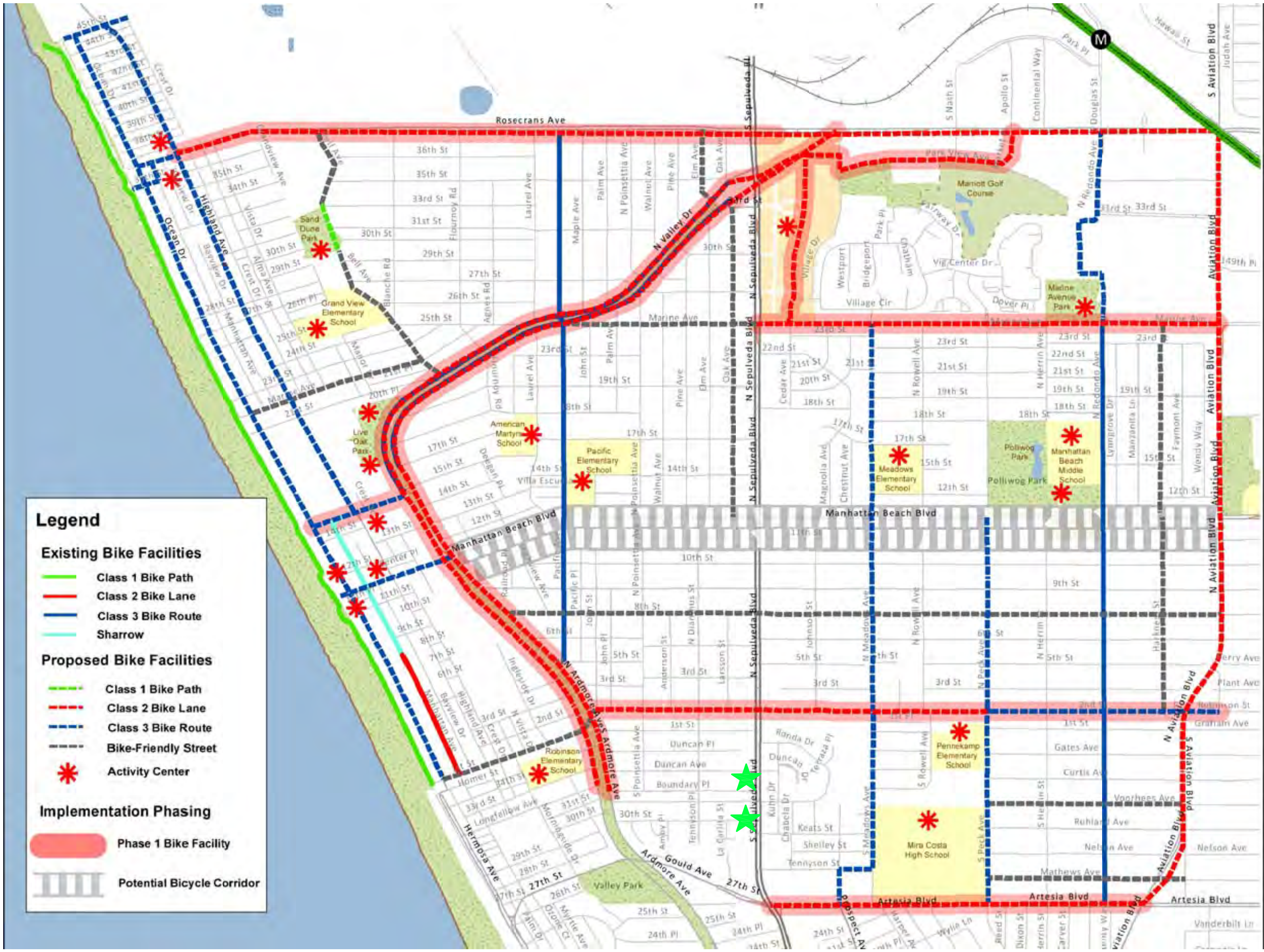
3.2.4 *Manhattan Beach Project Sites - Bicycle Access Review*

Similar to the City of Hermosa Beach, the City of Manhattan Beach has adopted the South Bay Bicycle Master Plan which proposes to add approximately 31 miles of bicycle facilities within the City and connects to neighboring networks in the Cities of Hermosa Beach and El Segundo. A map which shows the existing and proposed bicycle facilities in the Manhattan Beach area is provided in ***Figure 3-2***. It is noted that the north-south bicycle facilities in the City of Hermosa Beach previously highlighted above will connect to the existing and planned bicycle facilities in the City of Manhattan Beach.

Use of bicycles as a transportation mode to and from the project site should be encouraged by the provision of ample and safe parking. Refer to ***Appendix A*** for a summary of the bicycle requirements for the Manhattan Beach project buildings. The bicycle spaces should be provided in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

3.2.5 *Manhattan Beach Project Sites - Service and Delivery Operations*

Service and delivery operations for the 305 S. Sepulveda Boulevard building are planned to occur via a loading dock area planned to be provided on Boundary Place along the south side of the project site. The layout of the service/loading area has been configured so that access will be directed to/from Sepulveda Boulevard and will accommodate maneuvers for single-unit 30-foot (SU-30), panel truck service/delivery vehicles and vans. Deliveries are anticipated to occur mid-morning and mid-afternoon so as to avoid the morning and afternoon peak commute hours. Based on information provided by the project applicant, deliveries typically are made via panel type trucks (e.g., UPS and Federal Express trucks) and vans and will occur on a daily basis. It is noted that there will be no connections to the subterranean parking levels to/from the loading area on Boundary Place. In addition, the intersection of Boundary Place at Sepulveda Boulevard is limited to right-turns in and right-turns out only due to the existing raised median island on Sepulveda Boulevard. Given the configuration of the loading area, access will be directed to/from Sepulveda Boulevard and travel through the residential areas to the west will be prohibited. Additionally, service and delivery operations for the 330 S. Sepulveda Boulevard Expansion project are expected to occur within the designated loading area(s) of the existing Skechers 330 S. Sepulveda Boulevard office building.



NOT TO SCALE

MAP SOURCE: CITY OF MANHATTAN BEACH MOBILITY PLAN (DRAFT)

★ PROJECT SITE

FIGURE 3-2
EXISTING AND PROPOSED BICYCLE FACILITIES IN MANHATTAN BEACH

SKECHERS DESIGN CENTER AND OFFICES PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4065-2\dwg\f3-2.dwg LDP 12:09:48 07/20/2016 turney

3.2.6 *Manhattan Beach Project Sites - Access Recommendations*

The following measures are recommended to facilitate access to and from the planned project sites:

- Direct project site guests and visitors to utilize the Duncan Avenue project driveway via Sepulveda Boulevard to access the 305 S. Sepulveda Boulevard project site. Left-turn egress will be prohibited at the 305 S. Sepulveda driveway and the driveway will be constructed to physically prevent the outbound left-turn movement.

- Direct project site guests and visitors to utilize the existing 330 S. Sepulveda Boulevard project driveways via Sepulveda Boulevard and Longfellow Drive to access the 330 S. Sepulveda Boulevard Expansion project parking garage which is interconnected with the existing 330 S. Sepulveda Boulevard parking garage.

- Direct vendors to access the loading area during off-peak periods for both Manhattan Beach buildings so as to avoid the weekday AM and PM peak commute peak hours. At the 305 S. Sepulveda Boulevard building, truck deliveries on Boundary Place will occur only via Sepulveda Boulevard and will be prohibited west of the project site. The north side curb return radius will be increased to accommodate truck turning movements and the south side curb return will be increased if feasible.

- Develop a parking management plan for the proposed project, including details on the internal parking operations to ensure that any potential queuing onto public right-of-way will not occur.

- Install appropriate pavement markings (i.e., stop bar with STOP legend) for the 305 S. Sepulveda Boulevard building project drive aisle at the public sidewalk to ensure that motorists stop prior to the sidewalk along Duncan Avenue before exiting the site.

- Provide bicycle parking within the parking facilities in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

- Public sidewalks and curb ramps will be reconstructed as necessary to provide full ADA access along the project frontages and connecting intersections.

4.0 EXISTING STREET SYSTEM

4.1 Local Roadway System

The list of 25 study intersections and 19 study street segments selected in consultation with City of Hermosa Beach and City of Manhattan Beach staff for analysis of potential impacts related to the proposed project is presented in ***Table 4-1***. The study locations selected for analysis in the traffic study also are noted in *Figure 1-1*. Of the 25 study intersections, 13 intersections are presently controlled by traffic signals and the remaining 12 intersections are stop-sign controlled. The existing roadway configurations and intersection controls at the study intersections are displayed in ***Figure 4-1*** and descriptions of the existing roadways (e.g., number of travel lanes, median type, and speed limit) are provided in ***Table 4-2***.

4.2 Public Bus Transit Service

Public bus transit service within the study area is currently provided by the Los Angeles County Metropolitan Transportation Authority, City of Torrance Transit, City of Los Angeles Department of Transportation (Commuter Express) and Beach Cities Transit. A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in ***Table 4-3***. The existing public transit routes in the project vicinity are illustrated in ***Figure 4-2***.

Table 4-1

LIST OF STUDY LOCATIONS

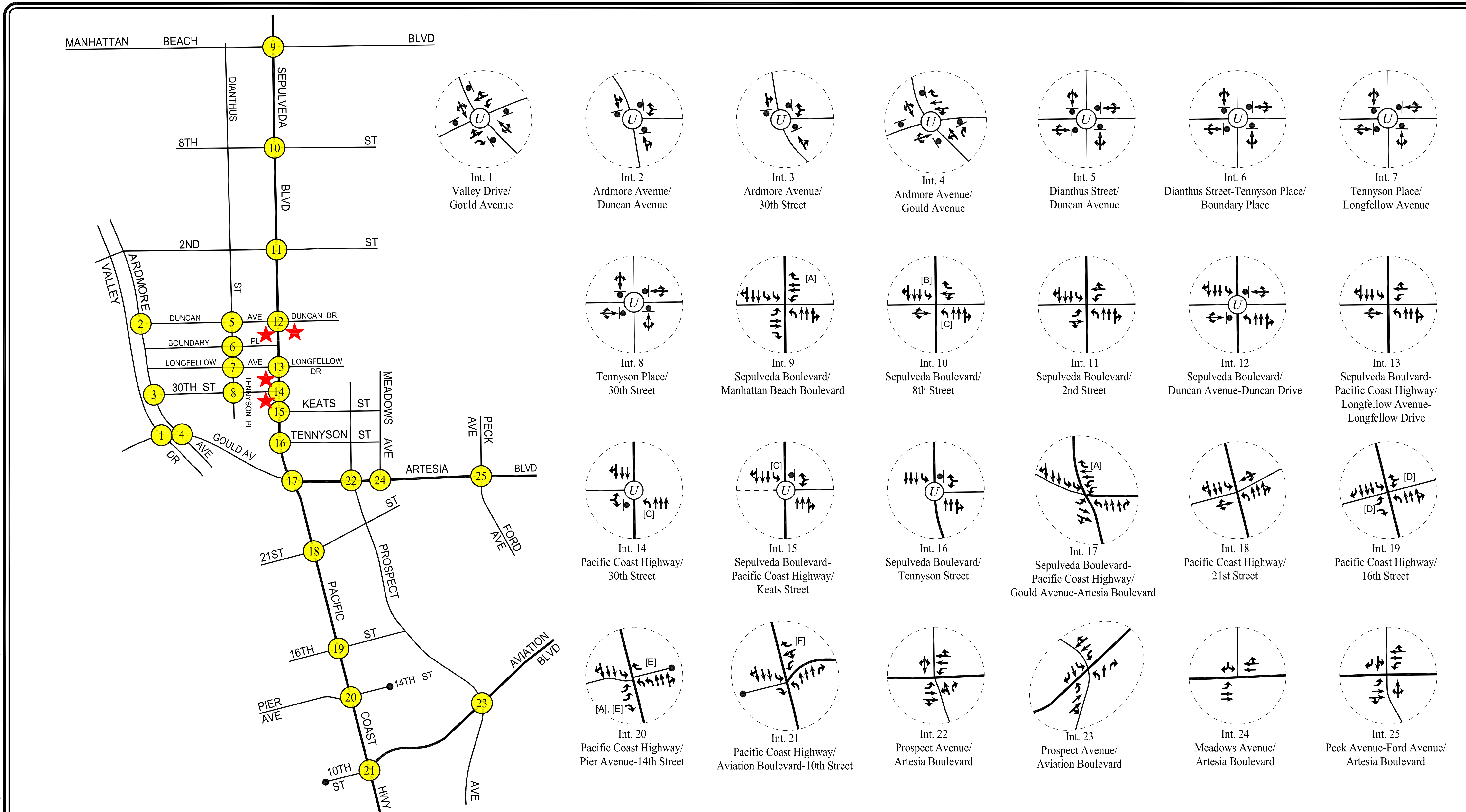
LIST OF STUDY INTERSECTIONS			
NO.	INTERSECTION	TRAFFIC CONTROL	JURISDICTION(S)
1	Valley Drive/Gould Avenue	Unsignalized	City of Hermosa Beach
2	Ardmore Avenue/Duncan Avenue	Unsignalized	City of Manhattan Beach
3	Ardmore Avenue/30th Street	Unsignalized	City of Hermosa Beach
4	Ardmore Avenue/Gould Avenue	Unsignalized	City of Hermosa Beach
5	Dianthus Street/Duncan Avenue	Unsignalized	City of Manhattan Beach
6	Dianthus Street-Tennyson Place/Boundary Place	Unsignalized	Cities of Hermosa Beach/Manhattan Beach
7	Tennyson Place/Longfellow Avenue	Unsignalized	City of Hermosa Beach
8	Tennyson Place/30th Street	Unsignalized	City of Hermosa Beach
9	Sepulveda Boulevard/Manhattan Beach Boulevard	Signalized	City of Manhattan Beach/CA
10	Sepulveda Boulevard/8th Street	Signalized	City of Manhattan Beach/CA
11	Sepulveda Boulevard/2nd Street	Signalized	City of Manhattan Beach/CA
12	Sepulveda Boulevard/Duncan Avenue-Duncan Drive	Unsignalized	City of Manhattan Beach/CA
13	Sepulveda Boulevard-Pacific Coast Highway/Longfellow Avenue-Longfellow Drive	Signalized	Cities of Hermosa Beach/Manhattan Beach/CA
14	Pacific Coast Highway/30th Street	Unsignalized	Cities of Hermosa Beach/Manhattan Beach/CA
15	Sepulveda Boulevard-Pacific Coast Highway/Keats Street	Unsignalized	Cities of Hermosa Beach/Manhattan Beach/CA
16	Sepulveda Boulevard/Tennyson Street	Unsignalized	Cities of Hermosa Beach/Manhattan Beach/CA
17	Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard	Signalized	Cities of Hermosa Beach/Manhattan Beach/CA
18	Pacific Coast Highway/21st Street	Signalized	City of Hermosa Beach/CA
19	Pacific Coast Highway/16th Street	Signalized	City of Hermosa Beach/CA
20	Pacific Coast Highway/Pier Avenue-14th Street	Signalized	City of Hermosa Beach/CA
21	Pacific Coast Highway/Aviation Boulevard-10th Street	Signalized	City of Hermosa Beach/CA
22	Prospect Avenue/Artesia Boulevard	Signalized	Cities of Hermosa Beach/Manhattan Beach
23	Prospect Avenue/Aviation Boulevard	Signalized	City of Hermosa Beach
24	Meadows Avenue/Artesia Boulevard	Signalized	Cities of Hermosa Beach/Manhattan Beach
25	Peck Avenue-Ford Avenue/Artesia Boulevard	Signalized	Cities of Manhattan Beach/Redondo Beach

LIST OF STUDY STREET SEGMENTS		
NO.	STREET SEGMENTS	JURISDICTION(S)
1	Duncan Avenue east of Ardmore Avenue	City of Manhattan Beach
2	Longfellow Avenue east of Ardmore Avenue	City of Hermosa Beach
3	30th Street east of Ardmore Avenue	City of Hermosa Beach
4	Dianthus Street north of Duncan Avenue	City of Manhattan Beach
5	Dianthus Street between Duncan Avenue and Boundary Place	City of Manhattan Beach
6	Tennyson Place between Longfellow Avenue and 30th Street	City of Hermosa Beach
7	Duncan Avenue west of Sepulveda Boulevard	City of Manhattan Beach
8	Boundary Place west of Sepulveda Boulevard	Cities of Hermosa Beach/Manhattan Beach
9	Longfellow Avenue west of Pacific Coast Highway	City of Hermosa Beach
10	30th Street west of Pacific Coast Highway	City of Hermosa Beach
11	Duncan Drive east of Sepulveda Boulevard	City of Manhattan Beach
12	Longfellow Drive east of Pacific Coast Highway	City of Manhattan Beach
13	Keats Street east of Pacific Coast Highway	City of Manhattan Beach
14	Kuhn Drive between Ronda Drive and Duncan Drive	City of Manhattan Beach
15	Kuhn Drive between Duncan Drive and Longfellow Drive	City of Manhattan Beach
16	Kuhn Drive between Longfellow Drive and Keats Street	City of Manhattan Beach
17	Keats Street between Kuhn Drive and Chabela Drive	City of Manhattan Beach
18	Prospect Avenue north of Artesia Boulevard	City of Manhattan Beach
19	Meadows Avenue north of Artesia Boulevard	City of Manhattan Beach

Notes:

◊ CA = State of California Department of Transportation (Caltrans)

◊ The traffic signal at Study Intersection No. 25 is maintained and operated by the County of Los Angeles, not the local jurisdictions. Thus, the location is analyzed under the methodology of the Lead Agency responsible for the environmental review (i.e., City of Manhattan Beach).



N
NOT TO SCALE

★ PROJECT SITE

(U) UNSIGNALIZED INTERSECTION
STOP SIGN
[A] OVERLAP PHASE
[B] NO LEFT-TURN/U-TURN 7-9A M-F
[C] NO LEFT-TURN/U-TURN 3-7P M-F
[D] SPLIT PHASE OPERATION
[E] NO RIGHT-TURN ON RED 6-9A/3-7P
[F] NO RIGHT-TURN ON RED

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 4-1
EXISTING LANE CONFIGURATIONS

SKECHERS DESIGN CENTER AND OFFICES PROJECT

Table 4-2
EXISTING ROADWAY DESCRIPTIONS

Roadways	Classification [1]	Jurisdiction [2]	Travel Lanes		Median	Speed
			Direction [3]	No. Lanes [4]	Type [5]	Limit
Valley Drive	Minor Arterial	Hermosa Beach	NB-SB	2	N/A	25
	Residential Collector	Manhattan Beach	NB-SB	2	N/A	25
Ardmore Avenue	Minor Arterial	Hermosa Beach	NB-SB	2	N/A	35
	Residential Collector	Manhattan Beach	NB-SB	2	N/A	35
Dianthus Street	Local Street	Manhattan Beach	NB-SB	2	N/A	25
Tennyson Place	Local Street	Manhattan Beach	NB-SB	2	N/A	25
Sepulveda Boulevard	Regional Arterial	Manhattan Beach	NB-SB	4 to 5 [6]	RMI	30/35
Pacific Coast Highway	Major Arterial	Hermosa Beach	NB-SB	4 to 5 [6]	RMI	30/35
Prospect Avenue	Minor Arterial	Hermosa Beach	NB-SB	2 to 4 [7]	N/A	25
Meadows Avenue	Major Local	Manhattan Beach	NB-SB	2	N/A	25
Peck Avenue	Major Local	Manhattan Beach	NB-SB	2	N/A	25
Ford Avenue	Local Street	Redondo Beach	NB-SB	2	N/A	25
Gould Avenue	Minor Arterial	Hermosa Beach	EB-WB	2	N/A	25
Duncan Avenue	Local Street	Manhattan Beach	EB-WB	2	N/A	25
30th Street	Local Street	Hermosa Beach	EB-WB	2	N/A	25
Boundary Place	Local Street	Hermosa Beach	EB-WB	2	N/A	25
Longfellow Avenue	Local Street	Hermosa Beach	EB-WB	2	N/A	25
Manhattan Beach Boulevard	Major Arterial e/o Sepulveda	Manhattan Beach	EB-WB	4	RMI	35
	Minor Arterial w/o Sepulveda	Manhattan Beach			N/A	
8th Street	Major Local	Manhattan Beach	EB-WB	2	N/A	25
2nd Street	Major Local	Manhattan Beach	EB-WB	2	N/A	25
Duncan Drive	Local Street	Manhattan Beach	EB-WB	2	N/A	25
Keats Street	Local Street	Manhattan Beach	EB-WB	2	N/A	25
Tennyson Street	Local Street	Manhattan Beach	EB-WB	2	N/A	25
Artesia Boulevard	Major Arterial	Hermosa Beach	EB-WB	4	RMI	35/40
		Manhattan Beach				
		Redondo Beach				
21st Street	Local Street	Hermosa Beach	EB-WB	2	N/A	25
16th Street	Local Street	Hermosa Beach	EB-WB	2	N/A	25
Pier Avenue	Minor Arterial	Hermosa Beach	EB-WB	4	N/A	25
14th Street	Local Street	Hermosa Beach	EB-WB	2	N/A	25
10th Street	Local Street	Hermosa Beach	EB-WB	3	N/A	25
Aviation Boulevard	Minor Arterial	Hermosa Beach	EB-WB	4	N/A	35
	Major Arterial	Redondo Beach	EB-WB			

[1] Roadway classifications obtained from the City of Hermosa Beach Plan Hermosa-Mobility System, Public Review Draft 2015; City of Manhattan Beach General Plan Infrastructure Element, 2014; and City of Redondo Beach Circulation Element, 2009.

[2] Jurisdiction: Cities of Hermosa Beach, Manhattan Beach and Redondo Beach.

[3] Direction of roadways in the project area: NB = northbound; SB = southbound; EB = Eastbound; and WB = westbound.

[4] Number of lanes in both directions of the roadway. Variations in number of travel lanes due to time restricted on-street parallel parking are noted.

[5] Median type of the road: RMI = Raised Median Island; 2WLT = Two way left-turn; and N/A = Not applicable.

[6] Tow-Away-No-Stopping-Anytime between 5:30 am-9:30 am for northbound direction, and between 3:00 pm-7:00 pm for southbound direction.

[7] Four lanes between Artesia Boulevard and 21st Street, otherwise two lanes.

Table 4-3
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES DURING PEAK HOUR		
			DIR	AM	PM
Metro 126	Manhattan Beach to Redondo Beach	Manhattan Beach Boulevard, Sepulveda Boulevard	EB WB	1 1	1 1
Metro 130	Redondo Beach to Cerritos via Hermosa Beach, Harbor Gateway, Compton, North Long Beach, and Bellflower	Artesia Boulevard (SR-91), Pacific Coast Hwy, Gould Avenue, 21st Street, 16th Street, Pier Avenue, 14th Street, Prospect Avenue, Meadow Avenue, Peck Avenue, Ford Avenue	EB WB	2 3	2 2
Metro 232	Long Beach to LAX via Wilmington, Harbor City, Torrance, Redondo Beach, Hermosa Beach, Manhattan Beach, and El Segundo	Manhattan Beach Boulevard, Sepulveda Boulevard, Longfellow Avenue, Artesia Boulevard (SR-91), 8th Street, 2nd Street, Pacific Coast Highway, Gould Avenue, 21st Street, 16th Street, Pier Avenue, 14th Street, Aviation Boulevard, Duncan Avenue	NB SB	4 4	3 3
Metro Green Line	Norwalk to Redondo Beach via Downey, Lynwood, Willowbrook, Los Angeles, Hawthorne, and El Segundo	Redondo Beach Station	EB WB	8 8	8 8
Commuter Express 438	Downtown Los Angeles to Redondo Beach via 37th Street Transitway Station, El Segundo, Manhattan Beach, and Hermosa Beach	Manhattan Beach Boulevard, Longfellow Avenue, 27th Street, Pier Avenue	NB SB	3 0	0 2
Torrance Transit 8	LAX Transit Center to Carson/Hawthorne Center via Mariposa Station, El Segundo Station, South Bay Galleria, and Del Amo Mall	Aviation Boulevard, Artesia Boulevard	NB SB	2 2	2 2
BCT 102	Redondo Pier to Redondo Beach Metro Station	Artesia Boulevard	NB SB	2 5	2 2
BCT 109	Redondo Beach to LAX City Bus Center	Gould Avenue	NB SB	1 2	2 2
			Total	**48**	**42**

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) website, 2016; Los Angeles Department of Transportation website, 2016; City of Torrance Transit website; and Beach Cities Transit (BCT) City of Redondo Beach website, 2016.

MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY (METRO) WEBSITE

★ PROJECT SITE

NOT TO SCALE

FIGURE 4-2
EXISTING PUBLIC TRANSIT ROUTES

LINSCOTT, LAW & GREENSPAN, engineers

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f4-2.dwg LDP 10:51:16 08/01/2016 rodriquez

5.0 TRAFFIC COUNTS

5.1 Manual Intersection Traffic Counts

Manual counts of vehicular turning movements were conducted at each of the study intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted by traffic count subconsultants (City Traffic Counters and The Traffic Solution) at the study intersections from 7:00 to 9:00 AM to determine the weekday AM peak commute hour, and from 4:00 to 6:00 PM to determine the weekday PM peak commute hour in March 2016. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. Traffic volumes at the study intersections show the morning and afternoon peak periods typically associated with peak commute hours in the metropolitan area.

The existing weekday AM and PM peak commute period manual counts of turning vehicles at the study intersections are summarized in ***Table 5-1***. The existing traffic volumes at the study intersections during the weekday AM and PM peak commute hours are shown in ***Figures 5-1*** and ***5-2***, respectively. Summary data worksheets of the manual traffic counts for the study intersections are contained in ***Appendix B***. Traffic flow adjustments, where necessary, also are shown on the summary data worksheets. It is important to note that the traffic volumes shown in *Figures 5-1* and *5-2* are higher than the raw existing traffic count data, as the traffic associated with the now vacant existing site uses have been included.

5.2 Automatic 24-Hour Machine Traffic Counts

Automatic 24-hour machine traffic counts of the study street segments were conducted by traffic subconsultants (City Traffic Counters and The Traffic Solution). The automatic 24-hour machine traffic counts were conducted when local schools were in session. Copies of the 24-hour machine traffic counts for the study street segment locations also are contained in *Appendix B*.

5.3 Skechers' Driveway Traffic Counts

In order to help determine which trip generation rates to employ in this traffic analysis for the proposed project sites, manual traffic counts were conducted at all driveways serving existing Skechers buildings and parking areas. Copies of the driveway traffic counts are contained in *Appendix B*. *Appendix B* also contains a summary diagram showing the turning movement traffic volumes during the weekday AM and PM peak hours. The breakdown of the driveway counts is presented in tabular format for each 15-minute interval during the survey periods.

Table 5-1
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR BEGAN	AM PEAK HOUR VOLUME	PM PEAK HOUR BEGAN	PM PEAK HOUR VOLUME
1	Valley Drive/	03/03/2016	NB	7:30	253	4:30	192
	Gould Avenue		SB		220		437
			EB		278		297
			WB		407		389
2	Ardmore Avenue/	03/03/2016	NB	7:45	461	4:45	305
	Duncan Avenue		SB		130		291
			EB		0		0
			WB		55		66
3	Ardmore Avenue/	03/03/2016	NB	7:45	448	4:45	320
	30th Street		SB		136		309
			EB		0		0
			WB		28		26
4	Ardmore Avenue/	03/03/2016	NB	7:45	374	4:30	266
	Gould Avenue		SB		131		309
			EB		399		431
			WB		508		464
5	Dianthus Street/	03/03/2016	NB	7:45	41	4:45	44
	Duncan Avenue		SB		27		49
			EB		49		39
			WB		44		104
6	Dianthus Street-Tennyson Place/	03/03/2016	NB	8:00	31	4:45	36
	Boundary Place		SB		24		47
			EB		9		8
			WB		18		13
7	Tennyson Place/	03/03/2016	NB	7:30	21	4:30	28
	Longfellow Avenue		SB		26		39
			EB		38		27
			WB		40		48
8	Tennyson Place/	03/03/2016	NB	7:30	5	5:00	8
	30th Street		SB		19		32
			EB		40		41
			WB		34		23
9	Sepulveda Boulevard/	03/08/2016	NB	7:45	3,017	4:45	1,612
	Manhattan Beach Boulevard		SB		1,151		2,433
			EB		849		894
			WB		885		935
10	Sepulveda Boulevard/	03/08/2016	NB	7:15	3,114	5:30	1,499
	8th Street		SB		1,154		2,611
			EB		69		82
			WB		149		58

[1] Counts conducted by City Traffic Counters and The Traffic Solution

Table 5-1 (Continued)
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

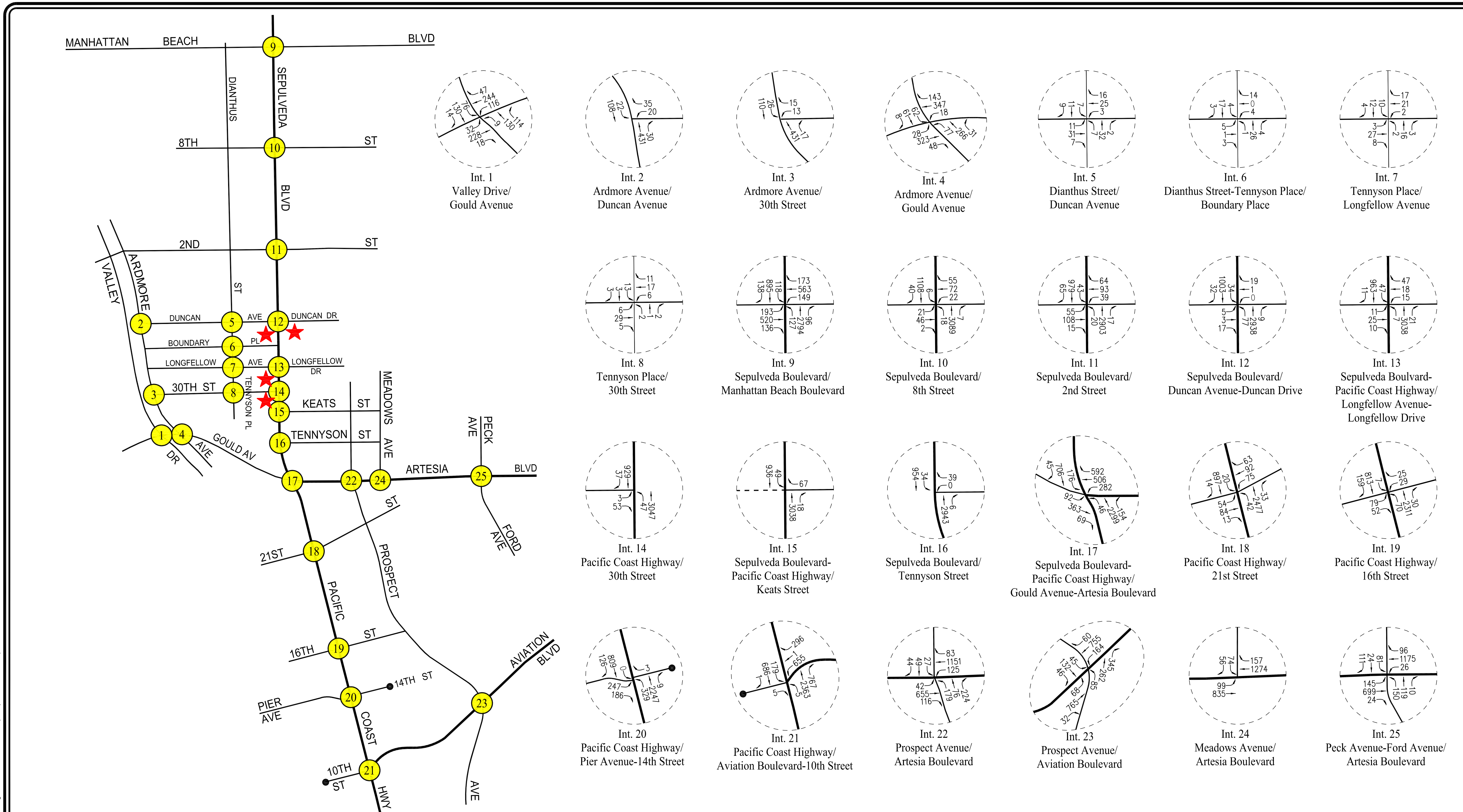
NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR BEGAN	AM PEAK HOUR VOLUME	PM PEAK HOUR BEGAN	PM PEAK HOUR VOLUME
11	Sepulveda Boulevard/ 2nd Street	03/02/2016	NB	7:30	2,940	5:15	1,416
			SB		1,087		2,354
			EB		178		214
			WB		196		124
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive	03/02/2016	NB	7:30	3,024	5:15	1,404
			SB		1,069		2,335
			EB		25		52
			WB		20		30
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	03/02/2016	NB	7:30	3,066	5:15	1,383
			SB		1,021		2,431
			EB		46		42
			WB		80		82
14	Pacific Coast Highway/ 30th Street	03/02/2016	NB	7:30	3,094	5:00	1,394
			SB		966		2,448
			EB		56		66
			WB		0		0
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	03/02/2016	NB	7:30	3,056	5:00	1,378
			SB		985		2,514
			EB		0		0
			WB		67		52
16	Sepulveda Boulevard/ Tennyson Street	03/02/2016	NB	7:45	2,949	5:00	1,314
			SB		988		2,505
			EB		0		0
			WB		39		57
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	03/02/2016	NB	7:45	2,499	5:15	1,298
			SB		927		2,440
			EB		524		524
			WB		1,380		888
18	Pacific Coast Highway/ 21st Street	03/08/2016	NB	7:45	2,552	5:00	1,301
			SB		931		2,224
			EB		151		81
			WB		230		130
19	Pacific Coast Highway/ 16th Street	03/01/2016	NB	7:45	2,411	5:00	1,136
			SB		979		2,159
			EB		133		283
			WB		56		31
20	Pacific Coast Highway/ Pier Avenue-14th Street	03/01/2016	NB	8:00	2,585	5:30	1,315
			SB		935		1,993
			EB		433		475
			WB		3		20

[1] Counts conducted by City Traffic Counters and The Traffic Solution

Table 5-1 (Continued)
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR BEGAN	AM PEAK HOUR VOLUME	PM PEAK HOUR BEGAN	PM PEAK HOUR VOLUME
21	Pacific Coast Highway/ Aviation Boulevard-10th Street	03/01/2016	NB	7:30	3,135	5:00	1,578
			SB		866		2,130
			EB		5		1
			WB		952		884
22	Prospect Avenue/ Artesia Boulevard	03/09/2016	NB	7:30	479	5:00	191
			SB		120		168
			EB		813		1,224
			WB		1,359		901
23	Prospect Avenue/ Aviation Boulevard	03/01/2016	NB	7:45	692	4:30	488
			SB		223		436
			EB		865		876
			WB		979		1,094
24	Meadows Avenue/ Artesia Boulevard	03/09/2016	NB	7:30	0	5:15	0
			SB		130		244
			EB		934		1,246
			WB		1,431		1,001
25	Peak Avenue-Ford Avenue/ Artesia Boulevard	03/09/2016	NB	7:45	279	5:15	97
			SB		216		181
			EB		868		1,257
			WB		1,297		957

[1] Counts conducted by City Traffic Counters and The Traffic Solution



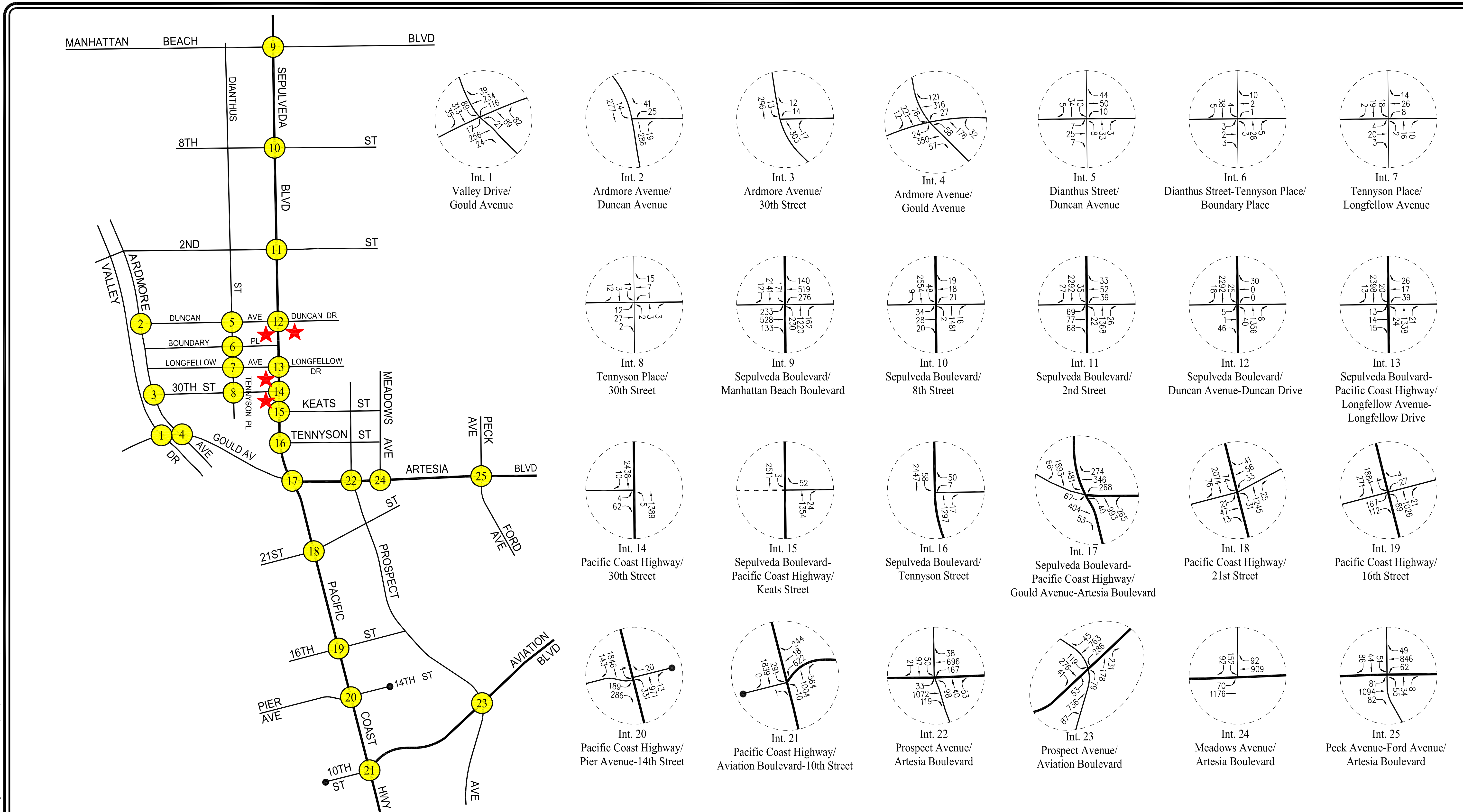
N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 5-1
EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 5-2
EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT

6.0 FUTURE TRAFFIC CONDITIONS

The forecast of future pre-project conditions was prepared in accordance with procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provides two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

6.1 Related Projects Traffic Characteristics

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the Cities of El Segundo, Hermosa Beach, Manhattan Beach and Redondo Beach. The list of related projects in the project site area and a brief description for each of the 29 related projects is presented in ***Table 6–1***. The location of the related projects is shown in ***Figure 6-1***.

Traffic volumes expected to be generated by the related projects were calculated by either using trip generation forecasts from specific traffic impact studies (where available) or by using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[5]. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 6-1*. As shown in *Table 6-1*, the related projects are expected to generate a combined total of 47,251 daily trips during a typical weekday, 2,071 trips (1,139 inbound trips and 932 outbound trips) during the weekday AM peak hour, and 3,689 trips

[5] Institute of Transportation Engineers *Trip Generation Manual*, 9th Edition, 2012, Washington, D.C.

Table 6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA: LAND-USE	LAND USE DATA: SIZE	PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM OUT	AM TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM OUT	PM TOTAL
		City of Hermosa Beach										
H1	Approved	Clash Hotel 1429 Hermosa Avenue	Hotel	30 Rooms	[3]	245	9	7	16	9	9	18
H2	Approved	2101 Pacific Coast Highway	Office	10,124 GSF	[4]	112	14	2	16	3	12	15
H3	Approved	906 Hermosa Avenue	Office	8,780 GSF	[4]	97	12	2	14	2	11	13
H4	Approved	824 1st Street	Office	3,000 GSF	[4]	33	4	1	5	1	3	4
H5	Proposed	Strand & Pier Hotel Mixed-Use NE Corner of The Strand/Pier Avenue	Hotel	100 Rooms	[3]	817	31	22	53	31	29	60
			Retail	5,406 GLSF	[5]	231	3	2	5	10	10	20
			Restaurant	8,213 GSF	[6]	1,044	49	40	89	49	32	81
			(Less Existing Restaurant)	(9,300) GSF	[6]	(1,182)	(56)	(45)	(101)	(55)	(37)	(92)
			(Less Existing Retail)	(6,000) GLSF	[5]	(256)	(4)	(2)	(6)	(11)	(11)	(22)
H6	Proposed	2420 Pacific Coast Highway	Net New Church	32,191 GSF	[7]	293	11	7	18	9	9	18
			Supermarket	30,078 GSF	[8]	3,075	63	39	102	145	140	285
			(Less Existing Office)	(15,000) GSF	[4]	(165)	(20)	(3)	(23)	(4)	(18)	(22)
			(Less Existing Recreation Center)	(29,653) GSF	[9]	(1,003)	(40)	(21)	(61)	(40)	(41)	(81)
H7	Proposed	OTO Development Hotel Beach Drive/11th Street	Hotel	100 Rooms	[3]	817	31	22	53	31	29	60
H8	Proposed	Transpacific Fiber-Optic Cables Project	Communications	N/A	[10]	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.
		City of Manhattan Beach										
M1	Approved	Manhattan Village Shopping Center 3200-3600 N. Sepulveda Boulevard	Net New Shopping Center	110,000 GLSF	[11]	715	29	19	48	97	79	176
M2	Approved	1133 Artesia Boulevard	Grocery Store	12,000 GSF	[8]	1,227	25	16	41	58	56	114
M3	Approved	865 Manhattan Beach Boulevard	General Office	15,000 GSF	[12]	165	20	3	23	4	18	22
			Deli	700 GSF	[12]	340	21	21	42	5	4	9
M4	Under Construction	1000 N. Sepulveda Boulevard	Medical Office	23,050 GSF	[13]	833	43	12	55	23	59	82
			Pharmacy	665 GSF	[14]	60	1	1	2	3	3	6
			Coffee Shop	1,715 GSF	[15]	1,860	95	91	186	35	35	70
			(Less Existing Restaurant)	(5,400) GSF	[6]	(687)	(32)	(26)	(58)	(32)	(21)	(53)
M5	Proposed	Gelson's Market 707 N. Sepulveda Boulevard	Supermarket	27,500 GSF	[12]	1,596	39	24	63	80	77	157
			Restaurant	52 Seats	[12]	1,489	90	59	149	36	21	57
			Bank	7,000 GSF	[12]	840	23	10	33	30	38	68
			(Less Existing Automobile Care)	(31,720) GSF	[12]	(807)	(60)	(31)	(91)	(60)	(65)	(125)

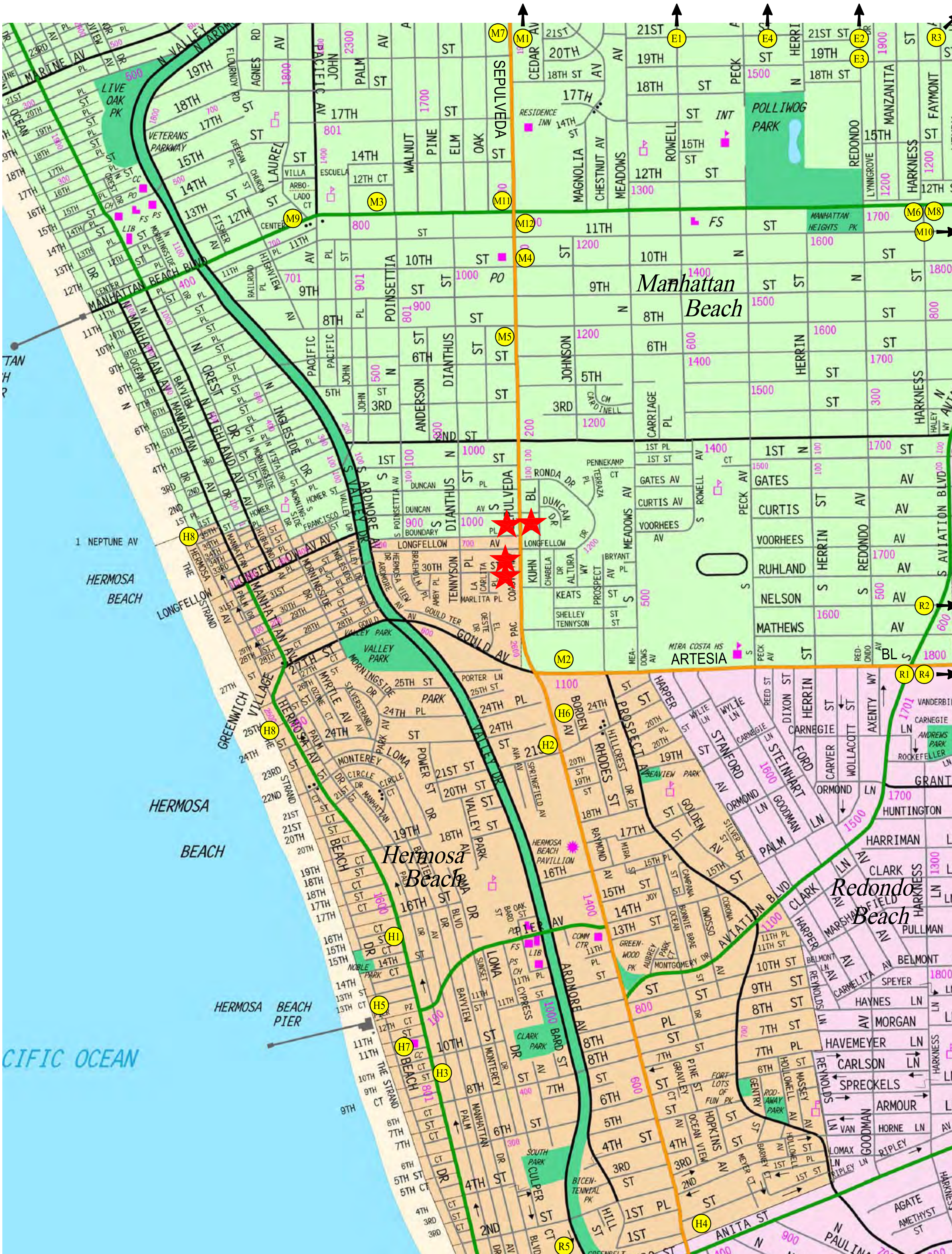
Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA LAND-USE	SIZE	PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	OUT	TOTAL	PM PEAK HOUR VOLUMES [2] IN	OUT	TOTAL
City of Manhattan Beach (Continued)												
M6	Proposed	1800 Manhattan Beach Boulevard	General Office (Less Existing Apartment)	3,000 GSF (3) DU	[4] [16]	33 (20)	4 0	1 (2)	5 (2)	1 (1)	3 (1)	4 (2)
M7	Proposed	2205 N. Sepulveda Boulevard	General Office (Less Existing Hair Salon)	4,700 GSF (1,040) GSF	[4] [17]	52 (20)	6 (1)	1 0	7 (1)	1 0	6 (2)	7 (2)
M8	Proposed	1762 Manhattan Beach Boulevard	Medical Office Apartment (Less Existing Single-Family Residence)	1,800 GSF 1 DU (1) DU	[13] [16] [18]	65 7 (10)	3 0 0	1 1 (1)	4 1 (1)	2 1 (1)	4 0 0	6 1 (1)
M9	Approved	757 Manhattan Beach Boulevard	Condominium (Less Existing Apartment)	5 DU (6) DU	[19] [16]	29 (40)	0 (1)	2 (2)	2 (3)	2 (3)	1 (1)	3 (4)
M10	Approved	1101 Aviation Boulevard	Medical Office	5,000 GSF	[13]	181	9	3	12	5	13	18
M11	Proposed	1129 N. Sepulveda Boulevard	Retail	2,000 GLSF	[5]	85	1	1	2	3	4	7
M12	Proposed	1100 Manhattan Beach Boulevard	Retail	13,000 GLSF	[5]	555	7	5	12	23	25	48
City of El Segundo												
E1	Proposed	Raytheon South Campus Phase I 2100 E. El Segundo Boulevard	General Office Warehouse Light Industrial Retail	1,751,921 GSF 73,577 GSF 168,000 GSF 148,960 GLSF	[20]	3,775	56	33	89	108	117	225
E2	Proposed	750 S. Douglas Street	Industrial	4,986 GSF	[21]	34	4	1	5	1	4	5
E3	Approved	500 S. Douglas Street and 2330 Utah Avenue	General Office	80,042 GSF	[4]	883	110	15	125	20	99	119
E4	Proposed	2171-2191 Rosecrans Avenue	Restaurant (Less Existing Restaurant)	13,570 GSF (8,195) GSF	[6] [6]	1,725 (1,042)	81 (49)	66 (40)	147 (89)	80 (49)	54 (32)	134 (81)
City of Redondo Beach												
R1	Approved	2012 Artesia Boulevard	Indoor Pool	16,900 GSF	[22]	727	31	19	50	63	38	101
R2	Approved	2516-2520 Nelson Avenue	Condominium	9 DU	[19]	52	1	3	4	3	2	5
R3	Approved	2430 Marine Avenue	Hotel	121 Rooms	[3]	989	38	26	64	37	36	73
R4	Proposed	South Bay Galleria Improvement 1815 Hawthorne Boulevard	Net New Retail Hotel Residential	217,864 GLSF 150 Rooms 650 DU	[5] [3] [16]	9,303 1,226 4,323	130 47 66	79 33 266	209 80 332	388 46 262	420 44 141	808 90 403

Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA LAND-USE	SIZE	PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	OUT	TOTAL	PM PEAK HOUR VOLUMES [2] IN	OUT	TOTAL
City of Redondo Beach (Continued)												
R5	Proposed	Waterfront Development Project	Retail Movie Theater Quality Restaurant High-Turnover Restaurant Hotel Office Boat Launch (Less Existing Retail) (Less Existing Quality Restaurant) (Less Existing High-Turnover Rest.) (Less Existing Office)	97,000 GLSF 700 Seats 128,000 GSF 45,000 GSF 130 Rooms 60,000 GSF 40 Stalls (31,005) GLSF (45,094) GSF (30,083) GSF (71,174) GSF	[23]	12,550	195	149	344	471	311	782
TOTAL						47,251	1,139	932	2,071	1,922	1,767	3,689

[1] Source: City of Hermosa Beach Planning Division, City of Manhattan Beach Planning Division, City of El Segundo Planning Division, and City of Redondo Beach Planning Division. Trip generation for the related projects are based on ITE "Trip Generation Manual", 9th Edition, 2012, unless otherwise noted (as referenced in the Project Data Source column).
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 310 (Hotel) trip generation average rates.
[4] ITE Land Use Code 710 (General Office Building) trip generation average rates.
[5] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[6] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
[7] ITE Land Use Code 560 (Church) trip generation average rates.
[8] ITE Land Use Code 850 (Supermarket) trip generation average rates.
[9] ITE Land Use Code 495 (Recreational Community Center) trip generation average rates.
[10] Source: "Transpacific Fiber-Optic Cables Project Draft EIR", Aspen Environmental Group, December 2015.
[11] Source: "Traffic Study for Manhattan Village Shopping Center", Components I + II Total New Trips, prepared by Gibson Transportation Consulting, May 2012.
[12] Trip generation forecast for this project provided by City of Manhattan Beach staff.
[13] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[14] ITE Land Use Code 880 (Pharmacy/Drugstore without Drive-Through Window) trip generation average rates.
[15] ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window) trip generation average rates.
[16] ITE Land Use Code 220 (Apartment) trip generation average rates.
[17] ITE Land Use Code 918 (Hair Salon) trip generation average rates. As no daily trip rate is provided, it was assumed that the PM peak hour trips represents 10% of the daily trips.
[18] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
[19] ITE Land Use Code 230 (Residential Condominium/Townhouse) trip generation average rates.
[20] Source: "Raytheon South Campus Specific Plan Draft Traffic Impact Analysis," Phase I, prepared by RBF, May 27, 2014.
[21] ITE Land Use Code 110 (Light Industrial) trip generation average rates.
[22] ITE Land Use Code 493 (Athletic Club) trip generation average rates.
[23] Source: "Redondo Waterfront Project Transportation Impact Study," prepared by Fehr & Peers, November 2015.



MAP SOURCE: RAND MCNALLY & COMPANY

H HERMOSA BEACH RELATED PROJECT
M MANHATTAN BEACH RELATED PROJECT
E EL SEGUNDO RELATED PROJECT
R REDONDO BEACH RELATED PROJECT

NOT TO SCALE

★ PROPOSED SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-1
LOCATION OF RELATED PROJECTS

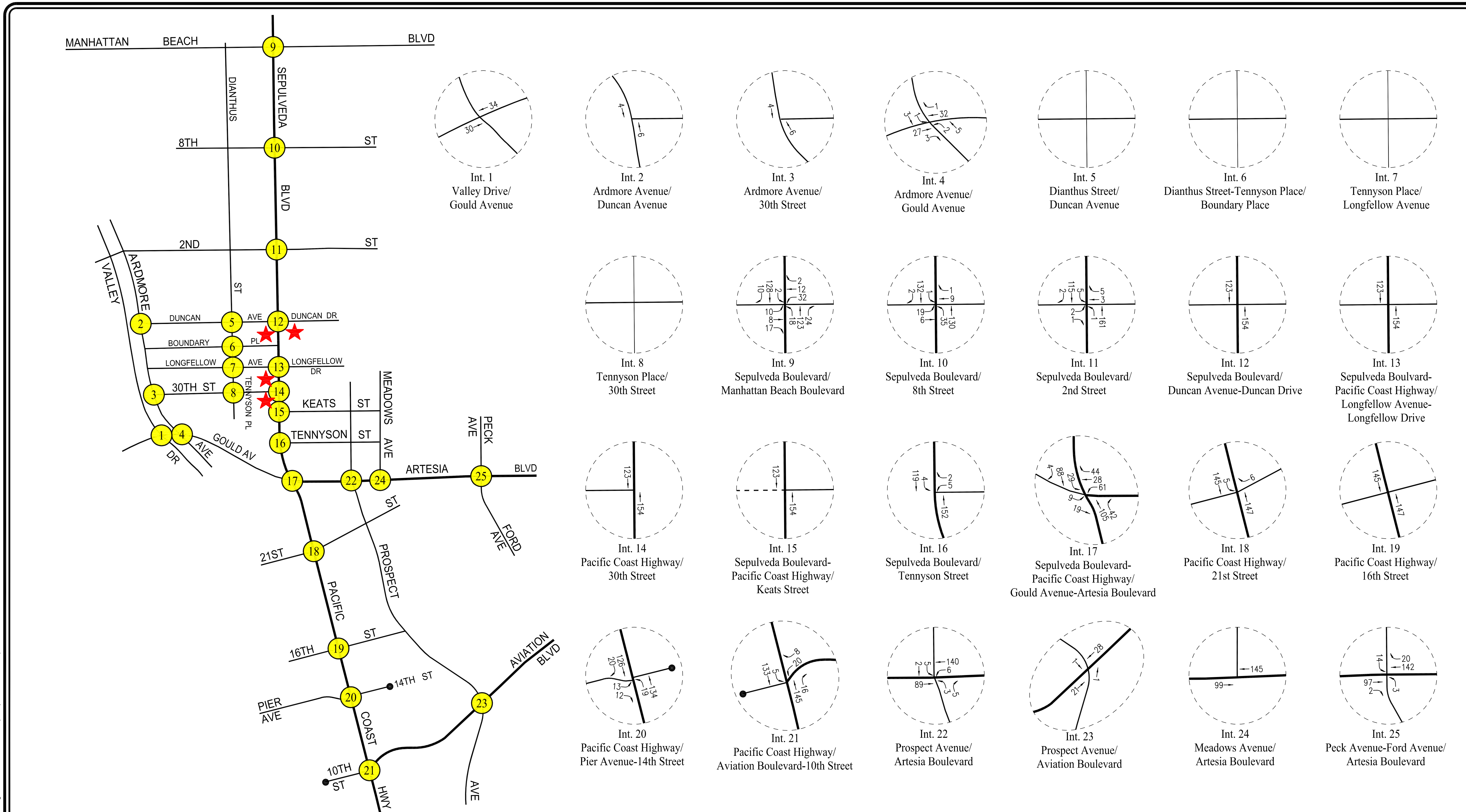
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f6-1.dwg LDP 10:51:50 08/01/2016 rodriquez

(1,922 inbound trips and 1,767 outbound trips) during the weekday PM peak hour. The anticipated distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours is displayed in ***Figures 6-2*** and ***6-3***, respectively.

6.2 Ambient Traffic Growth

Horizon year, background traffic growth estimates also have been calculated by using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area, as well as account for typical growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at one percent (1.0%) per year. The ambient growth factor was based on review of the background traffic growth estimates for the South Bay/LAX area (RSA 18) published in the *2010 Congestion Management Program for Los Angeles County*, which indicate that existing traffic volumes would be expected to increase at an annual rate of less than one percent (approximately 0.26% per year) between years 2010 and 2020. However, a one percent (1.0%) ambient traffic growth factor has been employed in this analysis in order to provide a conservative, worst case forecast of future traffic volumes in the area. Application of the ambient traffic growth factor to existing year 2016 traffic volumes results in a four percent (4.0%) increase in existing traffic volumes to horizon year 2020. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.



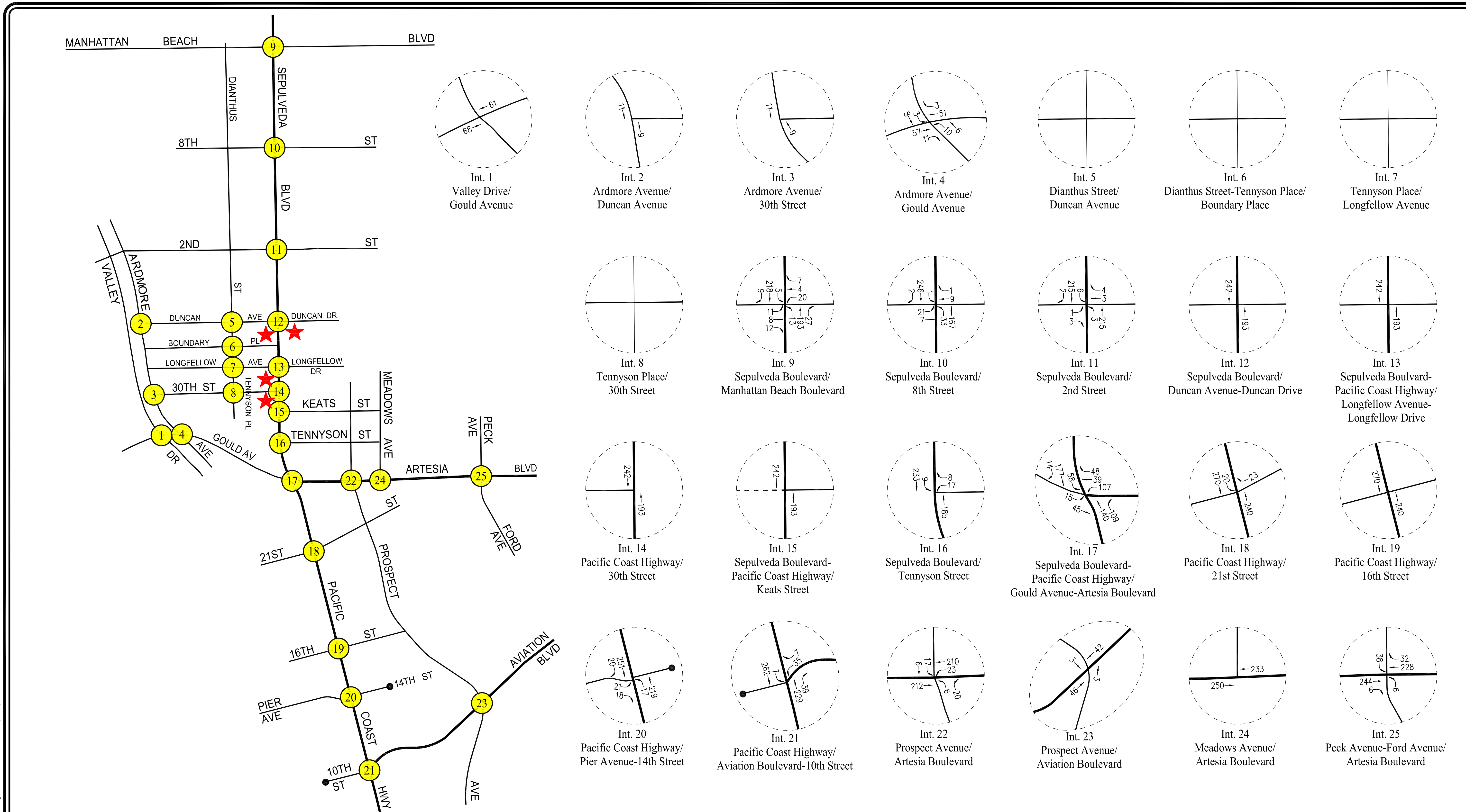
N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 6-3
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f6-3.dwg LDP 08:00:39 05/22/2016 rodriquez

7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Skechers Design Center and Offices project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Level of Service) conditions at selected key intersections using expected existing and future traffic volumes without and with forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

7.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates provided in the ITE *Trip Generation Manual*, 9th Edition publication and the San Diego Association of Governments (SANDAG) *Not So Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*[6] were utilized in the project trip generation forecasts. ITE Land Use Code 714 (Corporate Headquarters Building) trip generation averages rates were used to forecast the traffic volumes expected to be generated by the proposed Hermosa Beach buildings based on the strong correlation with the existing 330 S. Sepulveda Boulevard building site-specific driveway traffic counts (as described in Section 5.3) as well as the occupancy characteristics of the two Hermosa Beach buildings. Pursuant to the discussions with City of Manhattan Beach staff, ITE Land Use Code 715 (Single Tenant Office Building) trip generation averages rates were used to forecast the traffic volumes expected to be generated by the Manhattan Beach buildings since these rates are higher and more conservative than the ITE Corporate Headquarters rates and the Manhattan Beach buildings will not contain Design Center characteristics similar to those at the existing 330 S. Sepulveda Boulevard building (e.g., shoe showrooms). Additionally, to provide a conservative forecast of project trips, ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window) trip generation average rates were used to forecast the traffic volumes expected to be generated by the ancillary coffee house land use component planned to be provided as part of the Hermosa Beach project.

As previously discussed, (refer to Subsection 2.1.2, Project Parking), the proposed Hermosa Beach project is unique due to the nature of the Design Center building configurations (e.g., showroom space and shoe libraries) and busing of buyers to/from the project site several times a year. Skechers hosts large conferences several times a year where buyers come from around the world and the United States. The Skechers travel department utilizes eight (8) buses (60-seat capacity) to transport these people from the Redondo Beach Performing Arts Center building to the site. Based on current experience, the buses are only at the existing Skechers building at 330 S. Sepulveda Boulevard during drop-off and pick-up periods, and are staged off-site until needed to transport the people to their hotels; the same will apply when the showrooms are moved to the new Hermosa Beach location.

As the GSC is an atypical event (i.e. only occurs twice a year) and Skechers arranges for transport of attendees by bus and due to the unique configuration of the Design Center building, it is concluded that using the ITE Land Use Code 714 trip generation rates based on square footage will result in a conservative, worst case forecast of project-related trips. The proposed Hermosa Beach project will function as the Skechers product design center and executive offices on a typical, recurring daily basis when showroom space is not being utilized by attendees as part of the GSC.

For the GSC, it is understood that Skechers will arrange for bus transport of attendees between the venue (traditionally held at the Redondo Beach Performing Arts Center), local hotels and the project site, and that this circulation currently occurs at the existing site and will simply shift to the proposed project site. In order to provide a conservative forecast of project related trips, a forecast of bus trips associated with the GSC is included herein. The GSC bus trips have been based upon the following assumptions in order to provide a conservative forecast of project-related trips:

- No weekday AM peak hour bus trip generation.
- It is assumed that eight (8) buses (60-seat capacity) will arrive/depart the site during the weekday PM peak hour.
- For the daily trip ends, it is assumed that eight (8) buses will arrive/depart the site during the mid-day and again during the weekday PM peak hour (2 inbound trips and 2 outbound trips per bus).

[6] SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002, for the automated car wash site only, where no ITE data is available.

- A passenger car equivalency (PCE) factor (2.0 passenger car equivalency per bus) was accounted for in the analysis of potential traffic impacts in order to account for the affect that buses have on overall intersection operations. This assumption is conservative and accounts for the larger vehicle type and slower speeds.

In addition to the proposed project trip generation forecasts, forecasts also were made for the existing site land uses at the Manhattan Beach project site, even though some of the existing uses are currently vacant (i.e., the former Auto Werkstatt auto repair facility and the copy shop at the 305 S. Sepulveda Boulevard site) or have been demolished for nuisance reasons (i.e., the car wash operation at the 300 S. Sepulveda Boulevard site). As such, the vehicle trips generated by these specific land uses were added to the existing traffic counts in the determination of the baseline traffic conditions. This approach was confirmed by City of Manhattan Beach staff. No existing use trip generation credits were assumed for the Hermosa Beach project sites due to the length of time (i.e., years) since the buildings were last occupied by former Midas Muffler, Vasek Polak BMW dealership and South Bay Lotus dealership operations. Trip generation average rates for the following ITE land uses were utilized in the forecasts for the existing project sites:

- ITE Land Use Code 710 (General Office Building)
- ITE Land Use Code 820 (Shopping Center)
- ITE Land Use Code 942 (Automobile Care Center)
- ITE Land Use Code 948 (Automated Car Wash) and SANDAG (Car Wash – Automated)

Pass-by trip adjustments were applied to the trip generation forecasts for the retail and automobile-related site uses to account for pass-by trips. Pass-by trips are made as intermediate stops on the way from an origin to a destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the Manhattan Beach site. As an example, a motorist on their way home from work that typically traverses Sepulveda Boulevard may elect to combine trips and stop by to pick-up their dry cleaning. This is not a new trip on the street system with its primary purpose/destination related to the dry cleaning business, rather this is categorized as a pass-by trip (i.e., since the primary trip is a home-work-home trip that also included a secondary stop without a route diversion).

7.2 Combined Projects Traffic Generation

The trip generation forecast for the proposed Skechers projects is summarized in ***Table 7-1***. As presented in *Table 7-1*, the combined projects are expected to generate 279 net new vehicle trips (253 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the combined projects are expected to generate 254 net new vehicle trips (30 inbound trips and 224 outbound trips). When comparing the anticipated employment figures of each proposed building (as summarized in Section 2.0 of this report) with the weekday AM peak hour inbound vehicle trips and the PM peak hour outbound vehicle trips for each building, it is important

Table 7-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	OUT	TOTAL	PM PEAK HOUR VOLUMES [2] IN	OUT	TOTAL
Hermosa Beach Sites								
Design Center [3]	100,296 GSF	800	141	11	152	14	127	141
Executive Offices [3]	19,209 GSF	153	27	2	29	3	24	27
Executive Offices Coffee Shop [4]	998 GSF	817	55	53	108	21	20	41
- Less Internal Capture, Walk-In and Pass-by Adjustments (75%) [5]		(613)	(41)	(40)	(81)	(16)	(15)	(31)
GSC Event Bus Trips [6]	8 Buses	64	----	----	----	16	16	32
Subtotal Hermosa Beach Offices		**1,221**	**182**	**26**	**208**	**38**	**172**	**210**
Manhattan Beach Sites								
305 S. Sepulveda Boulevard								
General Office [7]	37,174 GSF	433	60	7	67	10	55	65
Less Existing General Office [8]	(8,422) GSF	(93)	(11)	(2)	(13)	(2)	(11)	(13)
Less Existing Retail [9]	(4,000) GLSF	(171)	(2)	(2)	(4)	(7)	(8)	(15)
- Less Pass-by Adjustment (50%) [10]		86	1	1	2	4	4	8
Automobile Care Center [11]	(2,815) GLSF	(90)	(4)	(2)	(6)	(4)	(5)	(9)
- Less Pass-by Adjustment (10%) [10]		9	0	0	0	0	1	1
Subtotal 305 S. Sepulveda Boulevard Site		174	44	2	46	1	36	37
330 S. Sepulveda Boulevard Expansion								
General Office [7]	20,328 GSF	237	33	4	37	5	30	35
Automated Car Wash [12]	(2,525) GSF	(400)	(8)	(8)	(16)	(18)	(18)	(36)
- Less Pass-by Adjustment (20%) [10]		80	2	2	4	4	4	8
Subtotal 330 S. Sepulveda Boulevard Expansion Site		(83)	27	(2)	25	(9)	16	7
Subtotal Manhattan Beach Offices		**91**	**71**	**0**	**71**	**(8)**	**52**	**44**
COMBINED TOTAL		**1,312**	**253**	**26**	**279**	**30**	**224**	**254**

[1] Source: ITE "Trip Generation Manual", 9th Edition, 2012; and "(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, San Diego Association of Governments (SANDAG).

[2] Trips are one-way traffic movements, entering or leaving.

Table 7-1 (Continued)
PROJECT TRIP GENERATION

[3] ITE Land Use Code 714 (Corporate Headquarters Building) trip generation average rates.
- Daily Trip Rate: 7.98 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.52 trips/1,000 SF of floor area; 93% inbound/7% outbound
- PM Peak Hour Trip Rate: 1.41 trips/1,000 SF of floor area; 10% inbound/90% outbound

[4] ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window) trip generation average rates.
- Daily Trip Rate: 818.59 trips/dwelling unit; 50% inbound/50% outbound (ITE Land Use Code 937 since none provided for Code 936)
- AM Peak Hour Trip Rate: 108.38 trips/1,000 SF; 51% inbound/49% outbound
- PM Peak Hour Trip Rate: 40.75 trips/dwelling units; 50% inbound/50% outbound

[5] As this on-site land-use amenity is intended for local area employees and residents, a high level of walk-in and internal capture patronage is anticipated. Internal capture trips are those trips made internal to the site between land uses in a mixed-use development. Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site. Please note that although the ITE "Trip Generation Handbook" does not include coffee shop land use type in the review of pass-by trips, a fast-food restaurant with drive-through window (i.e., ITE Land Use Code 934) was reviewed for reference purposes. When combined with expected walk-in and internal capture patronage, a 75% adjustment was applied to the Coffee Shop land use component.

[6] The Skechers Global Sales Conference (GSC) is held at the Redondo Beach Performing Arts building in the morning. After lunch, approximately 450 to 500 of those attendees are transported via bus to the existing building at 330 Sepulveda Boulevard to tour the showrooms. The Skechers travel department utilizes 8 buses (60 seat capacity) to transport these people from the Performing Arts building to the site. The buses are only at the existing Skechers building during drop-off and pick-up periods, and are staged off-site until needed to transport people to their hotels; the same will apply when the showrooms are moved to the proposed Hermosa Beach project site. Therefore, the GSC event bus trips have been based upon the following assumptions in order to provide a conservative forecast of project-related trips:
- No AM peak hour bus trips.
- It is assumed that 8 buses (60 seat capacity) will arrive/depart the site during the PM peak hour.
- For the daily trip ends, it is assumed that 8 buses will arrive/depart the site during the mid-day and again during the PM peak hour (2 inbound trips and 2 outbound trips per bus).
- A passenger car equivalency (PCE) factor (2.0 per bus) was accounted for in the analysis of potential traffic impacts in order to account for the affect that buses have on overall intersection operations. This assumption is conservative and accounts for the larger vehicle type and slower speeds.

[7] ITE Land Use Code 715 (Single Tenant Office Building) trip generation average rates.
- Daily Trip Rate: 11.65 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.80 trips/1,000 SF of floor area; 89% inbound/11% outbound
- PM Peak Hour Trip Rate: 1.74 trips/1,000 SF of floor area; 15% inbound/85% outbound

[8] ITE Land Use Code 710 (General Office Building) trip generation average rates.
- Daily Trip Rate: 11.03 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.56 trips/1,000 SF of floor area; 88% inbound/12% outbound
- PM Peak Hour Trip Rate: 1.49 trips/1,000 SF of floor area; 17% inbound/83% outbound

[9] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 42.7 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.96 trips/1,000 SF of floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.71 trips/1,000 SF of floor area; 48% inbound/52% outbound

[10] Pass-by trips are made as intermediate stops on the way from an origin to a primary destination without a route diversion. Pass-by trips are attracted from the traffic passing the site on an adjacent street or roadway that offers direct access to the site.

[11] ITE Land Use Code 942 (Automobile Care Center) trip generation average rates.
- Daily Trip Rate: Based on assumption that PM peak hour volume represents 10% of daily trips
- AM Peak Hour Trip Rate: 2.25 trips/1,000 SF of floor area; 66% inbound/34% outbound
- PM Peak Hour Trip Rate: 3.11 trips/1,000 SF of floor area; 48% inbound/52% outbound

[12] ITE Land Use Code 948 (Automated Car Wash) and SANDAG (Car Wash - Automatic) trip generation average rates.
- Daily Trip Rate: ITE PM peak hour rate represents 9% of daily (SANDAG); 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 4% of daily (SANDAG); 50% inbound/50% outbound
- PM Peak Hour Trip Rate: 14.12 trips/1,000 SF of floor area; 50% inbound/50% outbound

to note that not all employees arrive and/or depart work during a single hour, not all employees arrive via single occupant vehicles, and not all employees are full-time. Over a 24-hour period, the combined projects are forecast to generate 1,312 net new daily trip ends during a typical weekday (656 inbound trips and 656 outbound trips).

7.3 Hermosa Beach Only Project Traffic Generation

As also presented in *Table 7-1*, the Hermosa Beach only project is expected to generate 208 net new vehicle trips (182 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the Hermosa Beach only project is expected to generate 210 net new vehicle trips (38 inbound trips and 172 outbound trips). Over a 24-hour period, the Hermosa Beach only project is forecast to generate 1,221 net new daily trip ends during a typical weekday (approximately 611 inbound trips and 611 outbound trips).

7.4 Manhattan Beach Projects Only Traffic Generation

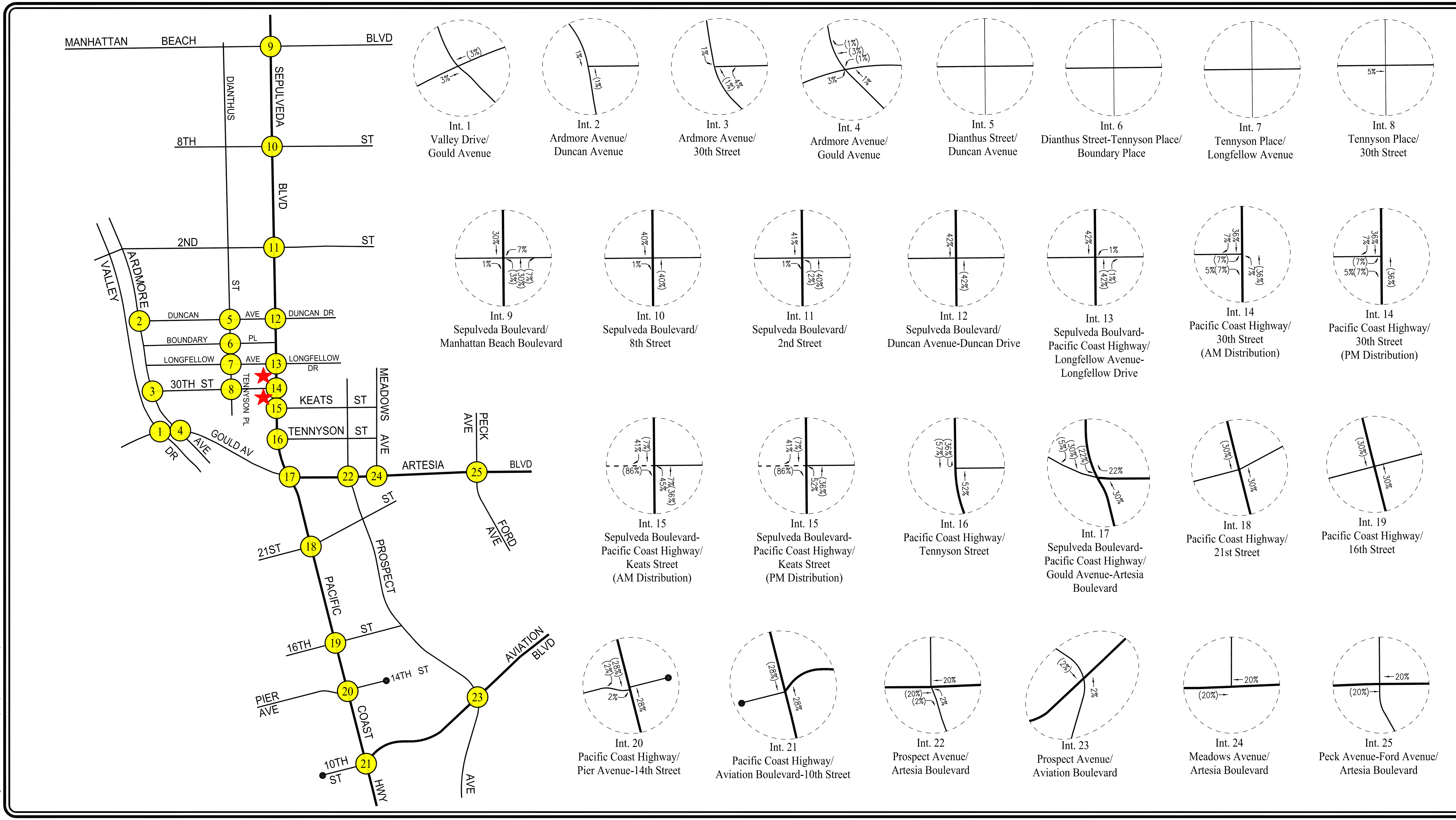
As also presented in *Table 7-1*, the 305 S. Sepulveda Boulevard project is expected to generate 46 net new vehicle trips (44 inbound trips and 2 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the 305 S. Sepulveda Boulevard project is expected to generate 37 net new vehicle trips (1 inbound trip and 36 outbound trips). Over a 24-hour period, the 305 S. Sepulveda Boulevard project is forecast to generate 174 net new daily trip ends during a typical weekday (approximately 87 inbound trips and 87 outbound trips).

As also presented in *Table 7-1*, the 330 S. Sepulveda Boulevard Expansion project is expected to generate 25 net new vehicle trips (27 inbound trips and 2 fewer outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the 330 S. Sepulveda Boulevard Expansion project is expected to generate 7 net new vehicle trips (nine fewer inbound trips and 16 outbound trips). Over a 24-hour period, the 330 S. Sepulveda Boulevard Expansion project is forecast to generate 83 fewer overall daily trip ends during a typical weekday than the prior car wash facility.

7.5 Project Traffic Distribution and Assignment

The general, directional traffic distribution patterns for the proposed Skechers projects and existing project sites are presented in the following graphics:

- ***Figure 7-1***: Hermosa Beach Project
- ***Figure 7-2***: 305 S. Sepulveda Boulevard Manhattan Beach Project
- ***Figure 7-3***: 330 S. Sepulveda Boulevard Manhattan Beach Expansion Project
- ***Figure 7-4***: Existing 305 S. Sepulveda Boulevard Site
- ***Figure 7-5***: Existing 300 S. Sepulveda Boulevard Site

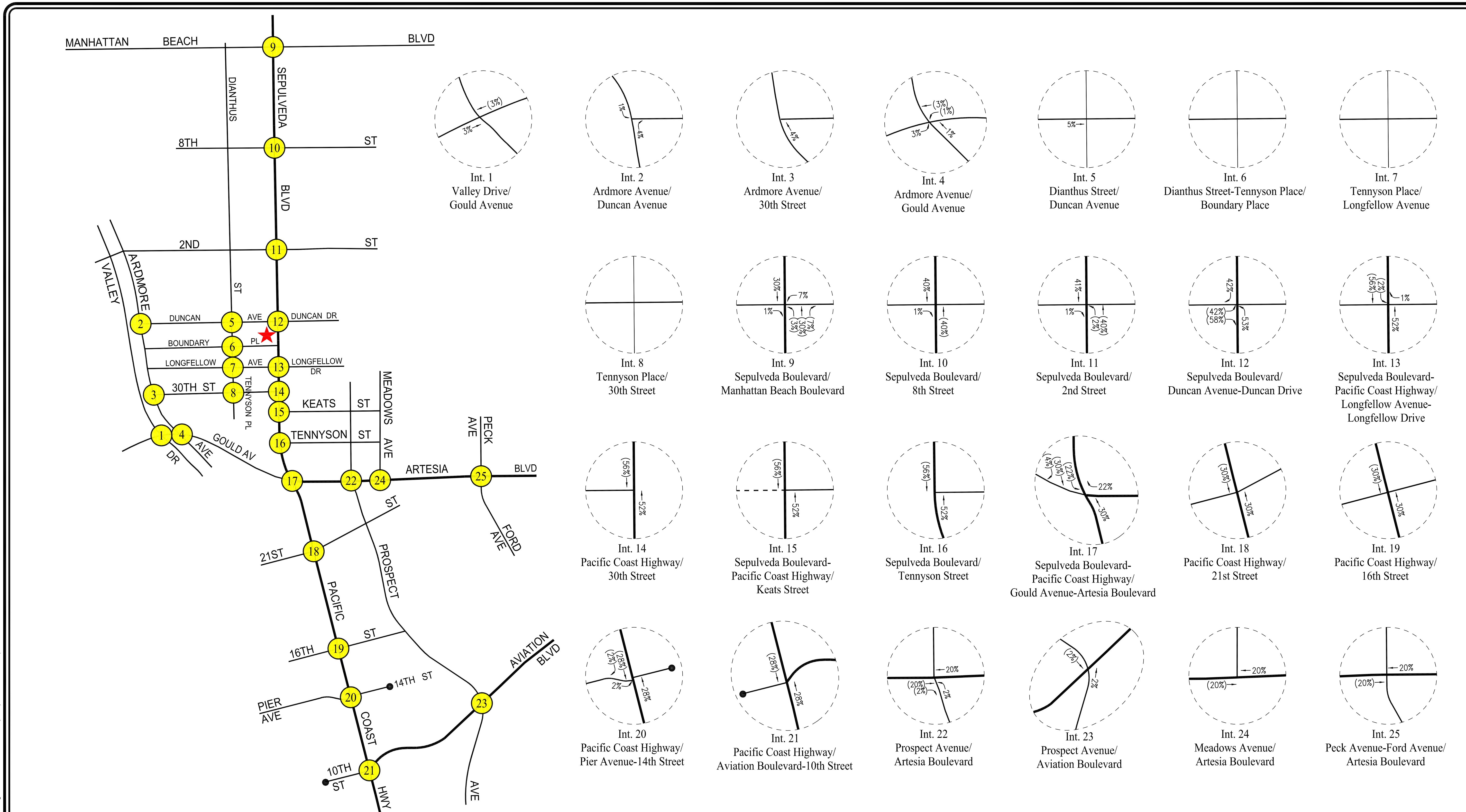


NOT TO SCALE

PROJECT SITE
XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 7-1
PROJECT TRIP DISTRIBUTION
HERMOSA BEACH PROJECT
SKECHERS DESIGN CENTER AND OFFICES PROJECT



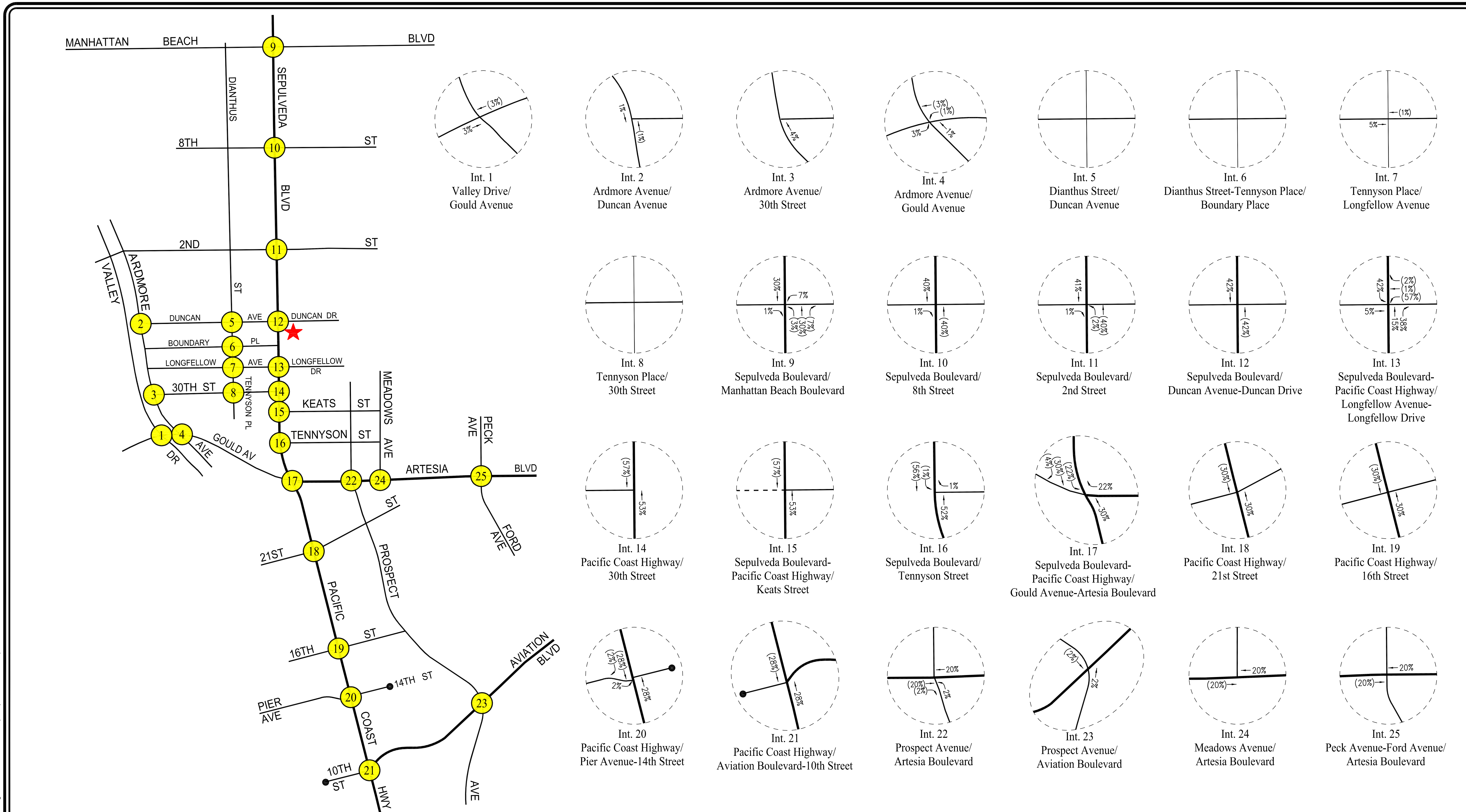
NOT TO SCALE

★ PROJECT SITE
XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 7-2
PROJECT TRIP DISTRIBUTION
MANHATTAN BEACH PROJECT: 305 S. SEPULVEDA BOULEVARD
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f7-2.dwg LDP 13:35:52 08/17/2016 rodriquez

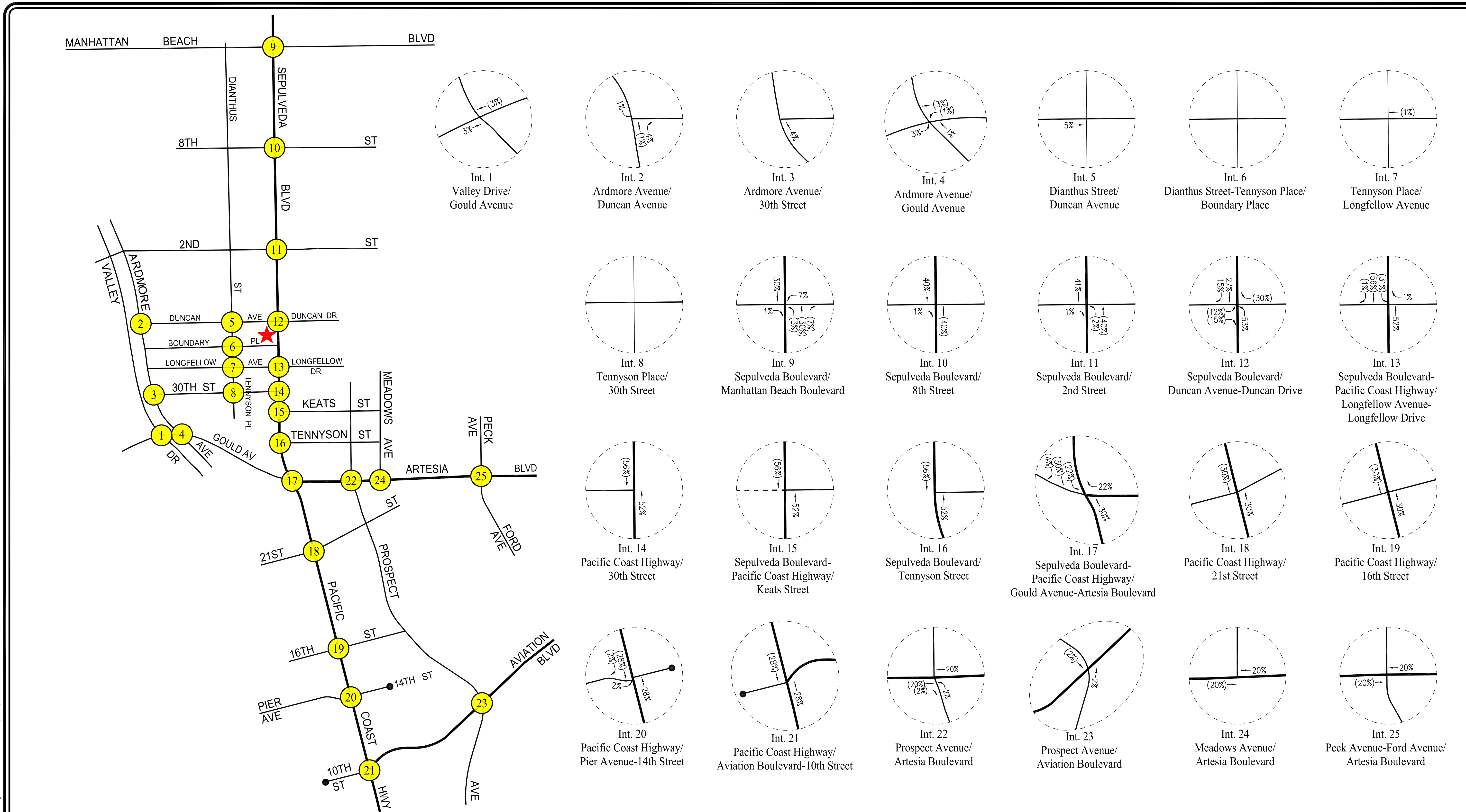


N
NOT TO SCALE

★ PROJECT SITE
XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 7-3
PROJECT TRIP DISTRIBUTION
MANHATTAN BEACH PROJECT: 330 S. SEPULVEDA BOULEVARD
SKECHERS DESIGN CENTER AND OFFICES PROJECT



NOT TO SCALE

PROJECT SITE

XX = INBOUND PERCENTAGES

(XX) = OUTBOUND PERCENTAGES

LINSCOTT, LAW & GREENSPAN, engineers

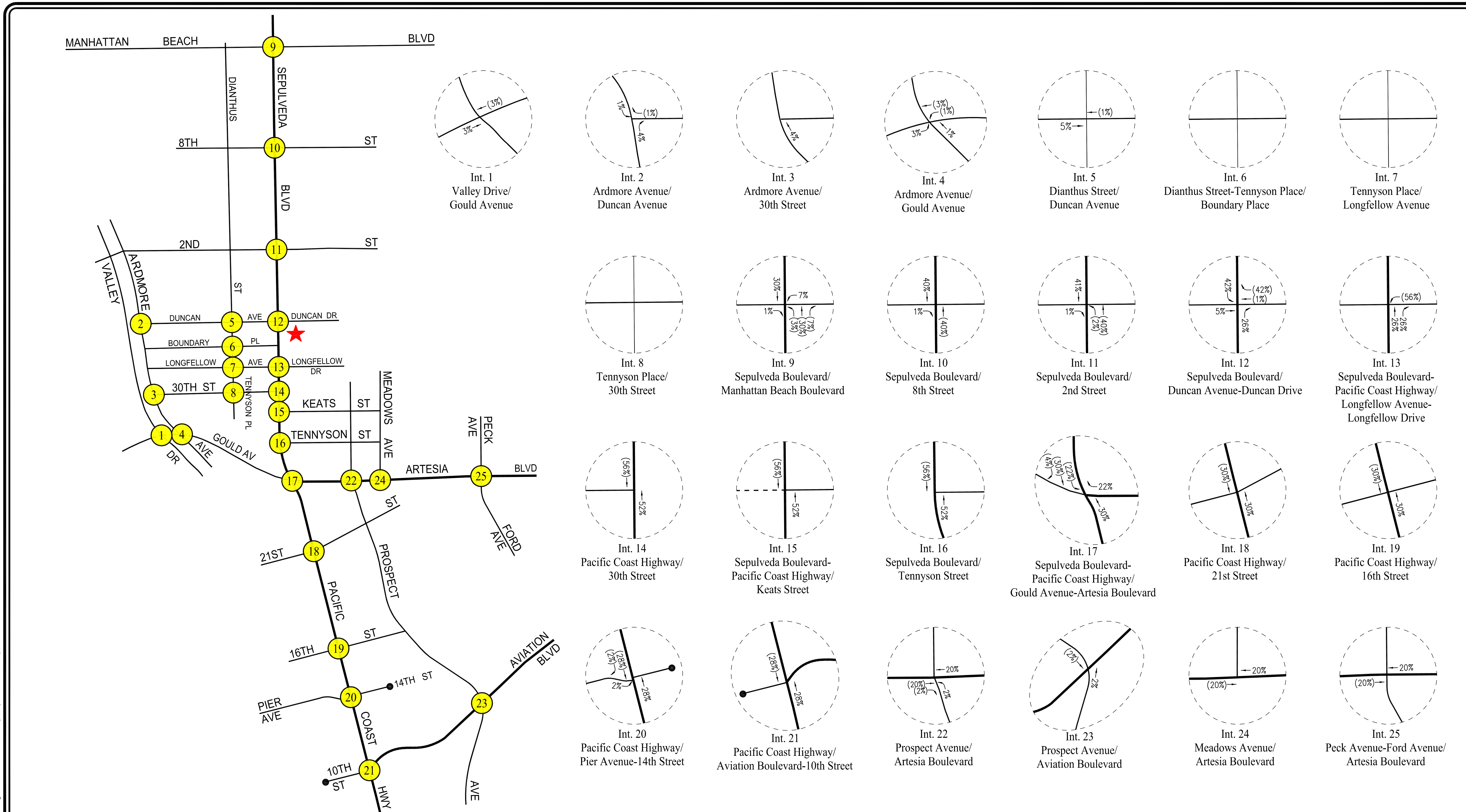
FIGURE 7-4

EXISTING SITE TRIP DISTRIBUTION

305 S. SEPULVEDA BOULEVARD

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f7-4.dwg LDP 09:15:02 04/12/2016 rodriquez



N
NOT TO SCALE

★ PROJECT SITE
XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

LINSCOTT, LAW & GREENSPAN, engineers

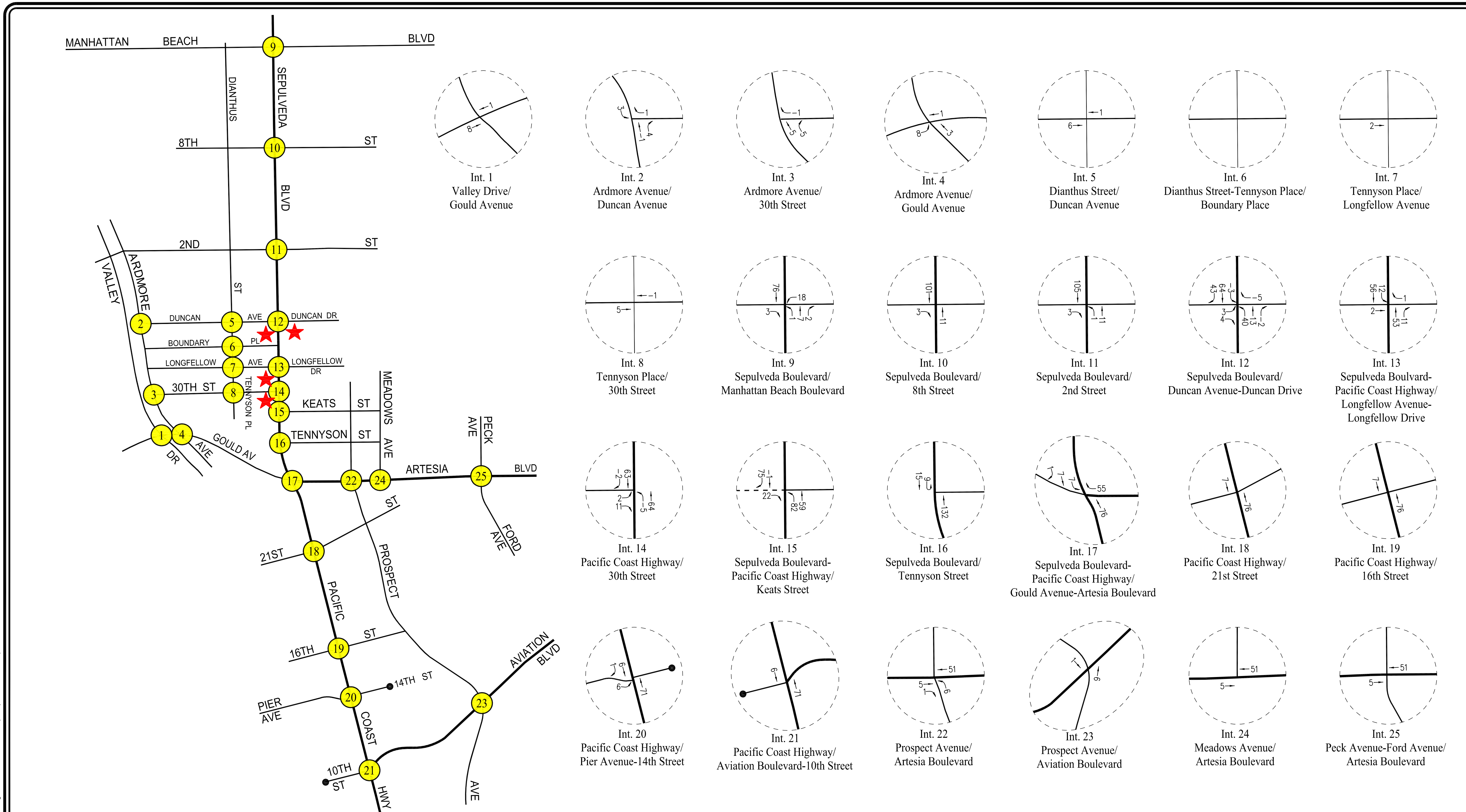
FIGURE 7-5
EXISTING SITE TRIP DISTRIBUTION
300 S. SEPULVEDA BOULEVARD
SKECHERS DESIGN CENTER AND OFFICES PROJECT

The project trip distribution patterns for the proposed Skechers projects were submitted for review and approval by both the City of Hermosa Beach and City of Manhattan Beach. Project traffic volumes both entering and exiting the project sites have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Sepulveda Boulevard/Pacific Coast Highway, Manhattan Beach Boulevard, Gould Avenue/Artesia Boulevard, Aviation Boulevard);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Spatial distribution of existing Skechers employees at the 330 S. Sepulveda Boulevard building and for all Skechers employees in Manhattan Beach based on zip code data as contained in ***Appendix C*** (refer to *Appendix C Figures C-1* and *C-2* which show the spatial distribution of employees by zip code for the 330 S. Sepulveda Boulevard building and for all those located in Manhattan Beach, respectively);
- Shifts in existing trips due to the reassignment of Skechers' off-site employee parking to the proposed 305 S. Sepulveda Boulevard Manhattan Beach project site with the construction of the Hermosa Beach sites (i.e., based on actual driveway counts conducted at the off-site parking location driveways and reassignment of those trips to the surplus parking at this building);
- Ingress/egress availability at the proposed Hermosa Beach and Manhattan Beach project sites; and
- The modification of the raised median island on Pacific Coast Highway at Keats Street for a left-turn pocket to allow northbound left-turns into the project site and southbound U-turn movements at the Pacific Coast Highway/Tennyson Street intersection.

The forecast weekday AM and PM peak hour traffic volumes associated with the combined projects are presented in ***Figures 7-6*** and ***7-7***, respectively. The traffic volume assignments presented in *Figures 7-6* and *7-7* reflect the traffic distribution characteristics shown in *Figures 7-1* through *7-5* and the project traffic generation forecasts presented in *Table 7-1*.

The forecast weekday AM and PM peak hour traffic volumes associated with the Hermosa Beach project are presented in ***Appendix D*** (refer to *Appendix Figures D1-A* and *D1-B*), respectively. The traffic volume assignments presented in these figures reflect the traffic distribution characteristics shown in *Figure 7-1* and the project traffic generation forecasts presented in *Table 7-1*.



NOT TO SCALE

PROJECT SITE

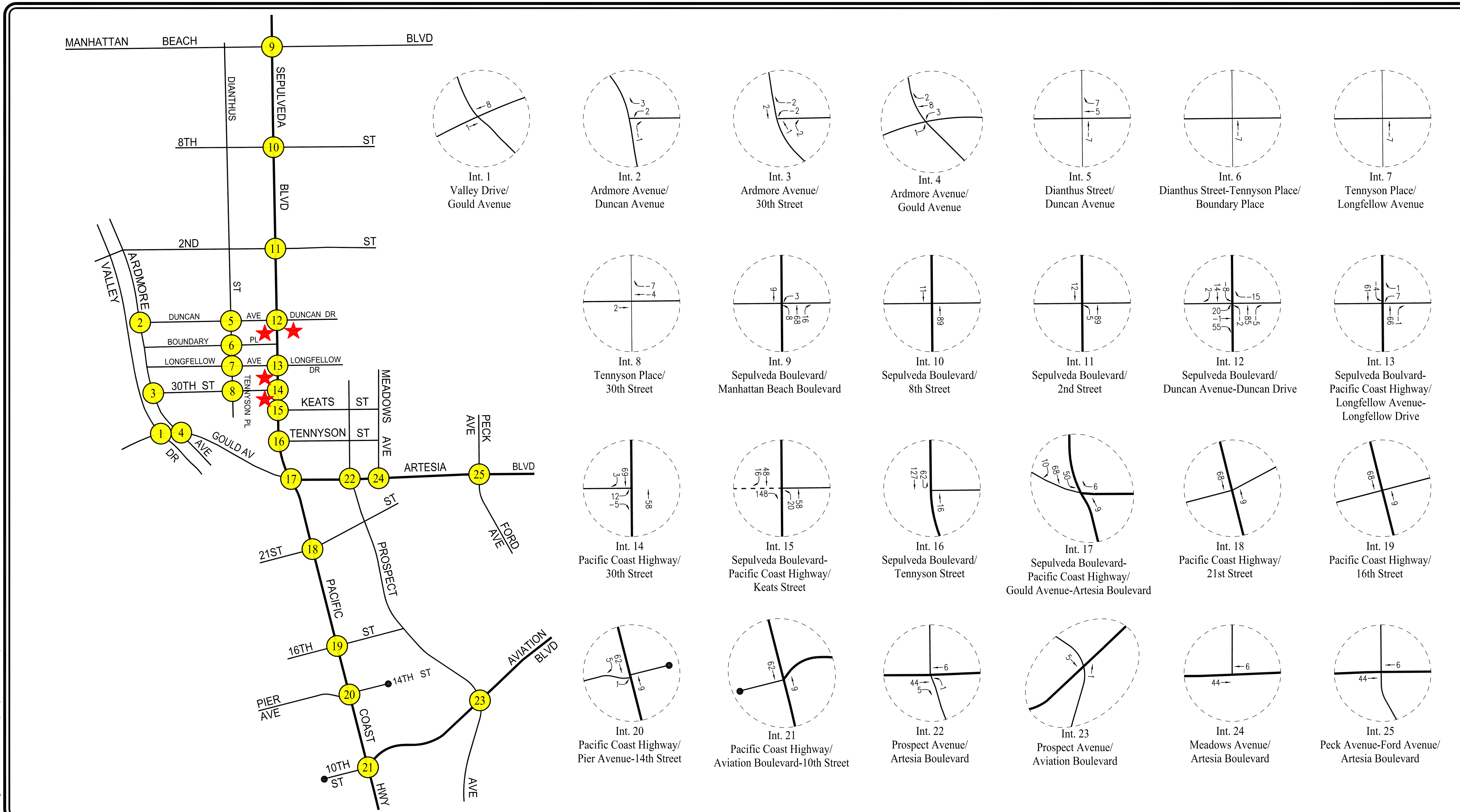
LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 7-6

COMBINED PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



NOT TO SCALE

PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 7-7
COMBINED PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f7-7.dwg LDP 08:16:20 05/22/2016 rodriquez

The forecast weekday AM and PM peak hour traffic volumes associated with the Manhattan Beach projects are presented in *Appendix D* (refer to *Appendix Figures D2-A* and *D2-B*), respectively. The traffic volume assignments presented in these figures reflect the traffic distribution characteristics shown in *Figure 7-2* through *7-5* and the project traffic generation forecasts presented in *Table 7-1*.

8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

8.1 City of Hermosa Beach Traffic Impact Analysis Methodology

8.1.1 *Intersection Capacity Utilization Methods of Analysis*

The relative impact of the added project traffic volumes generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of future operating conditions at the key study intersections in the site vicinity, without, then with, the proposed project. In conformance with the City of Hermosa Beach and Los Angeles County Congestion Management Program requirements, existing weekday AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU methodology is intended for signalized intersection analyses and estimates the volume-to-capacity (*v/c*) relationship for an intersection based on the individual *v/c* ratios for key conflicting traffic movements.

The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in ***Table 8-1***. A description of the ICU method and corresponding Level of Service is provided in ***Appendix E***.

TABLE 8-1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

Pursuant to Los Angeles County Congestion Management Program requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and a dual left-turn capacity of 2,880 vph. Additionally, a clearance adjustment factor of 0.10 was added to each LOS calculation.

The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. According to City of Hermosa Beach criteria, LOS D (V/C ratio = 0.801 to 0.900) is the minimum acceptable condition that should be maintained during the morning and evening peak commute hours.

The *Highway Capacity Manual 2010* (HCM2010) methodology outlined in Chapter 19 for unsignalized/two-way stop-controlled (TWSC) study intersections was utilized for the analysis of the unsignalized intersections. The TWSC methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns and determines the LOS for each constrained movement. It should be noted that LOS is not defined for the overall TWSC intersection because major-street movements with no delays typically result in a weighted average delay that is extremely low. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The average control delay is measured in seconds per vehicle, and includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue, stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. A description of the HCM method and corresponding Level of Service also is provided in *Appendix E*. The six qualitative categories of Level of Service have been defined along with the corresponding HCM2010 control delay value range, as shown in ***Table 8-2***.

TABLE 8-2

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

8.1.2 *Impact Criteria and Thresholds*

The significance of the potential project impacts at each key intersection was then evaluated using the traffic impact criteria employed in previous analyses for projects in the City of Hermosa Beach. It is noted that all of the study intersections, including those located within the City of Manhattan Beach, were evaluated based on City of Hermosa Beach threshold criteria. Those intersections located within the City of Manhattan Beach jurisdiction, or shared with the City of Hermosa Beach, also were evaluated based on City of Manhattan Beach threshold criteria. A significant transportation impact for signalized intersections is determined based on the sliding scale criteria presented in ***Table 8-3***.

TABLE 8-3

CITY OF HERMOSA BEACH SIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA

ICU	Level of Service	Project Related Increase in ICU
0.000-0.800	LOS A, B or C	degrades to LOS D, E, or F
> 0.801-0.900	LOS D	equal to or greater than 0.02 or degrades to LOS E or F
> 0.901 or greater	LOS E or F	equal to or greater than 0.05 or degrades from LOS E to F

As indicated in *Table 8-3*, the project-related increase in ICU value for the signalized intersections that defines a significant impact varies with LOS. A significant transportation impact for unsignalized intersections is determined based on the sliding scale criteria presented in ***Table 8-4***. It is important to note that for oversaturated conditions (LOS F) at unsignalized intersections, a significant traffic impact is triggered when the change in traffic volumes due to a proposed project results in an increase of 10 percent (10%) or more in total intersection traffic volumes.

TABLE 8-4
CITY OF HERMOSA BEACH UNSIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA

LOS	Final LOS
LOS A, B or C	Change to LOS D, E, or F
LOS D, E, or F	Increase in traffic volumes of 10% or more

8.1.3 *Traffic Impact Analysis Scenarios*

Pursuant to City of Hermosa Beach and Los Angeles County Congestion Management Program requirements, Level of Service calculations have been prepared for the following scenarios for the study intersections:

(a) Existing (year 2016) conditions.

(b) Condition (a) with completion and occupancy of the project.

(c) Condition (b) with implementation of project mitigation measures where necessary.

(d) Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2020 and with completion and occupancy of the related projects (i.e., future year 2020 without project conditions)

(e) Condition (d) with completion and occupancy of the project (i.e., future year 2020 with project conditions).

(f) Condition (e) with implementation of project mitigation measures where necessary.

8.1.4 *Street Segment Impact Criteria and Thresholds*

Based on direction from City of Hermosa Beach staff, Level of Service impact analyses were prepared for study street segment locations in the project study area. The City of Hermosa Beach study street segment locations identified for analysis are listed in *Table 4-1* and noted in *Figure 1-1*. Automatic 24-hour machine traffic counts were conducted at the study locations during a mid-week day (i.e., Tuesday, Wednesday, or Thursday). The average weekday AM and PM peak hour volumes were then calculated based on the automatic 24-hour machine traffic counts. Copies of the 24-hour machine counts are contained in *Appendix B.*

As the City of Hermosa Beach does not have adopted street segment analysis threshold criteria, the significance of the potential impacts of project generated traffic at the study street segments was identified using the two-lane roadway criteria set forth in the *County of Los Angeles Traffic Impact Analysis Report Guidelines* document. According to the County's published traffic impact study guidelines, a transportation impact on a roadway shall be deemed significant based on a percentage increase in passenger cars per hour (PCPH) by the project as shown in ***Table 8-5***.

TABLE 8-5

ROADWAY SEGMENT IMPACT THRESHOLD CRITERIA

Two-lane Roadways				
		Percentage Increases in Passenger Cars Per Hour (PCPH) by Project		
		Pre-Project LOS		
Directional Split	**Total Capacity (PCPH)**	**C**	**D**	**E/F**
50/50	2,800	4	2	1
60/40	2,650	4	2	1
70/30	2,500	4	2	1
80/20	2,300	4	2	1
90/10	2,100	4	2	1
100/0	2,000	4	2	1

Total capacity (PCPH) is based on existing roadway directional split pursuant to the County's traffic study guidelines. However, please note that the PCPH capacity used in this analysis is one-half (i.e., 50%) of the County's capacities shown above in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways and on-street parking regulations) in order to provide a conservative analysis.

8.2 City of Manhattan Beach Traffic Impact Analysis Methodology

8.2.1 *Intersection Capacity Utilization Methods of Analysis*

As noted previously, all of the study intersections, including those located within the City of Manhattan Beach, were evaluated based on City of Hermosa Beach threshold criteria. Those intersections located within the City of Manhattan Beach jurisdiction, or shared with the City of Hermosa Beach, also were evaluated based on City of Manhattan Beach threshold criteria.

The study intersections were evaluated using the ICU method of analysis which determines Volume-to-Capacity ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the ICU method and corresponding Level of Service is provided in *Appendix E*.

The weekday AM and PM peak hour operating conditions for the study intersections were evaluated using the ICU methodology for signalized intersections and the methodology outlined in Chapter 19 of the HCM2010 for stop-controlled intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each constrained movement. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall average control delay is measured in seconds per vehicle. A description of the HCM method and corresponding Level of Service also is provided in *Appendix E*.

8.2.2 *Impact Criteria and Thresholds*

The relative impact of the added project traffic volumes generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of future operating conditions at the study intersections, without, then with, the proposed project. The significance of the potential project impacts at each key intersection was then evaluated using the traffic impact criteria employed in previous analyses for projects in the City of Manhattan Beach. Pursuant to City of Manhattan Beach policy, the significance of the potential impacts of project generated traffic at each study intersection was identified using criteria consistent with the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, July 2010. A significant transportation impact is determined based on a change in the calculated v/c ratio of two percent (0.02) or more due to project-related traffic for an intersection operating at LOS F or worse (v/c > 1.00). It is important to note that for unsignalized intersections, the two percent increase has been assumed to correspond to an increase in delay of one (1) second per vehicle or more at LOS F conditions.

8.2.3 *Traffic Impact Analysis Scenarios*

Pursuant to City of Manhattan Beach and Los Angeles County Congestion Management Program requirements, Levels of Service calculations have been prepared for the following scenarios for the study intersections:

- (a) Existing (year 2016) conditions.
- (b) Condition (a) with completion and occupancy of the project.
- (c) Condition (b) with implementation of project mitigation measures where necessary.
- (d) Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2020 and with completion and occupancy of the related projects (i.e., future year 2020 without project conditions)
- (e) Condition (d) with completion and occupancy of the project (i.e., future year 2020 with project conditions).
- (f) Condition (e) with implementation of project mitigation measures where necessary.

8.2.4 *Street Segment Impact Criteria and Thresholds*

Based on direction from the City of Manhattan Beach Traffic Engineer, Level of Service impact analyses were prepared for study street segment locations in the project study area. The City of Manhattan Beach study street segment locations identified for analysis are listed in *Table 4-1* and noted in *Figure 1-1*. Automatic 24-hour machine traffic counts were conducted at the study locations during a mid-week day (i.e., Tuesday, Wednesday, or Thursday). The average weekday AM and PM peak hour volumes were then calculated based on the automatic 24-hour machine traffic counts. Copies of the 24-hour machine counts are contained in *Appendix B*.

As the City of Manhattan Beach also does not have adopted street segment analysis threshold criteria, the significance of the potential impacts of project generated traffic at the study street segments was identified using the two-lane roadway criteria set forth in the *County of Los Angeles Traffic Impact Analysis Report Guidelines* document (i.e., the same methodology utilized for analysis of the City of Hermosa Beach street segments). According to the County's published traffic impact study guidelines, a transportation impact on a roadway shall be deemed significant based on a percentage increase in PCPH by the project as shown in *Table 8-5*.

Total capacity (PCPH) is based on existing roadway directional split pursuant to the County's traffic study guidelines. However, please note that the PCPH capacity used in this analysis is one-half (i.e., 50%) of the County's capacities shown in *Table 8-5* in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways and on-street parking regulations) in order to provide a conservative analysis.

9.0 CITY OF HERMOSA BEACH TRAFFIC ANALYSIS

The traffic impact analysis prepared for the study intersections for the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) using the ICU and HCM methodologies with application of the City of Hermosa Beach significant traffic impact criteria is summarized in ***Table 9-1***. The traffic impact analysis prepared for the study intersections for the Hermosa Beach project only using the ICU and HCM methodologies with application of the City of Hermosa Beach significant traffic impact criteria is summarized in ***Table 9-2***. The traffic impact analysis prepared for the study intersections for the Manhattan Beach projects only using the ICU and HCM methodologies with application of the City of Hermosa Beach significant traffic impact criteria is summarized in ***Table 9-3***. A supplemental analysis for each Manhattan Beach building only was also prepared and is contained in Subsections 9.1.5, 9.1.6, 9.2.5, and 9.2.6 below. The ICU and HCM data worksheets for the analyzed intersections are contained in *Appendix E*.

9.1 Existing Traffic Conditions

9.1.1 *Existing Conditions*

As indicated in column [1] of *Table 9-1*, 17 of the 25 study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The remaining study intersections are presently operating at LOS E or F during the weekday AM and/or PM peak hours under existing conditions as shown below:

• Int. No. 4: Ardmore Avenue/Gould Avenue	AM Peak Hour: *Delay* = 39.5, LOS E
	PM Peak Hour: *Delay* = 39.6, LOS E
• Int. No. 9: Sepulveda Blvd./Manhattan Bch. Blvd.	AM Peak Hour: *v/c* = 1.040, LOS F
	PM Peak Hour: *v/c* = 1.053, LOS F
• Int. No. 12: Sepulveda Blvd./Duncan Ave.-Dr.	AM Peak Hour: *Delay* = >50.0, LOS F
	PM Peak Hour: *Delay* = >50.0, LOS F
• Int. No. 14: PCH/30th Street	PM Peak Hour: *Delay* = >50.0, LOS F
• Int. No. 15: PCH/Keats Street	AM Peak Hour: *Delay* = >50.0, LOS F
• Int. No. 16: PCH/Tennyson Street	AM Peak Hour: *Delay* = >50.0, LOS F
• Int. No. 17: PCH/Gould Ave.-Artesia Blvd.	AM Peak Hour: *v/c* = 1.006, LOS F
• Int. No. 21: PCH/Aviation Blvd.-10th Street	AM Peak Hour: *v/c* = 0.912, LOS E

Table 9-1
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
COMBINED PROJECT

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROPOSED PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
1	Valley Drive/	AM	18.4	C	18.7	C	0.3	No	25.3	D	26.1	D	0.8	No
	Gould Avenue [a]	PM	26.1	D	27.3	D	1.2	No	45.7	E	46.8	E	1.1	No
		AM	1,158 veh.		1,167 veh.		0.8%		1,269 veh.		1,278 veh.		0.7%	
		PM	1,315 veh.		1,324 veh.		0.7%		1,499 veh.		1,508 veh.		0.6%	
2	Ardmore Avenue/	AM	11.6	B	11.7	B	0.1	No	12.6	B	12.6	B	0.0	No
	Duncan Avenue [a]	PM	10.1	B	10.1	B	0.0	No	10.6	B	10.6	B	0.0	No
		AM	646 veh.		653 veh.		1.1%		682 veh.		689 veh.		1.0%	
		PM	662 veh.		666 veh.		0.6%		710 veh.		714 veh.		0.6%	
3	Ardmore Avenue/	AM	10.8	B	10.9	B	0.1	No	11.3	B	11.5	B	0.2	No
	30th Street [a]	PM	10.1	B	10.2	B	0.1	No	10.6	B	10.6	B	0.0	No
		AM	612 veh.		621 veh.		1.5%		648 veh.		657 veh.		1.4%	
		PM	655 veh.		656 veh.		0.2%		702 veh.		703 veh.		0.1%	
4	Ardmore Avenue/	AM	39.5	E	42.3	E	2.8	No	47.2	E	48.2	E	1.0	No
	Gould Ave [a]	PM	39.6	E	39.7	E	0.1	No	45.7	E	45.8	E	0.1	No
		AM	1,412 veh.		1,424 veh.		0.8%		1,543 veh.		1,555 veh.		0.8%	
		PM	1,470 veh.		1,484 veh.		1.0%		1,677 veh.		1,691 veh.		0.8%	
5	Dianthus Street/	AM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
	Duncan Avenue [a]	PM	7.6	A	7.6	A	0.0	No	7.6	A	7.6	A	0.0	No
		AM	161 veh.		168 veh.		4.3%		165 veh.		172 veh.		4.2%	
		PM	236 veh.		241 veh.		2.1%		243 veh.		248 veh.		2.1%	
6	Dianthus Street-Tennyson Place/	AM	7.0	A	7.0	A	0.0	No	7.0	A	7.0	A	0.0	No
	Boundary Place [a]	PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
		AM	82 veh.		82 veh.		0.0%		85 veh.		85 veh.		0.0%	
		PM	104 veh.		97 veh.		-6.7%		107 veh.		100 veh.		-6.5%	
7	Tennyson Place/	AM	7.2	A	7.2	A	0.0	No	7.2	A	7.2	A	0.0	No
	Longfellow Avenue [a]	PM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
		AM	125 veh.		127 veh.		1.6%		129 veh.		131 veh.		1.6%	
		PM	142 veh.		135 veh.		-4.9%		148 veh.		141 veh.		-4.7%	
8	Tennyson Place/	AM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
	30th Street [a]	PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
		AM	98 veh.		102 veh.		4.1%		101 veh.		105 veh.		4.0%	
		PM	104 veh.		95 veh.		-8.7%		107 veh.		98 veh.		-8.4%	
9	Sepulveda Boulevard/	AM	1.040	F	1.041	F	0.001	No	1.119	F	1.121	F	0.002	No
	Manhattan Beach Boulevard	PM	1.053	F	1.061	F	0.008	No	1.161	F	1.170	F	0.009	No
10	Sepulveda Boulevard/	AM	0.821	D	0.823	D	0.002	No	0.895	D	0.897	D	0.002	No
	8th Street	PM	0.700	B	0.702	C	0.002	No	0.814	D	0.816	D	0.002	No
11	Sepulveda Boulevard/	AM	0.868	D	0.870	D	0.002	No	0.942	E	0.945	E	0.003	No
	2nd Street	PM	0.712	C	0.718	C	0.006	No	0.786	C	0.792	C	0.006	No
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	[e]	No
	Duncan Avenue-Duncan Drive [b]	PM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
		AM	4,138 veh.		4,295 veh.		3.8%		4,582 veh.		4,739 veh.		3.4%	
		PM	3,821 veh.		3,966 veh.		3.8%		4,411 veh.		4,556 veh.		3.3%	
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.836	D	0.022	Yes	0.875	D	0.897	D	0.022	Yes
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.685	B	0.017	No	0.743	C	0.760	C	0.017	No
14	Pacific Coast Highway/	AM	19.1	C	23.5	C	4.4	No	23.4	C	31.4	D	8.0	Yes
	30th Street [b]	PM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
		AM	4,116 veh.		4,249 veh.		3.2%		4,561 veh.		4,694 veh.		2.9%	
		PM	3,908 veh.		4,045 veh.		3.5%		4,501 veh.		4,638 veh.		3.0%	

Table 9-1 (Continued)
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
COMBINED PROJECT

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROPOSED PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
15	Sepulveda Boulevard-Pacific Coast Highway/	AM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
	Keats Street [b]	PM	19.7	C	>50.0	F	[e]	Yes	24.7	C	>50.0	F	[e]	Yes
		AM	4,108 veh.		4,345 veh.		5.8%		4,552 veh.		4,789 veh.		5.2%	
		PM	3,944 veh.		4,234 veh.		7.4%		4,539 veh.		4,829 veh.		6.4%	
16	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
	Tennyson Street [b]	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
		AM	3,976 veh.		4,132 veh.		3.9%		4,419 veh.		4,575 veh.		3.5%	
		PM	3,876 veh.		4,081 veh.		5.3%		4,485 veh.		4,690 veh.		4.6%	
17	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.006	F	1.057	F	0.051	Yes	1.098	F	1.149	F	0.051	Yes
	Gould Avenue-Artesia Boulevard	PM	0.769	C	0.785	C	0.016	No	0.887	D	0.904	E	0.017	Yes
18	Pacific Coast Highway/	AM	0.813	D	0.829	D	0.016	No	0.880	D	0.896	D	0.016	No
	21st Street	PM	0.662	B	0.676	B	0.014	No	0.755	C	0.769	C	0.014	No
19	Pacific Coast Highway/	AM	0.676	B	0.692	B	0.016	No	0.730	C	0.746	C	0.016	No
	16th Street	PM	0.672	B	0.686	B	0.014	No	0.751	C	0.766	C	0.014	No
20	Pacific Coast Highway/	AM	0.658	B	0.675	B	0.017	No	0.713	C	0.729	C	0.016	No
	Pier Avenue-14th Street	PM	0.707	C	0.722	C	0.015	No	0.802	D	0.816	D	0.014	No
21	Pacific Coast Highway/	AM	0.912	E	0.927	E	0.015	No	0.984	E	0.999	E	0.015	No
	Aviation Boulevard-10th Street	PM	0.834	D	0.834	D	0.000	No	0.904	E	0.904	E	0.000	No
22	Prospect Avenue/	AM	0.699	B	0.718	C	0.019	No	0.773	C	0.793	C	0.020	No
	Artesia Boulevard	PM	0.743	C	0.759	C	0.016	No	0.868	D	0.884	D	0.016	No
23	Prospect Avenue/	AM	0.695	B	0.695	B	0.000	No	0.726	C	0.726	C	0.000	No
	Aviation Boulevard	PM	0.758	C	0.761	C	0.003	No	0.801	D	0.804	D	0.003	No
24	Meadows Avenue/	AM	0.690	B	0.706	C	0.016	No	0.759	C	0.775	C	0.016	No
	Artesia Boulevard	PM	0.620	B	0.634	B	0.014	No	0.719	C	0.733	C	0.014	No
25	Peck Avenue-Ford Avenue/	AM	0.813	D	0.829	D	0.016	No	0.903	E	0.919	E	0.016	No
	Artesia Boulevard	PM	0.600	A	0.614	B	0.014	No	0.726	C	0.740	C	0.014	No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

Table 9-2
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
HERMOSA BEACH PROJECT ONLY

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROPOSED PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
1	Valley Drive/	AM	18.4	C	18.6	C	0.2	No	25.3	D	25.8	D	0.5	No
	Gould Avenue [a]	PM	26.1	D	27.1	D	1.0	No	45.7	E	46.4	E	0.7	No
		AM	1,158 veh.		1,164 veh.		0.5%		1,269 veh.		1,275 veh.		0.5%	
		PM	1,315 veh.		1,321 veh.		0.5%		1,499 veh.		1,505 veh.		0.4%	
2	Ardmore Avenue/	AM	11.6	B	11.7	B	0.1	No	12.6	B	12.6	B	0.0	No
	Duncan Avenue [a]	PM	10.1	B	10.1	B	0.0	No	10.6	B	10.6	B	0.0	No
		AM	646 veh.		648 veh.		0.3%		682 veh.		684 veh.		0.3%	
		PM	662 veh.		664 veh.		0.3%		710 veh.		712 veh.		0.3%	
3	Ardmore Avenue/	AM	10.8	B	10.9	B	0.1	No	11.3	B	11.4	B	0.1	No
	30th Street [a]	PM	10.1	B	10.2	B	0.1	No	10.6	B	10.7	B	0.1	No
		AM	612 veh.		621 veh.		1.5%		648 veh.		657 veh.		1.4%	
		PM	655 veh.		659 veh.		0.6%		702 veh.		706 veh.		0.6%	
4	Ardmore Avenue/	AM	39.5	E	41.3	E	1.8	No	47.2	E	47.8	E	0.6	No
	Gould Ave [a]	PM	39.6	E	39.6	E	0.0	No	45.7	E	45.8	E	0.1	No
		AM	1,412 veh.		1,420 veh.		0.6%		1,543 veh.		1,551 veh.		0.5%	
		PM	1,470 veh.		1,480 veh.		0.7%		1,677 veh.		1,687 veh.		0.6%	
5	Dianthus Street/	AM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
	Duncan Avenue [a]	PM	7.6	A	7.6	A	0.0	No	7.6	A	7.6	A	0.0	No
		AM	161 veh.		161 veh.		0.0%		165 veh.		165 veh.		0.0%	
		PM	236 veh.		236 veh.		0.0%		243 veh.		243 veh.		0.0%	
6	Dianthus Street-Tennyson Place/	AM	7.0	A	7.0	A	0.0	No	7.0	A	7.0	A	0.0	No
	Boundary Place [a]	PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
		AM	82 veh.		82 veh.		0.0%		85 veh.		85 veh.		0.0%	
		PM	104 veh.		97 veh.		-6.7%		107 veh.		100 veh.		-6.5%	
7	Tennyson Place/	AM	7.2	A	7.2	A	0.0	No	7.2	A	7.2	A	0.0	No
	Longfellow Avenue [a]	PM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
		AM	125 veh.		125 veh.		0.0%		129 veh.		129 veh.		0.0%	
		PM	142 veh.		142 veh.		0.0%		148 veh.		148 veh.		0.0%	
8	Tennyson Place/	AM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
	30th Street [a]	PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
		AM	98 veh.		107 veh.		9.2%		101 veh.		110 veh.		8.9%	
		PM	104 veh.		106 veh.		1.9%		107 veh.		109 veh.		1.9%	
9	Sepulveda Boulevard/	AM	1.040	F	1.042	F	0.002	No	1.119	F	1.121	F	0.002	No
	Manhattan Beach Boulevard	PM	1.053	F	1.060	F	0.007	No	1.161	F	1.168	F	0.007	No
10	Sepulveda Boulevard/	AM	0.821	D	0.823	D	0.002	No	0.895	D	0.897	D	0.002	No
	8th Street	PM	0.700	B	0.703	C	0.003	No	0.814	D	0.817	D	0.003	No
11	Sepulveda Boulevard/	AM	0.868	D	0.870	D	0.002	No	0.942	E	0.944	E	0.002	No
	2nd Street	PM	0.712	C	0.717	C	0.005	No	0.786	C	0.791	C	0.005	No
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	Duncan Avenue-Duncan Drive [b]	PM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	0.0	No
		AM	4,138 veh.		4,225 veh.		2.1%		4,582 veh.		4,669 veh.		1.9%	
		PM	3,821 veh.		3,909 veh.		2.3%		4,411 veh.		4,499 veh.		2.0%	
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.816	D	0.002	No	0.875	D	0.878	D	0.003	No
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.671	B	0.003	No	0.743	C	0.746	C	0.003	No
14	Pacific Coast Highway/	AM	19.1	C	24.6	C	5.5	No	23.4	C	33.9	D	10.5	Yes
	30th Street [b]	PM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
		AM	4,116 veh.		4,230 veh.		2.8%		4,561 veh.		4,675 veh.		2.5%	
		PM	3,908 veh.		4,013 veh.		2.7%		4,501 veh.		4,606 veh.		2.3%	

Table 9-2 (Continued)
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
HERMOSA BEACH PROJECT ONLY

			[1]		[2]				[3]		[4]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2016 EXISTING V/C or DELAY or VOLUME	LOS [c]	YEAR 2016 EXISTING W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY or VOLUME	LOS [c]	YEAR 2020 FUTURE W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street [b]	AM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	0.0	No
		PM	19.7	C	>50.0	F	[e]	Yes	24.7	C	>50.0	F	[e]	Yes
		AM	4,108 veh.		4,311 veh.		4.9%		4,552 veh.		4,755 veh.		4.5%	
		PM	3,944 veh.		4,202 veh.		6.5%		4,539 veh.		4,797 veh.		5.7%	
16	Sepulveda Boulevard/ Tennyson Street [b]	AM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
		PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
		AM	3,976 veh.		4,095 veh.		3.0%		4,419 veh.		4,538 veh.		2.7%	
		PM	3,876 veh.		4,056 veh.		4.6%		4,485 veh.		4,665 veh.		4.0%	
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	AM	1.006	F	1.043	F	0.037	No	1.098	F	1.135	F	0.037	No
		PM	0.769	C	0.782	C	0.013	No	0.887	D	0.900	D	0.013	No
18	Pacific Coast Highway/ 21st Street	AM	0.813	D	0.824	D	0.011	No	0.880	D	0.891	D	0.011	No
		PM	0.662	B	0.673	B	0.011	No	0.755	C	0.766	C	0.011	No
19	Pacific Coast Highway/ 16th Street	AM	0.676	B	0.688	B	0.011	No	0.730	C	0.741	C	0.011	No
		PM	0.672	B	0.683	B	0.011	No	0.751	C	0.762	C	0.011	No
20	Pacific Coast Highway/ Pier Avenue-14th Street	AM	0.658	B	0.670	B	0.012	No	0.713	C	0.725	C	0.012	No
		PM	0.707	C	0.718	C	0.011	No	0.802	D	0.813	D	0.011	No
21	Pacific Coast Highway/ Aviation Boulevard-10th Street	AM	0.912	E	0.923	E	0.011	No	0.984	E	0.995	E	0.011	No
		PM	0.834	D	0.834	D	0.000	No	0.904	E	0.904	E	0.000	No
22	Prospect Avenue/ Artesia Boulevard	AM	0.699	B	0.713	C	0.014	No	0.773	C	0.787	C	0.014	No
		PM	0.743	C	0.755	C	0.012	No	0.868	D	0.880	D	0.012	No
23	Prospect Avenue/ Aviation Boulevard	AM	0.695	B	0.695	B	0.000	No	0.726	C	0.726	C	0.000	No
		PM	0.758	C	0.760	C	0.002	No	0.801	D	0.803	D	0.002	No
24	Meadows Avenue/ Artesia Boulevard	AM	0.690	B	0.702	C	0.012	No	0.759	C	0.771	C	0.012	No
		PM	0.620	B	0.631	B	0.011	No	0.719	C	0.730	C	0.011	No
25	Peck Avenue-Ford Avenue/ Artesia Boulevard	AM	0.813	D	0.824	D	0.011	No	0.903	E	0.914	E	0.011	No
		PM	0.600	A	0.611	B	0.011	No	0.726	C	0.737	C	0.011	No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

Table 9-3
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
MANHATTAN BEACH PROJECTS ONLY

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROPOSED PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
1	Valley Drive/ Gould Avenue [a]	AM	18.4	C	18.5	C	0.1	No	25.3	D	25.5	D	0.2	No
		PM	26.1	D	26.9	D	0.8	No	45.7	E	46.1	E	0.4	No
		AM	1,158 veh.		1,161 veh.		0.3%		1,269 veh.		1,272 veh.		0.2%	
		PM	1,315 veh.		1,318 veh.		0.2%		1,499 veh.		1,502 veh.		0.2%	
2	Ardmore Avenue/ Duncan Avenue [a]	AM	11.6	B	11.7	B	0.1	No	12.6	B	12.7	B	0.1	No
		PM	10.1	B	10.1	B	0.0	No	10.6	B	10.6	B	0.0	No
		AM	646 veh.		651 veh.		0.8%		682 veh.		687 veh.		0.7%	
		PM	662 veh.		664 veh.		0.3%		710 veh.		712 veh.		0.3%	
3	Ardmore Avenue/ 30th Street [a]	AM	10.8	B	10.8	B	0.0	No	11.3	B	11.4	B	0.1	No
		PM	10.1	B	10.1	B	0.0	No	10.6	B	10.6	B	0.0	No
		AM	612 veh.		612 veh.		0.0%		648 veh.		648 veh.		0.0%	
		PM	655 veh.		652 veh.		-0.5%		702 veh.		699 veh.		-0.4%	
4	Ardmore Avenue/ Gould Ave [a]	AM	39.5	E	40.5	E	1.0	No	47.2	E	47.5	E	0.3	No
		PM	39.6	E	39.6	E	0.0	No	45.7	E	45.7	E	0.0	No
		AM	1,412 veh.		1,416 veh.		0.3%		1,543 veh.		1,547 veh.		0.3%	
		PM	1,470 veh.		1,474 veh.		0.3%		1,677 veh.		1,681 veh.		0.2%	
5	Dianthus Street/ Duncan Avenue [a]	AM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
		PM	7.6	A	7.6	A	0.0	No	7.6	A	7.6	A	0.0	No
		AM	161 veh.		168 veh.		4.3%		165 veh.		172 veh.		4.2%	
		PM	236 veh.		241 veh.		2.1%		243 veh.		248 veh.		2.1%	
6	Dianthus Street-Tennyson Place/ Boundary Place [a]	AM	7.0	A	7.0	A	0.0	No	7.0	A	7.0	A	0.0	No
		PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
		AM	82 veh.		82 veh.		0.0%		85 veh.		85 veh.		0.0%	
		PM	104 veh.		97 veh.		-6.7%		107 veh.		100 veh.		-6.5%	
7	Tennyson Place/ Longfellow Avenue [a]	AM	7.2	A	7.2	A	0.0	No	7.2	A	7.2	A	0.0	No
		PM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
		AM	125 veh.		127 veh.		1.6%		129 veh.		131 veh.		1.6%	
		PM	142 veh.		135 veh.		-4.9%		148 veh.		141 veh.		-4.7%	
8	Tennyson Place/ 30th Street [a]	AM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
		PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
		AM	98 veh.		93 veh.		-5.1%		101 veh.		96 veh.		-5.0%	
		PM	104 veh.		93 veh.		-10.6%		107 veh.		96 veh.		-10.3%	
9	Sepulveda Boulevard/ Manhattan Beach Boulevard	AM	1.040	F	1.039	F	-0.001	No	1.119	F	1.119	F	0.000	No
		PM	1.053	F	1.054	F	0.001	No	1.161	F	1.163	F	0.002	No
10	Sepulveda Boulevard/ 8th Street	AM	0.821	D	0.821	D	0.000	No	0.895	D	0.895	D	0.000	No
		PM	0.700	B	0.699	B	-0.001	No	0.814	D	0.813	D	-0.001	No
11	Sepulveda Boulevard/ 2nd Street	AM	0.868	D	0.868	D	0.000	No	0.942	E	0.943	E	0.001	No
		PM	0.712	C	0.712	C	0.000	No	0.786	C	0.786	C	0.000	No
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive [b]	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
		PM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
		AM	4,138 veh.		4,208 veh.		1.7%		4,582 veh.		4,652 veh.		1.5%	
		PM	3,821 veh.		3,878 veh.		1.5%		4,411 veh.		4,468 veh.		1.3%	
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	AM	0.814	D	0.833	D	0.019	No	0.875	D	0.894	D	0.019	No
		PM	0.668	B	0.682	B	0.014	No	0.743	C	0.756	C	0.013	No
14	Pacific Coast Highway/ 30th Street [b]	AM	19.1	C	19.1	C	0.0	No	23.4	C	23.4	C	0.0	No
		PM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
		AM	4,116 veh.		4,135 veh.		0.5%		4,561 veh.		4,580 veh.		0.4%	
		PM	3,908 veh.		3,940 veh.		0.8%		4,501 veh.		4,533 veh.		0.7%	

Table 9-3 (Continued)
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
MANHATTAN BEACH PROJECTS ONLY

			[1]		[2]				[3]		[4]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2016 EXISTING V/C or DELAY or VOLUME	LOS [c]	YEAR 2016 EXISTING W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY or VOLUME	LOS [c]	YEAR 2020 FUTURE W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
15	Sepulveda Boulevard-Pacific Coast Highway/	AM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
	Keats Street [b]	PM	19.7	C	19.7	C	0.0	No	24.7	C	24.7	C	0.0	No
		AM	4,108 veh.		4,142 veh.		0.8%		4,552 veh.		4,586 veh.		0.7%	
		PM	3,944 veh.		3,976 veh.		0.8%		4,539 veh.		4,571 veh.		0.7%	
16	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	[e]	No	>50.0	F	>50.0	F	[e]	No
	Tennyson Street [b]	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
		AM	3,976 veh.		4,013 veh.		0.9%		4,419 veh.		4,456 veh.		0.8%	
		PM	3,876 veh.		3,901 veh.		0.6%		4,485 veh.		4,510 veh.		0.6%	
17	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.006	F	1.020	F	0.014	No	1.098	F	1.112	F	0.014	No
	Gould Avenue-Artesia Boulevard	PM	0.769	C	0.773	C	0.004	No	0.887	D	0.891	D	0.004	No
18	Pacific Coast Highway/	AM	0.813	D	0.817	D	0.004	No	0.880	D	0.884	D	0.004	No
	21st Street	PM	0.662	B	0.665	B	0.003	No	0.755	C	0.758	C	0.003	No
19	Pacific Coast Highway/	AM	0.676	B	0.681	B	0.004	No	0.730	C	0.734	C	0.004	No
	16th Street	PM	0.672	B	0.675	B	0.003	No	0.751	C	0.755	C	0.003	No
20	Pacific Coast Highway/	AM	0.658	B	0.663	B	0.005	No	0.713	C	0.717	C	0.004	No
	Pier Avenue-14th Street	PM	0.707	C	0.711	C	0.004	No	0.802	D	0.805	D	0.003	No
21	Pacific Coast Highway/	AM	0.912	E	0.916	E	0.004	No	0.984	E	0.989	E	0.005	No
	Aviation Boulevard-10th Street	PM	0.834	D	0.834	D	0.000	No	0.904	E	0.904	E	0.000	No
22	Prospect Avenue/	AM	0.699	B	0.705	C	0.006	No	0.773	C	0.779	C	0.006	No
	Artesia Boulevard	PM	0.743	C	0.747	C	0.004	No	0.868	D	0.872	D	0.004	No
23	Prospect Avenue/	AM	0.695	B	0.695	B	0.000	No	0.726	C	0.726	C	0.000	No
	Aviation Boulevard	PM	0.758	C	0.759	C	0.001	No	0.801	D	0.802	D	0.001	No
24	Meadows Avenue/	AM	0.690	B	0.695	B	0.005	No	0.759	C	0.764	C	0.005	No
	Artesia Boulevard	PM	0.620	B	0.623	B	0.003	No	0.719	C	0.723	C	0.004	No
25	Peck Avenue-Ford Avenue/	AM	0.813	D	0.818	D	0.005	No	0.903	E	0.908	E	0.005	No
	Artesia Boulevard	PM	0.600	A	0.603	B	0.003	No	0.726	C	0.729	C	0.003	No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5-1* and *5-2*, respectively.

9.1.2 *Existing With Combined Project Conditions*

As shown in column [2] of *Table 9-1*, application of the City of Hermosa Beach's threshold criteria to the Existing With Combined Project scenario indicates that the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) is expected to result in a significant impact at three of the study intersections. The combined project is expected to significantly impact the following locations according to the City of Hermosa Beach's impact criteria during the weekday peak hours shown below under Existing With Combined Project conditions:

- <u>Int. No. 13: Sepulveda Boulevard-Pacific Coast Highway/Longfellow Avenue-Drive</u>

  AM peak hour

- <u>Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street</u>

  PM peak hour

- <u>Int. No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard</u>

  AM peak hour

As indicated in *Table 9-1*, incremental but not significant impacts associated with the combined project are noted at the remaining study intersections according to the City of Hermosa Beach's impact criteria. The existing with combined project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 9–1*** and ***9–2***, respectively.

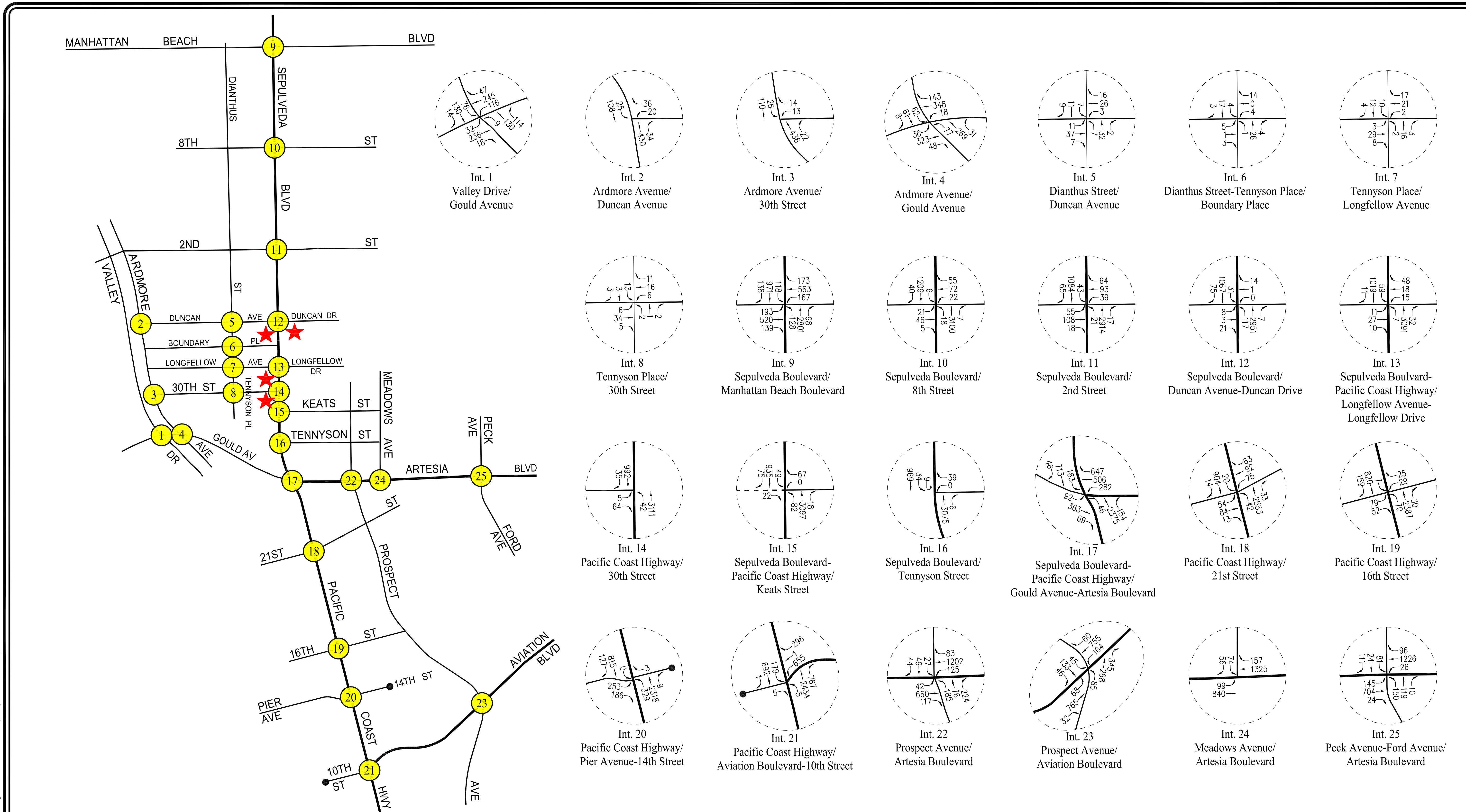
9.1.3 *Existing With Hermosa Beach Project Only Conditions*

As shown in column [2] of *Table 9-2*, application of the City of Hermosa Beach's threshold criteria to the Existing With Hermosa Beach Project Only scenario indicates that the Hermosa Beach project only is expected to result in a significant impact at one of the study intersections. The Hermosa Beach project only is expected to significantly impact the following location according to the City of Hermosa Beach's impact criteria during the weekday peak hour shown below under Existing With Hermosa Beach Project Only conditions:

- <u>Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street</u>

  PM peak hour

As indicated in *Table 9-2*, incremental but not significant impacts associated with the Hermosa Beach project only are noted at the remaining study intersections according to the City of Hermosa Beach's impact criteria.



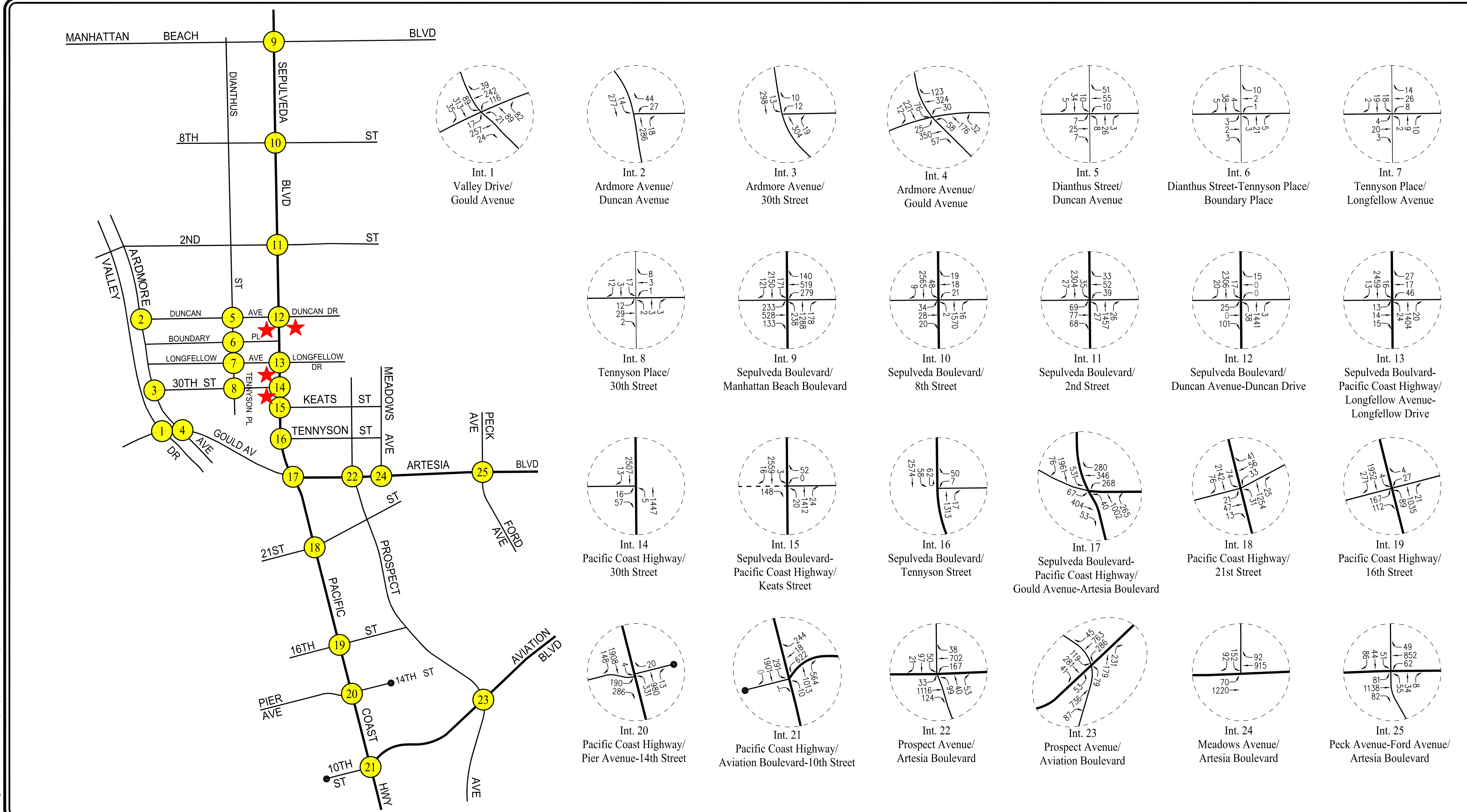
N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 9-1
EXISTING WITH COMBINED PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f9-1.dwg LDP 08:18:02 05/22/2016 rodriquez



N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 9-2
EXISTING WITH COMBINED PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f9-2.dwg LDP 08:19:31 05/22/2016 rodriquez

9.1.4 *Existing With Manhattan Beach Projects Only Conditions*

As shown in column [2] of *Table 9-3*, application of the City of Hermosa Beach's threshold criteria to the Existing With Manhattan Beach Projects Only scenario indicates that the Manhattan Beach projects only are not expected to create a significant impact at any of the study intersections.

9.1.5 *Existing With 305 S. Sepulveda Boulevard Project Only Conditions*

As shown in column [2] of ***Table 9-3-1***, application of the City of Hermosa Beach's threshold criteria to the Existing With 305 S. Sepulveda Boulevard Project Only scenario indicates that this project is not expected to create a significant impact at any of the study intersections. Please note only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to be significantly impacted by any individual Skechers project).

9.1.6 *Existing With 330 S. Sepulveda Boulevard Expansion Project Only Conditions*

As shown in column [2] of ***Table 9-3-2***, application of the City of Hermosa Beach's threshold criteria to the Existing With 330 S. Sepulveda Boulevard Expansion Project Only scenario indicates that this project is not expected to create a significant impact at any of the study intersections. Please note only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to be significantly impacted by any individual Skechers project).

9.2 Future Traffic Conditions

9.2.1 *Future Without Project Conditions*

The future without project conditions were forecast based on the addition of traffic generated by the completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios and delay at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6-1*. As presented in column [3] of *Table 9-1*, 14 of the 25 study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The remaining study intersections are expected to operate at LOS E or F during the weekday AM and/or PM peak hours in the future without project conditions as shown below:

- Int. No. 1: Valley Drive/Gould Avenue PM Peak Hour: *Delay* = 45.7, LOS E

Table 9-3-1
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
305 S. SEPULVEDA BOULEVARD PROJECT ONLY

			[1]		[2]				[3]		[4]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2016 EXISTING V/C or DELAY or VOLUME	LOS [c]	YEAR 2016 EXISTING W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY or VOLUME	LOS [c]	YEAR 2020 FUTURE W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	Duncan Avenue-Duncan Drive [a]	PM	>50.0	F	>50.0	F	[d]	No	>50.0	F	>50.0	F	[d]	No
		AM	4,138 veh.		4,200 veh.		1.5%		4,582 veh.		4,644 veh.		1.4%	
		PM	3,821 veh.		3,885 veh.		1.7%		4,411 veh.		4,475 veh.		1.5%	
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.822	D	0.008	No	0.875	D	0.883	D	0.008	No
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.677	B	0.009	No	0.743	C	0.752	C	0.009	No
14	Pacific Coast Highway/	AM	19.1	C	19.1	C	0.0	No	23.4	C	23.4	C	0.0	No
	30th Street [a]	PM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
		AM	4,116 veh.		4,122 veh.		0.1%		4,561 veh.		4,567 veh.		0.1%	
		PM	3,908 veh.		3,935 veh.		0.7%		4,501 veh.		4,528 veh.		0.6%	
15	Sepulveda Boulevard-Pacific Coast Highway/	AM	>50.0	F	>50.0	F	[d]	No	>50.0	F	>50.0	F	0.0	No
	Keats Street [a]	PM	19.7	C	19.7	C	0.0	No	24.7	C	24.7	C	0.0	No
		AM	4,108 veh.		4,129 veh.		0.5%		4,552 veh.		4,573 veh.		0.5%	
		PM	3,944 veh.		3,971 veh.		0.7%		4,539 veh.		4,566 veh.		0.6%	
16	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	[d]	No	>50.0	F	>50.0	F	[d]	No
	Tennyson Street [a]	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	[d]	No
		AM	3,976 veh.		4,000 veh.		0.6%		4,419 veh.		4,443 veh.		0.5%	
		PM	3,876 veh.		3,896 veh.		0.5%		4,485 veh.		4,505 veh.		0.4%	
17	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.006	F	1.015	F	0.009	No	1.098	F	1.107	F	0.009	No
	Gould Avenue-Artesia Boulevard	PM	0.769	C	0.771	C	0.002	No	0.887	D	0.890	D	0.003	No

[a] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[b] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[c] Refer to report text for the significant impact thresholds.
[d] Oversaturated conditions.
Note:
Please note that only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to significantly impacted by any individual Skechers project).

Table 9-3-2
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
330 S. SEPULVEDA BOULEVARD EXPANSION PROJECT ONLY

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROPOSED PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME	LOS [c]	V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	Duncan Avenue-Duncan Drive [a]	PM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
		AM	4,138 veh.		4,146 veh.		0.2%		4,582 veh.		4,590 veh.		0.2%	
		PM	3,821 veh.		3,814 veh.		-0.2%		4,411 veh.		4,404 veh.		-0.2%	
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.826	D	0.012	No	0.875	D	0.887	D	0.012	No
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.672	B	0.004	No	0.743	C	0.747	C	0.004	No
14	Pacific Coast Highway/	AM	19.1	C	19.1	C	0.0	No	23.4	C	23.4	C	0.0	No
	30th Street [a]	PM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	[d]	No
		AM	4,116 veh.		4,129 veh.		0.3%		4,561 veh.		4,574 veh.		0.3%	
		PM	3,908 veh.		3,913 veh.		0.1%		4,501 veh.		4,506 veh.		0.1%	
15	Sepulveda Boulevard-Pacific Coast Highway/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	Keats Street [a]	PM	19.7	C	19.7	C	0.0	No	24.7	C	24.7	C	0.0	No
		AM	4,108 veh.		4,118 veh.		0.2%		4,552 veh.		4,562 veh.		0.2%	
		PM	3,944 veh.		3,956 veh.		0.3%		4,539 veh.		4,551 veh.		0.3%	
16	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	[d]	No	>50.0	F	>50.0	F	[d]	No
	Tennyson Street [a]	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
		AM	3,976 veh.		3,989 veh.		0.3%		4,419 veh.		4,432 veh.		0.3%	
		PM	3,876 veh.		3,881 veh.		0.1%		4,485 veh.		4,490 veh.		0.1%	
17	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.006	F	1.012	F	0.006	No	1.098	F	1.104	F	0.006	No
	Gould Avenue-Artesia Boulevard	PM	0.769	C	0.770	C	0.001	No	0.887	D	0.888	D	0.001	No

[a] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[b] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[c] Refer to report text for the significant impact thresholds.
[d] Oversaturated conditions.
Note:
Please note that only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to significantly impacted by any individual Skechers project).

- Int. No. 4: Ardmore Avenue/Gould Avenue — AM Peak Hour: *Delay* = 47.2, LOS E
  PM Peak Hour: *Delay* = 45.7, LOS E
- Int. No. 9: Sepulveda Blvd./Manhattan Bch. Blvd. — AM Peak Hour: *v/c* = 1.119, LOS F
  PM Peak Hour: *v/c* = 1.161, LOS F
- Int. No. 11: Sepulveda Boulevard/2nd Street — AM Peak Hour: *v/c* = 0.942, LOS E
- Int. No. 12: Sepulveda Blvd./Duncan Ave.-Dr. — AM Peak Hour: *Delay* = >50.0, LOS
  PM Peak Hour: *Delay* = >50.0, LOS
- Int. No. 14: Sepulveda Blvd.-PCH/30th Street — PM Peak Hour: *Delay* = >50.0, LOS F
- Int. No. 15: Sepulveda Blvd.-PCH/Keats Street — AM Peak Hour: *Delay* = >50.0, LOS F
- Int. No. 16: Sepulveda Blvd./Tennyson Street — AM Peak Hour: *Delay* = >50.0, LOS F
  PM Peak Hour: *Delay* = >50.0, LOS F
- Int. No. 17: PCH/Gould Ave.-Artesia Blvd. — AM Peak Hour: *v/c* = 1.098, LOS F
- Int. No. 21: PCH/Aviation Boulevard-10th Street — AM Peak Hour: *v/c* = 0.984, LOS E
  PM Peak Hour: *v/c* = 0.904, LOS E
- Int. No. 25: Peck Ave.-Ford Ave./Artesia Blvd. — AM Peak Hour: *v/c* = 0.903, LOS E

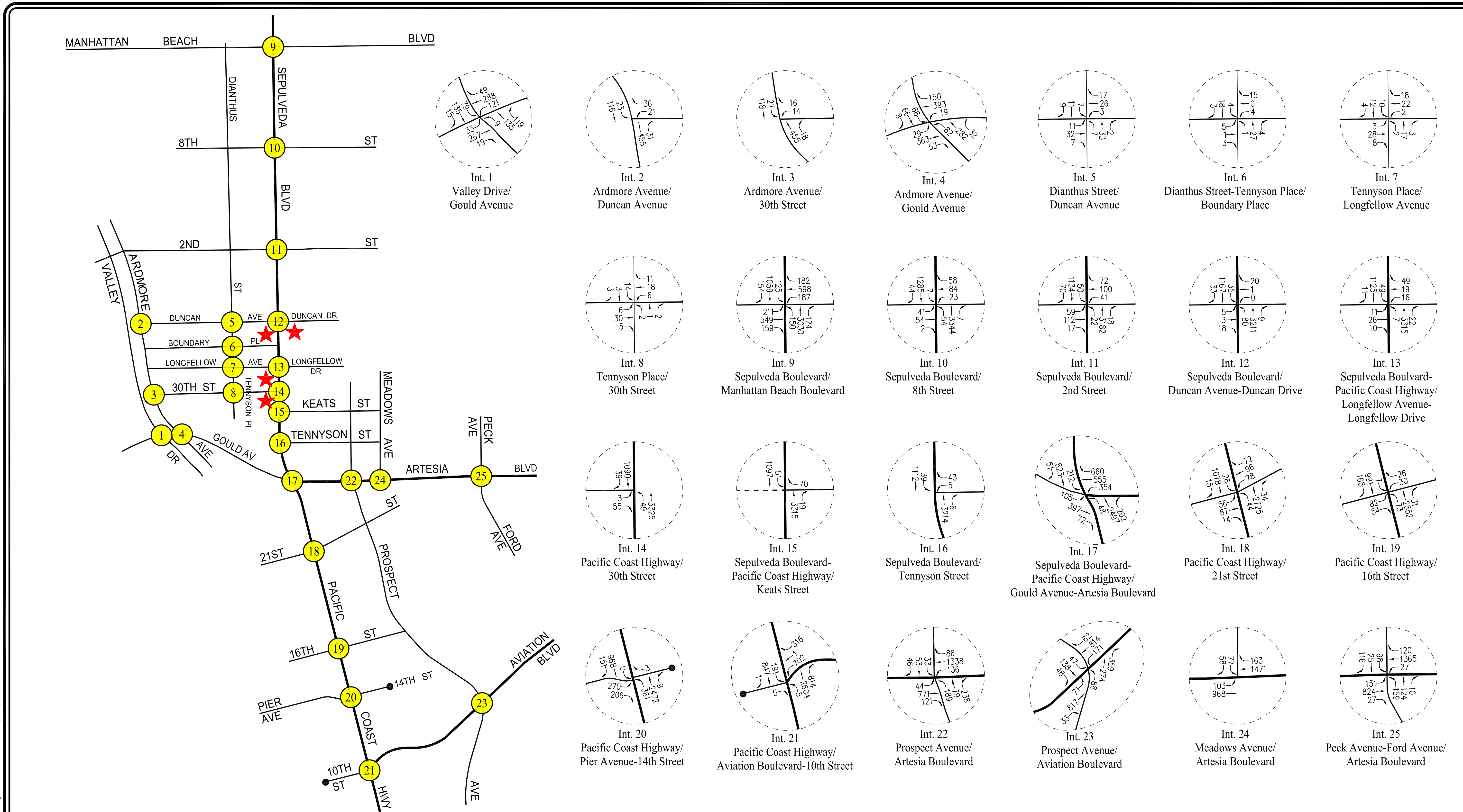
The future year 2020 without project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 9-3*** and ***9-4***, respectively.

9.2.2 *Future With Combined Project Conditions*

As shown in column [4] of *Table 9-1*, application of the City of Hermosa Beach's threshold criteria to the Future With Combined Project scenario indicates that the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) is expected to result in a significant impact at four of the study intersections. The combined project is expected to significantly impact the following locations according to the City of Hermosa Beach's impact criteria during the weekday peak hours shown below under Future With Combined Project conditions:

- <u>Int. No. 13: Sepulveda Boulevard-Pacific Coast Highway/Longfellow Avenue-Drive</u>

  AM peak hour



NOT TO SCALE

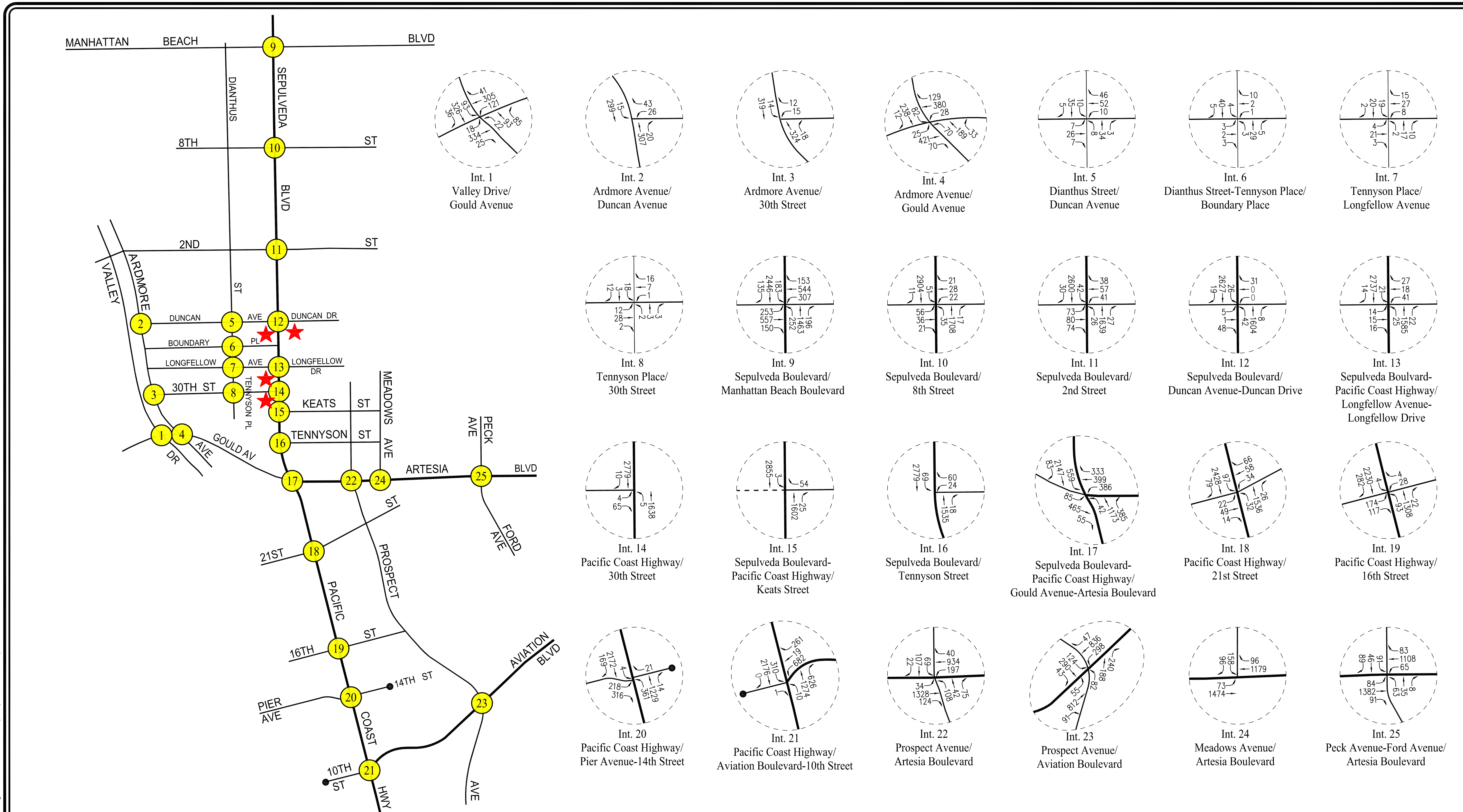
★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 9-3
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f9-3.dwg LDP 08:22:55 05/22/2016 rodriguez



N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 9-4
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT

- <u>Int. No. 14: Pacific Coast Highway/30th Street</u>

  AM peak hour

- <u>Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street</u>

  PM peak hour

- <u>Int. No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard</u>

  AM and PM peak hours

As indicated in *Table 9-1*, incremental but not significant impacts associated with the combined project are noted at the remaining study intersections according to the City of Hermosa Beach's impact criteria. The future year 2020 with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 9-5*** and ***9-6***, respectively.

9.2.3 *Future With Hermosa Beach Project Only Conditions*

As shown in column [4] of *Table 9-2*, application of the City of Hermosa Beach's threshold criteria to the Future With Hermosa Beach Project Only scenario indicates that the Hermosa Beach project only is expected to result in a significant impact at two of the study intersections. The Hermosa Beach project only is expected to significantly impact the following locations according to the City of Hermosa Beach's impact criteria during the weekday peak hours shown below under Future With Hermosa Beach Project Only conditions:

- <u>Int. No. 14: Pacific Coast Highway/30th Street</u>

  AM peak hour

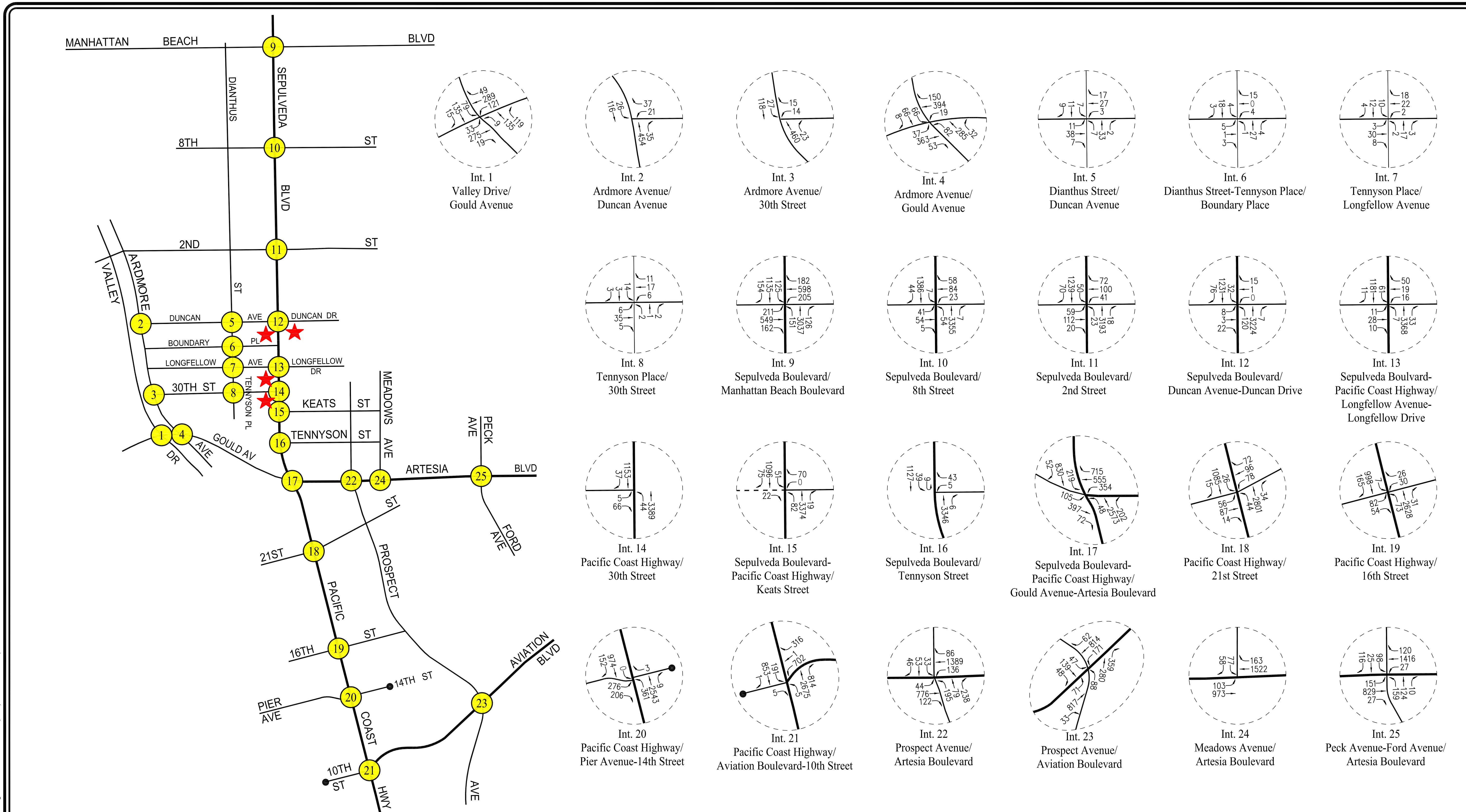
- <u>Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street</u>

  PM peak hour

As indicated in *Table 9-2*, incremental but not significant impacts associated with the Hermosa Beach project only are noted at the remaining study intersections according to the City of Hermosa Beach's impact criteria.

9.2.4 *Future With Manhattan Beach Projects Only Conditions*

As shown in column [4] of *Table 9-3*, application of the City of Hermosa Beach's threshold criteria to the Future With Manhattan Beach Projects Only scenario indicates that the Manhattan Beach projects only are not expected to create a significant impact at any of the study intersections.



N
NOT TO SCALE

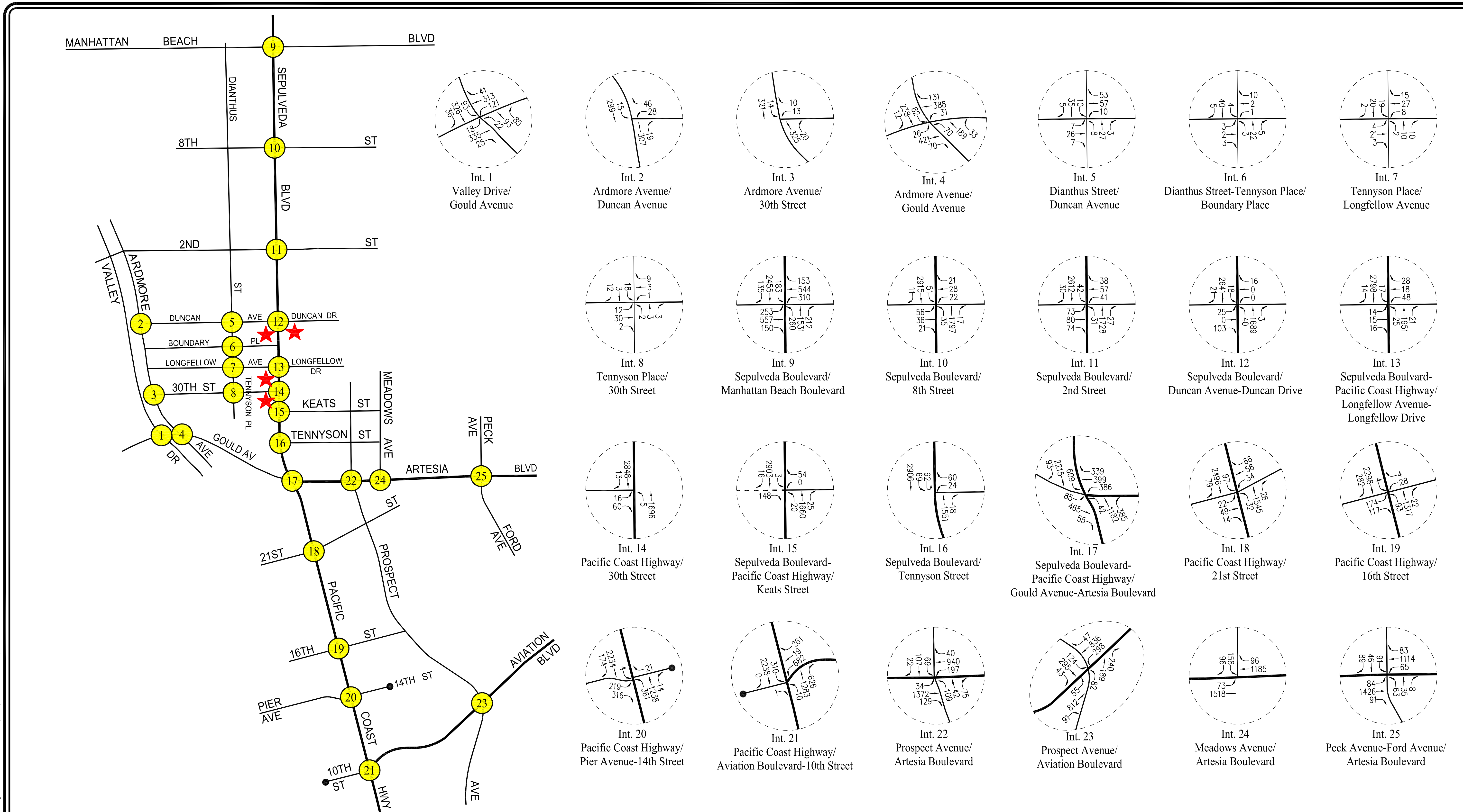
★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 9-5
FUTURE WITH COMBINED PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\f9-5.dwg LDP 08:27:24 05/22/2016 rodriquez



N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 9-6

FUTURE WITH COMBINED PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

9.2.5 *Future With 305 S. Sepulveda Boulevard Project Only Conditions*

As shown in column [4] of *Table 9-3-1*, application of the City of Hermosa Beach's threshold criteria to the Future With 305 S. Sepulveda Boulevard Project Only scenario indicates that this project is not expected to create a significant impact at any of the study intersections. Please note only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to be significantly impacted by any individual Skechers project).

9.2.6 *Future With 330 S. Sepulveda Boulevard Expansion Project Only Conditions*

As shown in column [4] of *Table 9-3-2*, application of the City of Hermosa Beach's threshold criteria to the Future With 330 S. Sepulveda Boulevard Expansion Project Only scenario indicates that this project is not expected to create a significant impact at any of the study intersections. Please note only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to be significantly impacted by any individual Skechers project).

9.3 Street Segment Traffic Impact Analysis

The forecast traffic conditions at the analyzed street segments for existing, future year 2020 pre-project (i.e., existing traffic volumes, ambient traffic growth and related projects traffic volumes) and future year 2020 future with combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) analysis scenarios are summarized in ***Table 9-4***. As presented in Column [1], the average weekday AM and PM peak hour volumes were utilized to evaluate existing conditions on the roadway. As presented in Column [2], the proposed project weekday AM and PM peak hour volumes were added to the existing volumes. As shown in Column [3] of *Table 9-4*, a 1.0 percent (1.0%) annual ambient growth rate through the year 2020 was conservatively applied to the existing weekday AM and PM peak hour volumes in order to estimate the future without project traffic volumes. As presented in Column [4] of *Table 9-4*, the proposed project weekday AM and PM day trips are expected to incrementally affect future traffic volumes on the analyzed street segments. It is noted that the project trips are based on the project trip generation forecasts (refer to *Table 7-1*) and the project trip distribution patterns (refer to *Figures 7-1* through *7-5*), as well as shifts in existing trips due to the reassignment of Skechers' off-site employee parking to the proposed Manhattan Beach project sites.

As indicated in *Table 9-4*, application of the County's two-lane roadway threshold criteria for street segment analysis (as modified for local conditions) indicates that the operational traffic due to the combined project is not anticipated to significantly impact the analyzed street segments under either the existing or future year 2020 conditions. Thus, no mitigation measures are required or recommended.

Table 9-4
CITY OF HERMOSA BEACH STREET SEGMENT LEVELS OF SERVICE SUMMARY
COMBINED PROJECT

					(1) EXISTING TRAFFIC			(2) EXISTING TRAFFIC WITH PROJECT TRIPS						(3) FUTURE TRAFFIC WITHOUT PROJECT TRIPS			(4) FUTURE TRAFFIC WITH PROJECT TRIPS					
NO.	STREET SEGMENT	TIME PERIOD	DIRECTIONAL SPLIT [a]	TOTAL CAPACITY (PCPH) [b]	PEAK HOUR VOL [c]	V/C	LOS	PROJECT TRIPS [d]	PEAK HOUR VOL [e]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [f]	PEAK HOUR VOL [g]	V/C	LOS	PROJECT TRIPS [d]	PEAK HOUR VOL [h]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [f]
1	Duncan Avenue east of	AM	70 / 30	1,250	108	0.086	A	7	115	0.092	A	6.5%	NO	112	0.090	A	7	119	0.095	A	6.3%	NO
	Ardmore Avenue	PM	60 / 40	1,325	101	0.076	A	4	105	0.079	A	4.0%	NO	105	0.079	A	4	109	0.082	A	3.8%	NO
2	Longfellow Avenue east of	AM	50 / 50	1,400	106	0.076	A	2	108	0.077	A	1.9%	NO	110	0.079	A	2	112	0.080	A	1.8%	NO
	Ardmore Avenue	PM	50 / 50	1,400	107	0.076	A	1	108	0.077	A	0.9%	NO	111	0.079	A	1	112	0.080	A	0.9%	NO
3	30th Street east of	AM	50 / 50	1,400	80	0.057	A	4	84	0.060	A	5.0%	NO	83	0.059	A	4	87	0.062	A	4.8%	NO
	Ardmore Avenue	PM	50 / 50	1,400	73	0.052	A	0	73	0.052	A	0.0%	NO	76	0.054	A	0	76	0.054	A	0.0%	NO
4	Dianthus Street north of	AM	80 / 20	1,150	93	0.081	A	0	93	0.081	A	0.0%	NO	97	0.084	A	0	97	0.084	A	0.0%	NO
	Duncan Avenue	PM	60 / 40	1,325	115	0.087	A	0	115	0.087	A	0.0%	NO	120	0.091	A	0	120	0.091	A	0.0%	NO
5	Dianthus Street between	AM	80 / 20	1,150	101	0.088	A	0	101	0.088	A	0.0%	NO	105	0.091	A	0	105	0.091	A	0.0%	NO
	Duncan Avenue and Boundary Place	PM	70 / 30	1,250	103	0.082	A	0	103	0.082	A	0.0%	NO	107	0.086	A	0	107	0.086	A	0.0%	NO
6	Tennyson Place between	AM	70 / 30	1,250	87	0.070	A	0	87	0.070	A	0.0%	NO	91	0.073	A	0	91	0.073	A	0.0%	NO
	Longfellow Avenue and 30th Street	PM	60 / 40	1,325	103	0.078	A	0	103	0.078	A	0.0%	NO	107	0.081	A	0	107	0.081	A	0.0%	NO
7	Duncan Avenue west of	AM	50 / 50	1,400	96	0.069	A	91	187	0.134	A	94.8%	NO	100	0.071	A	91	191	0.136	A	91.0%	NO
	Sepulveda Boulevard	PM	70 / 30	1,250	152	0.122	A	79	231	0.185	A	52.0%	NO	158	0.126	A	79	237	0.190	A	50.0%	NO
8	Boundary Place west of	AM	70 / 30	1,250	36	0.029	A	0	36	0.029	A	0.0%	NO	37	0.030	A	0	37	0.030	A	0.0%	NO
	Sepulveda Boulevard-Pacific Coast Highway	PM	60 / 40	1,325	30	0.023	A	0	30	0.023	A	0.0%	NO	31	0.023	A	0	31	0.023	A	0.0%	NO
9	Longfellow Avenue west of	AM	90 / 10	1,050	138	0.131	A	2	140	0.133	A	1.4%	NO	144	0.137	A	2	146	0.139	A	1.4%	NO
	Sepulveda Boulevard-Pacific Coast Highway	PM	90 / 10	1,050	169	0.161	A	1	170	0.162	A	0.6%	NO	176	0.168	A	1	177	0.169	A	0.6%	NO
10	30th Street west of	AM	60 / 40	1,325	125	0.094	A	5	130	0.098	A	4.0%	NO	130	0.098	A	5	135	0.102	A	3.8%	NO
	Pacific Coast Highway	PM	70 / 30	1,250	78	0.062	A	10	88	0.070	A	12.8%	NO	81	0.065	A	10	91	0.073	A	12.3%	NO
11	Duncan Drive east of	AM	60 / 40	1,325	58	0.044	A	0	58	0.044	A	0.0%	NO	60	0.045	A	0	60	0.045	A	0.0%	NO
	Sepulveda Boulevard	PM	60 / 40	1,325	77	0.058	A	0	77	0.058	A	0.0%	NO	80	0.060	A	0	80	0.060	A	0.0%	NO
12	Longfellow Drive east of	AM	60 / 40	1,325	150	0.113	A	26	176	0.133	A	17.3%	NO	156	0.118	A	26	182	0.137	A	16.7%	NO
	Sepulveda Boulevard-Pacific Coast Highway	PM	70 / 30	1,250	138	0.110	A	8	146	0.117	A	5.8%	NO	144	0.115	A	8	152	0.122	A	5.6%	NO
13	Keats Street east of	AM	50 / 50	1,400	113	0.081	A	0	113	0.081	A	0.0%	NO	118	0.084	A	0	118	0.084	A	0.0%	NO
	Sepulveda Boulevard-Pacific Coast Highway	PM	70 / 30	1,250	111	0.089	A	0	111	0.089	A	0.0%	NO	116	0.093	A	0	116	0.093	A	0.0%	NO
14	Kuhn Drive between	AM	60 / 40	1,325	37	0.028	A	0	37	0.028	A	0.0%	NO	39	0.029	A	0	39	0.029	A	0.0%	NO
	Rhonda Drive and Duncan Drive	PM	60 / 40	1,325	47	0.035	A	0	47	0.035	A	0.0%	NO	49	0.037	A	0	49	0.037	A	0.0%	NO
15	Kuhn Drive between	AM	60 / 40	1,325	67	0.051	A	0	67	0.051	A	0.0%	NO	70	0.053	A	0	70	0.053	A	0.0%	NO
	Duncan Drive and Longfellow Drive	PM	70 / 30	1,250	66	0.053	A	0	66	0.053	A	0.0%	NO	69	0.055	A	0	69	0.055	A	0.0%	NO

Table 9-4 (Continued)
CITY OF HERMOSA BEACH STREET SEGMENT LEVELS OF SERVICE SUMMARY
COMBINED PROJECT

NO.	STREET SEGMENT	TIME PERIOD	DIRECTIONAL SPLIT [a]	TOTAL CAPACITY (PCPH) [b]	(1) EXISTING TRAFFIC PEAK HOUR VOL [c]	V/C	LOS	(2) EXISTING TRAFFIC WITH PROJECT TRIPS PROJECT TRIPS [d]	PEAK HOUR VOL [e]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [f]	(3) FUTURE TRAFFIC WITHOUT PROJECT TRIPS PEAK HOUR VOL [g]	V/C	LOS	(4) FUTURE TRAFFIC WITH PROJECT TRIPS PROJECT TRIPS [d]	PEAK HOUR VOL [h]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [f]
16	Kuhn Drive between Longfellow Drive and Keats Street	AM	60 / 40	1,325	122	0.092	A	0	122	0.092	A	0.0%	NO	127	0.096	A	0	127	0.096	A	0.0%	NO
		PM	60 / 40	1,325	94	0.071	A	0	94	0.071	A	0.0%	NO	98	0.074	A	0	98	0.074	A	0.0%	NO
17	Keats Street between Kuhn Drive and Chabela Drive	AM	60 / 40	1,325	294	0.222	A	0	294	0.222	A	0.0%	NO	306	0.231	A	0	306	0.231	A	0.0%	NO
		PM	70 / 30	1,250	244	0.195	A	0	244	0.195	A	0.0%	NO	254	0.203	A	0	254	0.203	A	0.0%	NO
18	Prospect Avenue north of Artesia Boulevard	AM	70 / 30	1,250	227	0.182	A	0	227	0.182	A	0.0%	NO	236	0.189	A	0	236	0.189	A	0.0%	NO
		PM	60 / 40	1,325	278	0.210	A	0	278	0.210	A	0.0%	NO	289	0.218	A	0	289	0.218	A	0.0%	NO
19	Meadows Avenue north of Artesia Boulevard	AM	60 / 40	1,325	583	0.440	A	0	583	0.440	A	0.0%	NO	607	0.458	A	0	607	0.458	A	0.0%	NO
		PM	60 / 40	1,325	561	0.423	A	0	561	0.423	A	0.0%	NO	584	0.441	A	0	584	0.441	A	0.0%	NO

NOTES
PCPH = Passenger Cars Per Hour
[a] Directional split of the roadway is based on existing traffic count data.
[b] Total capacity (PCPH) is based on existing roadway directional split per County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines". However, please note that the PCPH capacity used in this analysis is one-half (i.e., 50%) of the County's identified capacities in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways, on-street parking, etc.) in order to provide a conservative analysis.
[c] Obtained from 24-hour machine counts conducted by City Traffic Counters in March 2016.
[d] Represents project trips based on the project trip generation forecasts contained in Table 7-1 and project trip distribution patterns provided in Figures 7-1 through 5, and includes shifts in existing trips due to the reassignment of Skechers' off-site employee parking to the proposed 305 Sepulveda Boulevard building in Manhattan Beach. For purposes of this analysis, no trip reductions were applied to those segments where the net total project trips were determined to be negative.
[e] [c] + [d]
[f] According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines", January 1, 1997, Page 6: an impact is considered significant if the project 'related increase in Passenger Car Per Hour (PCPH) equals or exceeds the thresholds shown below. However, as noted above, the PCPH capacities used in this analysis are one-half (i.e., 50%) of the County's identified capacities in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways, on-street parking, etc.) in order to provide a conservative analysis.

Directional Split	Total Capacity (PCPH)	Percentage Increases in PCPH by Project — Pre-project LOS: C	D	E/F
50/50	1,400	4	2	1
60/40	1,325	4	2	1
70/30	1,250	4	2	1
80/20	1,150	4	2	1
90/10	1,050	4	2	1
100/0	1,000	4	2	1

[g] Derived by applying an ambient growth factor of 1.00% per year to existing traffic volumes to reflect year 2020 conditions.
[h] [g] + [d]

9.4 Review of Accident Data in the Vicinity of the Project

Based on comments received at prior Draft Environmental Impact Report scoping public hearings regarding recent accidents along Sepulveda Boulevard-Pacific Coast Highway, research was conducted of available accident records in order to determine, to the extent feasible, any existing accident trends. Accident records were requested for the most recent five year period (2011 through 2016) from the Statewide Integrated Traffic Records System (SWITRS) database. The online SWITRS database notes that due to a collision records processing backlog, data from seven months prior to the date of request is to be considered incomplete. Therefore, although collision records from August 2015 to February 2016 are not considered part of the most recent five year period, they are included in this review. Records were requested for the Cities of Hermosa Beach and Manhattan Beach. The records were then categorized in order to review accidents that occurred along Sepulveda Boulevard/Pacific Coast Highway in the vicinity of the proposed project (i.e., between roughly Ronda Drive and Artesia Boulevard/Gould Avenue.

No accidents in this general vicinity were documented to have resulted in a fatality during the above timeframe. The overall trends for the primary collision factor were unsafe speed and driver alcohol/drug use. ***Appendix F*** contains a copy of the SWITRS report. As an example, a total of three (3) accidents were reported over the most recent five year period at the Sepulveda Boulevard/Duncan Place-Ronda Drive intersection, which corresponds to less than one collision per year, and all accidents were attributable to driver Alcohol/drug or unsafe speed. At the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection, a total of four (4) accidents were reported over the most recent five year period, which corresponds to less than one accident per year, and more than half of the accidents (i.e., three of the four) were attributable to driver alcohol/drug or unsafe speed. At the Sepulveda Boulevard-Pacific Coast Highway/Longfellow Avenue-Longfellow Drive intersection, a total of three (3) accidents were reported over the most recent five year period, which corresponds to less than one accident per year, with one of the accidents being attributable to driver alcohol/drug.

At the Pacific Coast Highway/30th Street intersection, a total of 12 accidents were reported over the most recent five year period, which corresponds to an average of just over two per year, however, the majority of accidents (i.e., nine of the 12) were attributable to unsafe speed. At the Sepulveda Boulevard-Pacific Coast Highway/Keats Street T-intersection, a total of eight (8) accidents were reported over the most recent five year period, which corresponds to an average of over one per year, with three (3) accidents being attributable to unsafe speed or driver alcohol/drug and five (5) being attributable to right-of-way or wrong side. At the Sepulveda Boulevard/Tennyson Street intersection, a total of nine (9) accidents were reported over the most recent five year period, which corresponds to an average of over one per year, with three (3) being attributable to driver alcohol/drug or unsafe speed and six (6) being attributable to improper turn, right-of-way, or starting/backing.

Finally, at the Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard intersection, a total of 37 accidents, with an average of over seven accidents per year, have occurred over the most recent five year period, with 16 attributable to driver alcohol/drug and four (4) attributable to unsafe speed. Thus, of the 76 total accidents that have occurred in the project vicinity along the Sepulveda Boulevard corridor in the most recent five year period, 23 accidents were a result of driver alcohol/drug. Further, of the 23 accidents related to alcohol/drug use, 19 of these accidents occurred between the hours of 8:00 PM and 4:00 AM. In conclusion, some of the documented accidents are not correctable through a change in traffic control or assignment.

9.5 Left-Turn Pocket Vehicle Queuing Analyses

In addition to the intersection analyses, a review of potential vehicle queuing was also conducted focusing on evaluation of the key left-turn movements at the following locations:

- Intersection No. 12, Sepulveda Boulevard/Duncan Avenue-Duncan Drive, for the northbound left-turn movement
- Intersection No. 14, Pacific Coast Highway/30th Street, for the northbound left-turn movement
- Intersection No. 15, Sepulveda Boulevard-Pacific Coast Highway/Keats Street, for the northbound left-turn movement
- Intersection No. 16, Sepulveda Boulevard/Tennyson Street, for the southbound left-turn movement

Vehicle queuing was calculated using the *Synchro 9* software package which implements the Highway Capacity Manual operational methods. In forecasting vehicle queuing, the *Synchro 9* software considers traffic volume data, lane configurations, traffic signal phasing, and available vehicle storage lengths for the respective traffic movements.

The vehicle queuing review has been prepared using the respective weekday AM and PM peak hour traffic volume forecasts for existing, existing with project, where applicable and year 2020 conditions both without and with the proposed project. The *Synchro* analysis provides a forecast of the 95th percentile queues for the analysis time periods. The 95th percentile queue is the maximum back of vehicle queue with 95th percentile traffic volumes and is typically utilized for design purposes. An average vehicle length of 25 feet (including vehicle separation) is assumed for analysis purposes. The corresponding AM and PM peak hour HCM worksheets for purposes of determining the 95th percentile vehicle queues are contained herein (refer to *Appendix E)*.

Based on a field review performed by LLG Engineers' staff and a review of aerial maps, the existing storage lengths were measured for the subject left-turn lanes. Based on the review of the queuing worksheets, the 95th percentile queue (in feet) for the subject left-turn lanes was determined. ***Table 9-5*** provides a summary of the vehicle queuing analyses for the key left-turn movements for the above noted study intersections for the Combined Project conditions. As shown in *Table 9-5,* vehicle queuing for the analyzed turning movements for Intersection Nos. 12, 14, and 15 are not forecast to exceed the available storage lengths of the turn pockets under either the Existing With

Table 9-5
SUMMARY OF LEFT-TURN POCKET QUEUING ANALYSIS [1]
WEEKDAY AM AND PM PEAK HOURS
COMBINED PROJECT

INTERSECTION	PEAK HOUR	AVAILABLE STORAGE		YEAR 2016 EXISTING			YEAR 2016 EXISTING W/ PROPOSED PROJECT			YEAR 2020 FUTURE PRE-PROJECT			YEAR 2020 FUTURE W/ PROPOSED PROJECT		
				95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)
		FEET [2]	NO. OF VEH. [3]	FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.	
No. 12 Sepulveda Boulevard/ Duncan Avenue-Duncan Drive (Northbound Left-turn)	AM PM	110 110	4.4 4.4	25 53	0.9 2.1	No No	45 53	1.8 2.0	No No	30 85	1.2 3.4	No No	63 85	2.5 3.2	No No
No. 14 Pacific Coast Highway/ 30th Street (Northbound Left-turn)	AM PM	60 60	2.4 2.4	25 25	0.4 0.2	No No	25 25	0.4 0.3	No No	25 25	0.6 0.4	No No	25 25	0.5 0.4	No No
No. 15 Sepulveda Boulevard-Pacific Coast Highway/ Keats Street (Northbound Left-turn)	AM PM	[6], [7] [6], [7]	3.2 3.2	[6] [6]	[6] [6]	N/A N/A	25 35	0.8 1.4	No No	[6] [6]	[6] [6]	N/A N/A	25 50	1.0 2.0	No No
No. 16 Sepulveda Boulevard/ Tennyson Street (Southbound Left-turn)	AM PM	120 120	4.8 4.8	90 25	3.6 0.8	No No	[8] 120 48	4.8 1.9	No No	123 38	4.9 1.5	Yes No	[8] 160 85	6.4 3.4	Yes No

[1] Intersection queuing analysis based on the Highway Capacity Manual (HCM) methodologies. Refer to calculation worksheets in Appendix E.
[2] Available storage based on field measurements taken by LLG Engineers staff.
[3] An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes.
[4] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes.
[5] A minimum of 25 feet (i.e., one vehicle) is reported for queues which are less than one vehicle.
[6] The proposed northbound left-turn lane is anticipated to be completed as part of the project, therefore potential queuing in the turn lane is only analyzed for the With Project conditions.
[7] It is recommended that 80 feet of storage be provided for the proposed northbound left-turn lane. Such a configuration would be consistent with the storage currently provided for the existing southbound left-turn lane at the intersection.
[8] The reported southbound left-turn vehicle queue does not assume a future traffic signal at the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection. Should the traffic signal at this location be reviewed and approved by Caltrans, the southbound left-turn/u-turn volume and corresponding vehicle queue lengths would decrease.

Project or Future Year With Combined Project scenarios. However, the southbound left-turn vehicle queue for Intersection No. 16 is forecast to exceed the available storage of the turn pocket for the subject intersection under the Future Pre-Project and Future With Combined Project scenarios during the AM peak hour. It is important to note that this analysis of queue lengths does not assume a future traffic signal at the Sepulveda Boulevard/Keats Street intersection, which if approved by Caltrans would alleviate the southbound left-turn/U-turn movement at Intersection No. 16. It is therefore recommended as a conditional mitigation measure that the southbound left-turn pocket on Sepulveda Boulevard at Tennyson Street be monitored during the AM peak hour within six months of the occupancy of the combined project and if the southbound left-turn queue extends beyond the available storage, the Applicant shall implement corrective action (e.g., lengthen the southbound left-turn pocket) or provide another equal mitigation to the satisfaction of the City and Caltrans. Should a traffic signal be approved by Caltrans at the Sepulveda Boulevard/Keats Street intersection, adequate storage would exist and monitoring would not be required.

Table 9-6 provides a summary of the vehicle queuing analyses for the key left-turn movements for the above noted study intersections for the Hermosa Beach Project Only conditions. As shown in *Table 9-6*, vehicle queuing for the analyzed turning movements for Intersection Nos. 12, 14, and 15 are not forecast to exceed the available storage lengths of the turn pockets under either the Existing With Project or Future Year With Combined Project scenarios. However, the southbound left-turn vehicle queue for Intersection No. 16 is forecast to exceed the available storage of the turn pocket for the subject intersection under the Future Pre-Project and Future With Hermosa Beach Project scenarios. As noted previously, this analysis of queue lengths does not assume a future traffic signal at the Sepulveda Boulevard/Keats Street intersection, which if approved by Caltrans would alleviate the southbound left-turn/U-turn movement at Intersection No. 16. It is therefore recommended as a conditional mitigation measure that the southbound left-turn pocket on Sepulveda Boulevard at Tennyson Street be monitored during the AM peak hour within six months of the occupancy of the Hermosa Beach project and if the southbound left-turn queue extends beyond the available storage, the Applicant shall implement corrective action (e.g., lengthen the southbound left-turn pocket) or provide another equal mitigation to the satisfaction of the City and Caltrans. As stated above, should a traffic signal be approved by Caltrans at the Sepulveda Boulevard/Keats Street intersection, adequate storage would exist and monitoring would not be required.

Table 9-7 provides a summary of the vehicle queuing analyses for the key left-turn movements for the above noted study intersections for the Manhattan Beach Projects conditions. As shown in *Table 9-7*, vehicle queuing for the analyzed turning movements for Intersection Nos. 12, 14, and 15 are not forecast to exceed the available storage lengths of the turn pockets under either the Existing With Project or Future Year With Manhattan Beach Projects scenarios. However, the southbound left-turn vehicle queue for Intersection No. 16 is forecast to just exceed the available storage of the turn pocket for the subject intersection under the Future Pre-Project and Future With Manhattan Beach Projects scenarios. It is therefore recommended as a conditional mitigation measure that the southbound left-turn pocket on Sepulveda Boulevard at Tennyson Street be monitored during the AM peak hour within six months of the occupancy of the Manhattan Beach projects and if the southbound left-turn queue extends beyond the available storage, the Applicant shall implement

Table 9-6
SUMMARY OF LEFT-TURN POCKET QUEUING ANALYSIS [1]
WEEKDAY AM AND PM PEAK HOURS
HERMOSA BEACH PROJECT ONLY

INTERSECTION	PEAK HOUR	AVAILABLE STORAGE		YEAR 2016 EXISTING			YEAR 2016 EXISTING W/ PROPOSED PROJECT			YEAR 2020 FUTURE PRE-PROJECT			YEAR 2020 FUTURE W/ PROPOSED PROJECT		
				95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)
		FEET [2]	NO. OF VEH. [3]	FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.	
No. 12 Sepulveda Boulevard/ Duncan Avenue-Duncan Drive (Northbound Left-turn)	AM PM	110 110	4.4 4.4	25 53	0.9 2.1	No No	25 55	1.0 2.2	No No	30 85	1.2 3.4	No No	33 85	1.3 3.4	No No
No. 14 Pacific Coast Highway/ 30th Street (Northbound Left-turn)	AM PM	60 60	2.4 2.4	25 25	0.4 0.2	No No	25 25	0.6 0.2	No No	25 25	0.6 0.4	No No	25 25	0.8 0.4	No No
No. 15 Sepulveda Boulevard-Pacific Coast Highway/ Keats Street (Northbound Left-turn)	AM PM	[6], [7] [6], [7]	3.2 3.2	[6] [6]	[6] [6]	N/A N/A	25 33	0.8 1.3	No No	[6] [6]	[6] [6]	N/A N/A	25 50	1.0 2.0	No No
No. 16 Sepulveda Boulevard/ Tennyson Street (Southbound Left-turn)	AM PM	120 120	4.8 4.8	90 25	3.6 0.8	No No	[8] 120 48	4.8 1.9	No No	123 38	4.9 1.5	Yes No	[8] 158 88	6.3 3.5	Yes No

[1] Intersection queuing analysis based on the Highway Capacity Manual (HCM) methodologies. Refer to calculation worksheets in Appendix E.
[2] Available storage based on field measurements taken by LLG Engineers staff.
[3] An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes.
[4] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes.
[5] A minimum of 25 feet (i.e., one vehicle) is reported for queues which are less than one vehicle.
[6] The proposed northbound left-turn lane is anticipated to be completed as part of the project, therefore potential queuing in the turn lane is only analyzed for the With Project conditions.
[7] It is recommended that 80 feet of storage be provided for the proposed northbound left-turn lane. Such a configuration would be consistent with the storage currently provided for the existing southbound left-turn lane at the intersection.
[8] The reported southbound left-turn vehicle queue does not assume a future traffic signal at the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection. Should the traffic signal at this location be reviewed and approved by Caltrans, the southbound left-turn/u-turn volume and corresponding vehicle queue lengths would decrease.

Table 9-7
SUMMARY OF LEFT-TURN POCKET QUEUING ANALYSIS [1]
WEEKDAY AM AND PM PEAK HOURS
MANHATTAN BEACH PROJECTS ONLY

				YEAR 2016 EXISTING			YEAR 2016 EXISTING W/ PROPOSED PROJECT			YEAR 2020 FUTURE PRE-PROJECT			YEAR 2020 FUTURE W/ PROPOSED PROJECT		
	PEAK	AVAILABLE STORAGE		95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE
INTERSECTION	HOUR	FEET [2]	NO. OF VEH. [3]	FEET [3], [5]	NO. OF VEH.	STORAGE? (YES/NO)	FEET [3], [5]	NO. OF VEH.	STORAGE? (YES/NO)	FEET [3], [5]	NO. OF VEH.	STORAGE? (YES/NO)	FEET [3], [5]	NO. OF VEH.	STORAGE? (YES/NO)
No. 12 Sepulveda Boulevard/	AM	110	4.4	25	0.9	No	40	1.6	No	30	1.2	No	55	2.2	No
Duncan Avenue-Duncan Drive	PM	110	4.4	53	2.1	No	53	2.0	No	85	3.4	No	85	3.2	No
(Northbound Left-turn)															
No. 14 Pacific Coast Highway/	AM	60	2.4	25	0.4	No	25	0.2	No	25	0.6	No	25	0.3	No
30th Street	PM	60	2.4	25	0.2	No	25	0.3	No	25	0.4	No	25	0.4	No
(Northbound Left-turn)															
No. 16 Sepulveda Boulevard/	AM	120	4.8	90	3.6	No	93	3.7	No	123	4.9	Yes	125	5.0	Yes
Tennyson Street	PM	120	4.8	25	0.8	No	25	0.8	No	38	1.5	No	38	1.5	No
(Southbound Left-turn)															

[1] Intersection queuing analysis based on the Highway Capacity Manual (HCM) methodologies. Refer to calculation worksheets in Appendix E.
[2] Available storage based on field measurements taken by LLG Engineers staff.
[3] An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes.
[4] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes.
[5] A minimum of 25 feet (i.e., one vehicle) is reported for queues which are less than one vehicle.

corrective action (e.g., lengthen the southbound left-turn pocket) or provide another equal mitigation to the satisfaction of the City and Caltrans. ***Tables 9-7-1*** and ***9-7-2*** provide a summary of the vehicle queuing analyses for the key left-turn movements for the above noted study intersections for the 305 S. Sepulveda Boulevard and 330 S. Sepulveda Boulevard Expansion projects independently. If either of the Manhattan Beach Projects individually move forward, no monitoring would be required since the vehicle queue for Intersection No. 16 does not change with either Manhattan Beach project.

Table 9-7-1
SUMMARY OF LEFT-TURN POCKET QUEUING ANALYSIS [1]
WEEKDAY AM AND PM PEAK HOURS
305 S. SEPULVEDA BOULEVARD PROJECT ONLY

INTERSECTION	PEAK HOUR	AVAILABLE STORAGE		YEAR 2016 EXISTING			YEAR 2016 EXISTING W/ PROPOSED PROJECT			YEAR 2020 FUTURE PRE-PROJECT			YEAR 2020 FUTURE W/ PROPOSED PROJECT		
				95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4]		EXCEEDS AVAILABLE STORAGE? (YES/NO)
		FEET [2]	NO. OF VEH. [3]	FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.		FEET [3], [5]	NO. OF VEH.	
No. 12 Sepulveda Boulevard/ Duncan Avenue-Duncan Drive (Northbound Left-turn)	AM	110	4.4	25	0.9	No	40	1.6	No	30	1.2	No	55	2.2	No
	PM	110	4.4	53	2.1	No	53	2.0	No	85	3.4	No	85	3.1	No
No. 14 Pacific Coast Highway/ 30th Street (Northbound Left-turn)	AM	60	2.4	25	0.4	No	25	0.2	No	25	0.6	No	25	0.3	No
	PM	60	2.4	25	0.2	No	25	0.3	No	25	0.4	No	25	0.4	No
No. 16 Sepulveda Boulevard/ Tennyson Street (Southbound Left-turn)	AM	120	4.8	90	3.6	No	90	3.6	No	123	4.9	Yes	123	4.9	Yes
	PM	120	4.8	25	0.8	No	25	0.8	No	38	1.5	No	38	1.5	No

[1] Intersection queuing analysis based on the Highway Capacity Manual (HCM) methodologies. Refer to calculation worksheets in Appendix E.
[2] Available storage based on field measurements taken by LLG Engineers staff.
[3] An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes.
[4] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes.
[5] A minimum of 25 feet (i.e., one vehicle) is reported for queues which are less than one vehicle.

Table 9-7-2
SUMMARY OF LEFT-TURN POCKET QUEUING ANALYSIS [1]
WEEKDAY AM AND PM PEAK HOURS
330 S. SEPULVEDA BOULEVARD EXPANSION PROJECT ONLY

INTERSECTION	PEAK HOUR	AVAILABLE STORAGE		YEAR 2016 EXISTING			YEAR 2016 EXISTING W/ PROPOSED PROJECT			YEAR 2020 FUTURE PRE-PROJECT			YEAR 2020 FUTURE W/ PROPOSED PROJECT		
		FEET [2]	NO. OF VEH. [3]	95TH PERCENTILE QUEUE [4] FEET [3], [5]	95TH PERCENTILE QUEUE [4] NO. OF VEH.	EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4] FEET [3], [5]	95TH PERCENTILE QUEUE [4] NO. OF VEH.	EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4] FEET [3], [5]	95TH PERCENTILE QUEUE [4] NO. OF VEH.	EXCEEDS AVAILABLE STORAGE? (YES/NO)	95TH PERCENTILE QUEUE [4] FEET [3], [5]	95TH PERCENTILE QUEUE [4] NO. OF VEH.	EXCEEDS AVAILABLE STORAGE? (YES/NO)
No. 12 Sepulveda Boulevard/	AM	110	4.4	25	0.9	No	25	0.9	No	30	1.2	No	30	1.2	No
Duncan Avenue-Duncan Drive	PM	110	4.4	53	2.1	No	53	2.1	No	85	3.4	No	85	3.4	No
(Northbound Left-turn)															
No. 14 Pacific Coast Highway/	AM	60	2.4	25	0.4	No	25	0.4	No	25	0.6	No	25	0.6	No
30th Street	PM	60	2.4	25	0.2	No	25	0.2	No	25	0.4	No	25	0.4	No
(Northbound Left-turn)															
No. 16 Sepulveda Boulevard/	AM	120	4.8	90	3.6	No	90	3.6	No	123	4.9	Yes	123	4.9	Yes
Tennyson Street	PM	120	4.8	25	0.8	No	25	0.8	No	38	1.5	No	38	1.5	No
(Southbound Left-turn)															

[1] Intersection queuing analysis based on the Highway Capacity Manual (HCM) methodologies. Refer to calculation worksheets in Appendix E.
[2] Available storage based on field measurements taken by LLG Engineers staff.
[3] An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes.
[4] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes.
[5] A minimum of 25 feet (i.e., one vehicle) is reported for queues which are less than one vehicle.

10.0 CITY OF MANHATTAN BEACH TRAFFIC ANALYSIS

The traffic impact analysis prepared for the study intersections for the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) using the ICU and HCM methodologies with application of the City of Manhattan Beach significant traffic impact criteria is summarized in ***Table 10–1***. The traffic impact analysis prepared for the study intersections for the Hermosa Beach project only using the ICU and HCM methodologies with application of the City of Manhattan Beach significant traffic impact criteria is summarized in ***Table 10–2.*** The traffic impact analysis prepared for the study intersections for the Manhattan Beach projects only using the ICU and HCM methodologies with application of the City of Manhattan Beach significant traffic impact criteria is summarized in ***Table 10-3***. *Tables 10-1*, *10-2*, and *10-3* present the data for the 15 intersections that either entirely under or shared with Manhattan Beach's jurisdiction. A supplemental analysis for each Manhattan Beach building only was also prepared and is contained in Subsections 10.1.4, 10.1.5, 10.2.4, and 10.2.5 below. The ICU and HCM data worksheets for the analyzed intersections are contained in *Appendix E*.

10.1 Existing Traffic Conditions

10.1.1 *Existing With Combined Project Conditions*

As shown in column [2] of *Table 10–1*, application of the City of Manhattan Beach's threshold criteria to the Existing With Combined Project scenario indicates that the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) is expected to result in a significant impact at five of the study intersections. The combined project is expected to significantly impact the following locations according to the City of Manhattan Beach's impact criteria during the weekday peak hours shown below under Existing With Combined Project conditions:

- <u>Int. No. 12: Sepulveda Boulevard/Duncan Avenue-Drive</u>

  PM peak hour

- <u>Int. No. 14: Pacific Coast Highway/30th Street</u>

  PM peak hour

- <u>Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street</u>

  AM and PM peak hours

- <u>Int. No. 16: Sepulveda Boulevard/Tennyson Street</u>

  AM peak hour

- <u>Int. No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard</u>

  AM peak hour

Table 10-1
CITY OF MANHATTAN BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
COMBINED PROJECT

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY	LOS [c]	V/C or Delay	LOS [c]	V/C or DELAY [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY	LOS [c]	V/C or DELAY	LOS [c]	V/C or DELAY [(4)-(3)]	SIGNIF. IMPACT [d]
2	Ardmore Avenue/	AM	11.6	B	11.7	B	0.1	No	12.6	B	12.6	B	0.0	No
	Duncan Avenue [a]	PM	10.1	B	10.1	B	0.0	No	10.6	B	10.6	B	0.0	No
5	Dianthus Street/	AM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
	Duncan Avenue [a]	PM	7.6	A	7.6	A	0.0	No	7.6	A	7.6	A	0.0	No
6	Dianthus Street-Tennyson Place/	AM	7.0	A	7.0	A	0.0	No	7.0	A	7.0	A	0.0	No
	Boundary Place [a]	PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
9	Sepulveda Boulevard/	AM	1.040	F	1.041	F	0.001	No	1.119	F	1.121	F	0.002	No
	Manhattan Beach Boulevard	PM	1.053	F	1.061	F	0.008	No	1.161	F	1.170	F	0.009	No
10	Sepulveda Boulevard/	AM	0.821	D	0.823	D	0.002	No	0.895	D	0.897	D	0.002	No
	8th Street	PM	0.700	B	0.702	C	0.002	No	0.814	D	0.816	D	0.002	No
11	Sepulveda Boulevard/	AM	0.868	D	0.870	D	0.002	No	0.942	E	0.945	E	0.003	No
	2nd Street	PM	0.712	C	0.718	C	0.006	No	0.786	C	0.792	C	0.006	No
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	[e]	Yes
	Duncan Avenue-Duncan Drive [b]	PM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.836	D	0.022	No	0.875	D	0.897	D	0.022	No
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.685	B	0.017	No	0.743	C	0.760	C	0.017	No
14	Pacific Coast Highway/	AM	19.1	C	23.5	C	4.4	No	23.4	C	31.4	D	8.0	No
	30th Street [b]	PM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
15	Sepulveda Boulevard-Pacific Coast Highway/	AM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
	Keats Street [b]	PM	19.7	C	>50.0	F	[e]	Yes	24.7	C	>50.0	F	[e]	Yes
16	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
	Tennyson Street [b]	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
17	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.006	F	1.057	F	0.051	Yes	1.098	F	1.149	F	0.051	Yes
	Gould Avenue-Artesia Boulevard	PM	0.769	C	0.785	C	0.016	No	0.887	D	0.904	E	0.017	No
22	Prospect Avenue/	AM	0.699	B	0.718	C	0.019	No	0.773	C	0.793	C	0.020	No
	Artesia Boulevard	PM	0.743	C	0.759	C	0.016	No	0.868	D	0.884	D	0.016	No
24	Meadows Avenue/	AM	0.690	B	0.706	C	0.016	No	0.759	C	0.775	C	0.016	No
	Artesia Boulevard	PM	0.620	B	0.634	B	0.014	No	0.719	C	0.733	C	0.014	No
25	Peck Avenue-Ford Avenue/	AM	0.813	D	0.829	D	0.016	No	0.903	E	0.919	E	0.016	No
	Artesia Boulevard	PM	0.600	A	0.614	B	0.014	No	0.726	C	0.740	C	0.014	No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

Table 10-2
CITY OF MANHATTAN BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
HERMOSA BEACH PROJECT ONLY

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY	LOS [c]	V/C or Delay	LOS [c]	V/C or DELAY [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY	LOS [c]	V/C or DELAY	LOS [c]	V/C or DELAY [(4)-(3)]	SIGNIF. IMPACT [d]
2	Ardmore Avenue/	AM	11.6	B	11.7	B	0.1	No	12.6	B	12.6	B	0.0	No
	Duncan Avenue [a]	PM	10.1	B	10.1	B	0.0	No	10.6	B	10.6	B	0.0	No
5	Dianthus Street/	AM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
	Duncan Avenue [a]	PM	7.6	A	7.6	A	0.0	No	7.6	A	7.6	A	0.0	No
6	Dianthus Street-Tennyson Place/	AM	7.0	A	7.0	A	0.0	No	7.0	A	7.0	A	0.0	No
	Boundary Place [a]	PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
9	Sepulveda Boulevard/	AM	1.040	F	1.042	F	0.002	No	1.119	F	1.121	F	0.002	No
	Manhattan Beach Boulevard	PM	1.053	F	1.060	F	0.007	No	1.161	F	1.168	F	0.007	No
10	Sepulveda Boulevard/	AM	0.821	D	0.823	D	0.002	No	0.895	D	0.897	D	0.002	No
	8th Street	PM	0.700	B	0.703	C	0.003	No	0.814	D	0.817	D	0.003	No
11	Sepulveda Boulevard/	AM	0.868	D	0.870	D	0.002	No	0.942	E	0.944	E	0.002	No
	2nd Street	PM	0.712	C	0.717	C	0.005	No	0.786	C	0.791	C	0.005	No
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	Duncan Avenue-Duncan Drive [b]	PM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	0.0	No
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.816	D	0.002	No	0.875	D	0.878	D	0.003	No
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.671	B	0.003	No	0.743	C	0.746	C	0.003	No
14	Pacific Coast Highway/	AM	19.1	C	24.6	C	5.5	No	23.4	C	33.9	D	10.5	No
	30th Street [b]	PM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
15	Sepulveda Boulevard-Pacific Coast Highway/	AM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	0.0	No
	Keats Street [b]	PM	19.7	C	>50.0	F	[e]	Yes	24.7	C	>50.0	F	[e]	Yes
16	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
	Tennyson Street [b]	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
17	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.006	F	1.043	F	0.037	Yes	1.098	F	1.135	F	0.037	Yes
	Gould Avenue-Artesia Boulevard	PM	0.769	C	0.782	C	0.013	No	0.887	D	0.900	D	0.013	No
22	Prospect Avenue/	AM	0.699	B	0.713	C	0.014	No	0.773	C	0.787	C	0.014	No
	Artesia Boulevard	PM	0.743	C	0.755	C	0.012	No	0.868	D	0.880	D	0.012	No
24	Meadows Avenue/	AM	0.690	B	0.702	C	0.012	No	0.759	C	0.771	C	0.012	No
	Artesia Boulevard	PM	0.620	B	0.631	B	0.011	No	0.719	C	0.730	C	0.011	No
25	Peck Avenue-Ford Avenue/	AM	0.813	D	0.824	D	0.011	No	0.903	E	0.914	E	0.011	No
	Artesia Boulevard	PM	0.600	A	0.611	B	0.011	No	0.726	C	0.737	C	0.011	No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

Table 10-3
CITY OF MANHATTAN BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
MANHATTAN BEACH PROJECTS ONLY

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROJECT		CHANGE		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT		CHANGE	
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY	LOS [c]	V/C or Delay	LOS [c]	V/C or DELAY [(2)-(1)]	SIGNIF. IMPACT [d]	V/C or DELAY	LOS [c]	V/C or DELAY	LOS [c]	V/C or DELAY [(4)-(3)]	SIGNIF. IMPACT [d]
2	Ardmore Avenue/	AM	11.6	B	11.7	B	0.1	No	12.6	B	12.7	B	0.1	No
	Duncan Avenue [a]	PM	10.1	B	10.1	B	0.0	No	10.6	B	10.6	B	0.0	No
5	Dianthus Street/	AM	7.3	A	7.3	A	0.0	No	7.3	A	7.3	A	0.0	No
	Duncan Avenue [a]	PM	7.6	A	7.6	A	0.0	No	7.6	A	7.6	A	0.0	No
6	Dianthus Street-Tennyson Place/	AM	7.0	A	7.0	A	0.0	No	7.0	A	7.0	A	0.0	No
	Boundary Place [a]	PM	7.1	A	7.1	A	0.0	No	7.1	A	7.1	A	0.0	No
9	Sepulveda Boulevard/	AM	1.040	F	1.039	F	-0.001	No	1.119	F	1.119	F	0.000	No
	Manhattan Beach Boulevard	PM	1.053	F	1.054	F	0.001	No	1.161	F	1.163	F	0.002	No
10	Sepulveda Boulevard/	AM	0.821	D	0.821	D	0.000	No	0.895	D	0.895	D	0.000	No
	8th Street	PM	0.700	B	0.699	B	-0.001	No	0.814	D	0.813	D	-0.001	No
11	Sepulveda Boulevard/	AM	0.868	D	0.868	D	0.000	No	0.942	E	0.943	E	0.001	No
	2nd Street	PM	0.712	C	0.712	C	0.000	No	0.786	C	0.786	C	0.000	No
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	Duncan Avenue-Duncan Drive [b]	PM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.833	D	0.019	No	0.875	D	0.894	D	0.019	No
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.682	B	0.014	No	0.743	C	0.756	C	0.013	No
14	Pacific Coast Highway/	AM	19.1	C	19.1	C	0.0	No	23.4	C	23.4	C	0.0	No
	30th Street [b]	PM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
15	Sepulveda Boulevard-Pacific Coast Highway/	AM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
	Keats Street [b]	PM	19.7	C	19.7	C	0.0	No	24.7	C	24.7	C	0.0	No
16	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	[e]	Yes	>50.0	F	>50.0	F	[e]	Yes
	Tennyson Street [b]	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
17	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.006	F	1.020	F	0.014	No	1.098	F	1.112	F	0.014	No
	Gould Avenue-Artesia Boulevard	PM	0.769	C	0.773	C	0.004	No	0.887	D	0.891	D	0.004	No
22	Prospect Avenue/	AM	0.699	B	0.705	C	0.006	No	0.773	C	0.779	C	0.006	No
	Artesia Boulevard	PM	0.743	C	0.747	C	0.004	No	0.868	D	0.872	D	0.004	No
24	Meadows Avenue/	AM	0.690	B	0.695	B	0.005	No	0.759	C	0.764	C	0.005	No
	Artesia Boulevard	PM	0.620	B	0.623	B	0.003	No	0.719	C	0.723	C	0.004	No
25	Peck Avenue-Ford Avenue/	AM	0.813	D	0.818	D	0.005	No	0.903	E	0.908	E	0.005	No
	Artesia Boulevard	PM	0.600	A	0.603	B	0.003	No	0.726	C	0.729	C	0.003	No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

As indicated in *Table 10–1*, incremental but not significant impacts associated with the combined project are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

10.1.2 *Existing With Hermosa Beach Project Only Conditions*

As shown in column [2] of *Table 10–2*, application of the City of Manhattan Beach's threshold criteria to the Existing With Hermosa Beach Project Only scenario indicates that the Hermosa Beach project only is expected to result in a significant impact at five of the study intersections. The Hermosa Beach project only is expected to significantly impact the following locations according to the City of Manhattan Beach's impact criteria during the weekday peak hours shown below under Existing With Hermosa Beach Project Only conditions:

- Int. No. 12: Sepulveda Boulevard/Duncan Avenue-Drive

  PM peak hour

- Int. No. 14: Pacific Coast Highway/30th Street

  PM peak hour

- Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street

  AM and PM peak hours

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM peak hour

- Int. No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard

  AM peak hour

As indicated in *Table 10–2*, incremental but not significant impacts associated with the Hermosa Beach project only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

10.1.3 *Existing With Manhattan Beach Projects Only Conditions*

As shown in column [2] of *Table 10–3*, application of the City of Manhattan Beach's threshold criteria to the Existing With Manhattan Beach Projects Only scenario indicates that the Manhattan Beach projects only is expected to result in a significant impact at three of the study intersections. The Manhattan Beach projects only are expected to significantly impact the following locations according to the City of Manhattan Beach's impact criteria during the weekday peak hours shown below under Existing With Manhattan Beach Projects Only conditions:

- Int. No. 12: Sepulveda Boulevard/Duncan Avenue-Drive

  PM peak hour

- Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street

  AM peak hour

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM peak hour

As indicated in *Table 10-3*, incremental but not significant impacts associated with the Manhattan Beach projects only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

10.1.4 *Existing With 305 S. Sepulveda Boulevard Project Only Conditions*

As shown in column [2] of ***Table 10-3-1***, application of the City of Manhattan Beach's threshold criteria to the Future With 305 S. Sepulveda Boulevard Project Only scenario indicates that this project is expected to result in a significant impact at three of the study intersections. According to the City of Manhattan Beach's impact criteria, the following locations are expected to be significantly impacted during the weekday peak hours shown below:

- Int. No. 12: Sepulveda Boulevard/Duncan Avenue-Drive

  PM peak hour

- Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street

  AM peak hour

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM peak hour

As indicated in *Table 10-3-1*, incremental but not significant impacts associated with the 305 S. Sepulveda Boulevard project only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria. Please note only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to be significantly impacted by any individual Skechers project).

Table 10-3-1
CITY OF MANHATTAN BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
305 S. SEPULVEDA BOULEVARD PROJECT ONLY

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2016 EXISTING V/C or DELAY	[1] LOS [b]	[2] YEAR 2016 EXISTING W/ PROJECT V/C or Delay	[2] LOS [b]	[2] CHANGE V/C or DELAY [(2)-(1)]	[2] SIGNIF. IMPACT [c]	[3] YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY	[3] LOS [b]	[4] YEAR 2020 FUTURE W/ PROPOSED PROJECT V/C or DELAY	[4] LOS [b]	[4] CHANGE V/C or DELAY [(4)-(3)]	[4] SIGNIF. IMPACT [c]
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive [a]	AM PM	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 [d]	No Yes	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 [d]	No Yes
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	AM PM	0.814 0.668	D B	0.822 0.677	D B	0.008 0.009	No No	0.875 0.743	D C	0.883 0.752	D C	0.008 0.009	No No
14	Pacific Coast Highway/ 30th Street [a]	AM PM	19.1 >50.0	C F	19.1 >50.0	C F	0.0 0.0	No No	23.4 >50.0	C F	23.4 >50.0	C F	0.0 0.0	No No
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street [a]	AM PM	>50.0 19.7	F C	>50.0 19.7	F C	[d] 0.0	Yes No	>50.0 24.7	F C	>50.0 24.7	F C	0.0 0.0	No No
16	Sepulveda Boulevard/ Tennyson Street [a]	AM PM	>50.0 34.3	F D	>50.0 34.3	F D	[d] 0.0	Yes No	>50.0 >50.0	F F	>50.0 >50.0	F F	[d] [d]	Yes Yes
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	AM PM	1.006 0.769	F C	1.015 0.771	F C	0.009 0.002	No No	1.098 0.887	F D	1.107 0.890	F D	0.009 0.003	No No

[a] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[b] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[c] Refer to report text for the significant impact thresholds.
[d] Oversaturated conditions.

Note:
Please note that only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to significantly impacted by any individual Skechers project).

10.1.5 *Existing With 330 S. Sepulveda Boulevard Expansion Project Only Conditions*

As shown in column [2] of ***Table 10-3-2***, application of the City of Manhattan Beach's threshold criteria to the Future With 330 S. Sepulveda Boulevard Expansion Project Only scenario indicates that this project is expected to result in a significant impact at one study intersection. According to the City of Manhattan Beach's impact criteria, the following locations are expected to be significantly impacted during the weekday peak hours shown below:

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM peak hour

As indicated in *Table 10-3-2*, incremental but not significant impacts associated with the 300 S. Sepulveda Boulevard project only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria. Please note only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to be significantly impacted by any individual Skechers project).

10.2 Future Traffic Conditions

10.2.1 *Future With Combined Project Conditions*

As shown in column [4] of *Table 10-1*, application of the City of Manhattan Beach's threshold criteria to the Future With Combined Project scenario indicates that the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) is expected to result in a significant impact at five of the study intersections. The combined project is expected to significantly impact the following locations according to the City of Manhattan Beach's impact criteria during the weekday peak hours shown below under Future With Combined Project conditions:

- Int. No. 12: Sepulveda Boulevard/Duncan Avenue-Drive

  AM and PM peak hours

- Int. No. 14: Pacific Coast Highway/30th Street

  PM peak hour

- Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street

  AM and PM peak hours

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM peak hour

Table 10-3-2
CITY OF MANHATTAN BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
330 S. SEPULVEDA BOULEVARD EXPANSION PROJECT ONLY

			[1]		[2]				[3]		[4]			
			YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROJECT				YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROPOSED PROJECT			
NO.	INTERSECTION	PEAK HOUR	V/C or DELAY	LOS [b]	V/C or Delay	LOS [b]	CHANGE V/C or DELAY [(2)-(1)]	SIGNIF. IMPACT [c]	V/C or DELAY	LOS [b]	V/C or DELAY	LOS [b]	CHANGE V/C or DELAY [(4)-(3)]	SIGNIF. IMPACT [c]
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive [a]	AM PM	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 0.0	No No	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 0.0	No No
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	AM PM	0.814 0.668	D B	0.826 0.672	D B	0.012 0.004	No No	0.875 0.743	D C	0.887 0.747	D C	0.012 0.004	No No
14	Pacific Coast Highway/ 30th Street [a]	AM PM	19.1 >50.0	C F	19.1 >50.0	C F	0.0 0.0	No No	23.4 >50.0	C F	23.4 >50.0	C F	0.0 [d]	No Yes
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street [a]	AM PM	>50.0 19.7	F C	>50.0 19.7	F C	0.0 0.0	No No	>50.0 24.7	F C	>50.0 24.7	F C	0.0 0.0	No No
16	Sepulveda Boulevard/ Tennyson Street [a]	AM PM	>50.0 34.3	F D	>50.0 34.3	F D	[d] 0.0	Yes No	>50.0 >50.0	F F	>50.0 >50.0	F F	[d] 0.0	Yes No
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	AM PM	1.006 0.769	F C	1.012 0.770	F C	0.006 0.001	No No	1.098 0.887	F D	1.104 0.888	F D	0.006 0.001	No No

[a] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[b] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[c] Refer to report text for the significant impact thresholds.
[d] Oversaturated conditions.
Note:
Please note that only those study intersections that are forecast to be significantly impacted by the combined project (i.e., the Hermosa Beach project and Manhattan Beach projects) were analyzed for each individual project site (i.e., if an intersection is not expected to be significantly impacted by the combined project, it also would not be expected to significantly impacted by any individual Skechers project).

- <u>Int. No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard</u>

  AM peak hour

As indicated in *Table 10-1*, incremental but not significant impacts associated with the combined project are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

10.2.2 *Future With Hermosa Beach Project Only Conditions*

As shown in column [4] of *Table 10-2*, application of the City of Manhattan Beach's threshold criteria to the Future With Hermosa Beach Project Only scenario indicates that the Hermosa Beach project only is expected to result in a significant impact at four of the study intersections. The Hermosa Beach project only is expected to significantly impact the following locations according to the City of Manhattan Beach's impact criteria during the weekday peak hours shown below under Future With Hermosa Beach Project Only conditions:

- <u>Int. No. 14: Pacific Coast Highway/30th Street</u>

  PM peak hour

- <u>Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street</u>

  PM peak hour

- <u>Int. No. 16: Sepulveda Boulevard/Tennyson Street</u>

  AM peak hour

- <u>Int. No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard</u>

  AM peak hour

As indicated in *Table 10-2*, incremental but not significant impacts associated with the Hermosa Beach project only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

10.2.3 *Future With Manhattan Beach Projects Only Conditions*

As shown in column [4] of *Table 10-3*, application of the City of Manhattan Beach's threshold criteria to the Future With Manhattan Beach Projects Only scenario indicates that the Manhattan Beach projects only is expected to result in a significant impact at three of the study intersections. The Manhattan Beach projects only is expected to significantly impact the following locations according to the City of Manhattan Beach's impact criteria during the weekday peak hour shown below under Future With Manhattan Beach Projects Only conditions:

- Int. No. 12: Sepulveda Boulevard/Duncan Avenue-Drive

  PM peak hour

- Int. No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street

  AM peak hour

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM peak hour

As indicated in *Table 10–3*, incremental but not significant impacts associated with the Manhattan Beach projects only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

10.2.4 *Future With 305 S. Sepulveda Boulevard Project Only Conditions*

As shown in column [4] of *Table 10-3-1*, application of the City of Manhattan Beach's threshold criteria to the Future With 305 S. Sepulveda Boulevard Project Only scenario indicates that this project is expected to result in a significant impact at two of the study intersections. According to the City of Manhattan Beach's impact criteria, the following locations are expected to be significantly impacted during the weekday peak hours shown below:

- Int. No. 12: Sepulveda Boulevard/Duncan Avenue-Drive

  PM peak hour

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM and PM peak hours

As indicated in *Table 10-3-1*, incremental but not significant impacts associated with the 305 S. Sepulveda Boulevard project only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

10.2.5 *Future With 330 S. Sepulveda Boulevard Expansion Project Only Conditions*

As shown in column [4] of *Table 10-3-2*, application of the City of Manhattan Beach's threshold criteria to the Future With 330 S. Sepulveda Boulevard Expansion Project Only scenario indicates that this project is expected to result in a significant impact at two of the study intersections. According to the City of Manhattan Beach's impact criteria, the following location is expected to be significantly impacted during the weekday peak hour shown below:

- Int. No. 14: Pacific Coast Highway/30th Street

  PM peak hour

- Int. No. 16: Sepulveda Boulevard/Tennyson Street

  AM peak hour

As indicated in *Table 10-3-2*, incremental but not significant impacts associated with the 300 S. Sepulveda Boulevard project only are noted at the remaining study intersections according to the City of Manhattan Beach's impact criteria.

11.0 CONSTRUCTION TRAFFIC ANALYSIS

While detailed construction staging and traffic management plans have not yet been developed, coordination with the project applicant's general contractor has occurred as part of this traffic analysis in order to identify overall construction activities and potential estimates of construction traffic generation (refer to ***Appendix G***). While quite unlikely, a scenario that involves the overlap of excavation activities for all four building sites (i.e., the Hermosa Beach building sites and the two Manhattan Beach building sites) concurrently has been reviewed. In addition the construction traffic generation associated with overlapping building construction of all sites has also been reviewed so as to provide a conservative forecast of short-term construction traffic impacts.

The Hermosa Beach construction activities will occur between a start time of 8:00 AM and an ending time of 6:00 PM, Monday through Friday as allowed per current City Code. Hauling activities within the City of Hermosa Beach associated with the excavation of the building sites will extend from between 8:00 AM and 3:00 PM so as to not overlap with the weekday PM peak hour. The Manhattan Beach construction activities will occur between a start time of 7:30 AM and an ending time of 6:00 PM, Monday through Friday as allowed per current City Code. Hauling activities within the City of Manhattan Beach associated with the excavation of the 305 S. Sepulveda Boulevard building site will extend from between 7:30 AM and 3:00 PM so as to not overlap with the weekday PM peak hour. Hauling activities associated with the excavation of the 330 S. Sepulveda Boulevard Expansion building site will extend from between 9:00 AM and 4:00 PM and will not overlap with the weekday AM and PM peak hours. Although no hauling associated with the excavation of the 330 S. Sepulveda Boulevard Expansion building site will occur prior to 9:00 AM, the traffic analysis does assume some construction traffic during the weekday AM peak hour in order to provide a conservative analysis. In addition, although the work day will end at 6:00 PM, workers are expected to depart the site generally by 4:30 PM, except when overtime is necessary to maintain the schedule.

During the excavation of the Hermosa Beach sites, the southbound exterior (curbside) travel lane on PCH will be closed between the hours of 8:00 AM and 3:00 PM on Mondays through Fridays. During the excavation of the 305 S. Sepulveda Boulevard site in Manhattan Beach, the southbound exterior (curbside) travel lane on Sepulveda Boulevard will be closed between the hours of 7:30 AM and 3:00 PM on Mondays through Fridays. This will ensure that the exterior southbound travel lane can be re-opened by 3:00 PM, so as not to interfere with the PM peak hour traffic. This lane will be closed during excavation activities and intermittently through the course of the project for deliveries and concrete pours. It is important to note that the southbound curb lane is used as a parking lane during most hours of the day, therefore, this temporary lane closure should not affect the number of through travel lanes otherwise provided. Construction hours for weekend work (i.e., on Saturdays) will extend from 9:00 AM to 6:00 PM.

Due to the construction of the internal below grade pedestrian only access (i.e., which is planned to connect the subterranean P1 level beneath the Hermosa Beach Design Center building to the subterranean P2 level beneath the Hermosa Beach Executive Offices building), 30th Street, while it will remain open, will be narrowed to one lane and operate with alternating traffic flows via flag persons to maintain accessibility. The construction of the pedestrian tunnel will be accomplished via temporary shoring using soldier piles and lagging and conventional shotcrete. The excavation is then covered using steel plates to allow vehicular traffic over the tunnel area. This is commonly referred to as "cut-and-cover" in the construction industry. Therefore, 30th Street will remain open during the peak weekday commute AM and PM peak hours.

This construction traffic analysis contained herein reflects the additional vehicle trips generated by the peak excavation and export activities for the Hermosa Beach and Manhattan Beach sites, construction worker trips to the extent that they overlap with the weekday AM and PM peak commute hours, and the redistribution of the existing Skechers employees who are currently parking off-site who will be directed to park at the existing 225 S. Sepulveda Boulevard and 330 S. Sepulveda Boulevard Skechers' buildings during construction through implementation of valet parking and attendants. A spot count of parked Skechers' employee vehicles within the project building sites indicated a need for up to 85 spaces. As the existing 330 S. Sepulveda Boulevard is overparked above the required parking by at least 50 spaces, the valet operation at both 225 S. Sepulveda Boulevard and 330 S. Sepulveda Boulevard buildings only needs to increase the supply by 45 spaces, which also accounts for the loss of up to 10 spaces due to the construction of the subterranean parking structure connection between the existing 330 S. Sepulveda building and the Expansion building. The parking supply increase due to valet operations is less than a ten percent (10%) increase, which is a yield that is very commonly achieved with the appropriate level of staffing/attendants. In addition, since excavation activities will cease at 3:00 PM for the building sites along the west side of Sepulveda Boulevard and at 4:00 PM for the building site along the west side of Sepulveda Boulevard, this construction traffic analysis also considers the additional vehicle trips generated by the peak concurrent building construction activities for the Hermosa Beach and Manhattan Beach sites during the weekday PM peak hour.

11.1 Construction Assumptions

It is assumed that demolition and site preparation would occur on the project sites during the first two months after commencement of construction activities and that the peak excavation and associated export activities would occur during the following five months for the Hermosa Beach sites and the following four months for the Manhattan Beach sites. It has been assumed that the excavation and export activities for the Hermosa Beach Design Center and Executive Offices buildings, while highly unlikely, could also occur on the same day. <u>Thus, excavation overlap between all sites has been assumed</u>. The excavation activities will require the removal of approximately 130,000 cubic yards of material from the Hermosa Beach sites, 30,000 cubic yards of material from the 305 S. Sepulveda Boulevard (Manhattan Beach) site, and 24,000 cubic yards of material from the 330 S. Sepulveda Boulevard Expansion Project (Manhattan Beach) site. It is assumed that the equipment staging area during the initial phases of construction grading would occur on, within and adjacent to the project sites. Construction worker parking during excavation would occur on-site. Refer to Subsection 11.2 below for a detailed summary of the conservative trip generation forecast during the excavation activities of all four sites concurrently.

While highly unlikely, this construction traffic analysis assumes that all four building sites would also overlap during the most intensive period of building construction (i.e., during the overlap at each site between structure construction and the commencement of core buildout). If this were to occur, as conservatively analyzed herein, a demand of 280 total construction workers could theoretically be generated, based on data provided by the Applicant's construction manager. Refer to Section 11.3 below for a summary of the trip generation forecast during the peak building construction activities of all four sites concurrently. During the building construction activities workers would be required to park off-site through a formal lease arrangement and incorporation of shuttle/s. This is expected to preclude any construction workers from parking on adjacent roadways and within the nearby residential areas. Subsection 11.3 below also provides a summary of the expected shuttle trips (as incorporated into the construction traffic analysis) which account for the application of a passenger car equivalency (PCE) factor.

As described more fully below in Subsection 11.4 below, the overall highest construction traffic generation during the weekday AM peak hour is associated with the peak excavation activities, assuming all four building sites overlap which is highly unlikely. The overall highest construction traffic generation during the weekday PM peak hour is associated with the peak building construction activities, assuming all four building sites overlap which also is highly unlikely.

Current City of Hermosa Beach Code restricts construction hours to no earlier than 8:00 AM, Monday through Friday, and no earlier than 9:00 AM on Saturdays. In addition, current City of Hermosa Beach Code restricts construction hours to no later than 6:00 PM, Monday through Friday, and no later than 5:00 PM on Saturdays. Current City of Manhattan Beach Code restricts construction hours to no earlier than 7:30 AM and to no later than 6:00 PM, Monday through Friday, and no later than 6:00 PM on Saturdays. No construction activities will occur on Sundays. Please refer to Section 11.0 above for a summary of the hours associated with excavation activities. In addition, the overall construction duration for the Manhattan Beach sites is 21 months while for the Hermosa Beach sites is slightly longer at 24 months in duration.

11.2 Construction Traffic Trip Generation – Excavation and Material Export

It is assumed that heavy construction equipment would be located on-site during grading activities and would not travel to and from the project sites on a daily basis. However, truck trips would be generated during the grading and corresponding export activities in order to remove material from the project sites. Trucks are expected to carry the export material to a receptor site/s, although the exact location/s cannot be determined until confirmation of availability can be obtained at a time closer to the actual construction commencement date. It is expected that the receptor site/s would be located within 25 miles of the project sites.

The general contractor anticipates that construction vehicles related to the export activities will have a capacity of at least 14 cubic yards per truck. It has also been assumed for analysis purposes that all hauling would occur for up to seven hours per workday and that export activities would be limited to no earlier than 8:00 AM and no later than 3:00 PM, Monday through Friday and 9:00 AM to 5:00 PM if necessary on Saturdays. Thus, hauling would not take place after 3:00 PM, so as to avoid potential traffic impacts during the peak weekday PM commute hour. The export period is assumed to require approximately 22 workdays per month for approximately four months for the Manhattan Beach sites and for approximately five months for the Hermosa Beach sites. During the peak (i.e., which assumes excavation activities on both the Hermosa Beach Design Center and Executive Offices building sites during the same timeframe and overlapping with excavation activities on both of the Manhattan Beach offices) up to 142 truck loads per day (i.e., 142 inbound trucks and 142 outbound trucks) are anticipated. Assuming a total of 7 hours of hauling activities each day within the City of Hermosa Beach and a total of 7.5 hours of hauling activities each day within Manhattan Beach, it is estimated that approximately 21 truck loads (i.e., resulting in 21 inbound trucks and 21 outbound trucks) could be expected per hour. When accounting for the application of a passenger car equivalency (PCE) factor of 2.5 to account for the heavier weight and larger size haul trucks, a total of 53 inbound PCE trips and 53 outbound PCE trips could potentially occur during the weekday AM peak hour with none expected during the weekday PM peak hour.

The project applicant's general contractor has also provided an estimate of the number of workers during this phase. A total of up to 40 construction workers can be expected during the shoring and excavation activities (i.e., up to 20 workers at the Hermosa Beach building sites and up to 20 workers at the Manhattan Beach building sites) and these workers are expected to be able to park their trucks/vehicles on-site. It is also anticipated that construction workers would primarily remain on-site throughout the day. The number of construction worker vehicles is estimated using an average vehicle ridership (AVR) of 1.135 persons per vehicle (as provided in the South Coast Air Quality Management District in its CEQA Air Quality Handbook). Therefore, it is estimated that approximately 72 vehicle trips (36 inbound trips and 36 outbound trips) on a daily basis would be generated to/from the sites by the construction workers during the excavation phase. In order to provide a conservative analysis, regardless of the construction hours, it has been assumed that an additional 36 inbound trips during the weekday AM peak hour and a maximum of 36 outbound trips would occur during the weekday PM peak hour at each site.

While the greatest potential for impact on the adjacent street system during the weekday AM peak hour would occur during the excavation construction period, the greatest number of construction workers are expected during building construction and these activities are expected to result in the greatest potential for impact on the adjacent street system during the weekday PM peak hour. The following subsection provides a summary of the forecast construction traffic trip generation during concurrent building construction.

11.3 Construction Traffic Trip Generation – Building Construction

Activities related to the building construction are expected to generate the highest number of construction worker vehicle trips as compared to the excavation period. Based on information provided by the general contractor, during concrete pouring and rebar work, the maximum number of construction workers at any given time is expected to be 140 workers at the Hermosa Beach sites and 140 workers at the Manhattan Beach sites. During this phase, as noted in Subsection 11.1 above, construction workers are expected to arrive at a yet to be designated off-site location(s) through lease arrangement, and be shuttled to the construction sites. At this time, it has been assumed that the Redondo Beach Performing Arts Center will be used for off-site construction worker parking. Construction workers are expected to typically arrive to the project site before 7:30 AM and many will depart the site before 4:30 PM. Thus, while these construction worker trips and shuttle trips would generally occur outside of the peak hour of traffic on the local street system, these trips have been assumed to overlap with the commute peak hours in order to provide a conservative forecast of construction trip generation. For example, as shown in the traffic study, the weekday peak hour of traffic at the study intersections adjacent to the project site typically begins between 7:45 and 8:00 AM during the morning commute period, and typically begins between 4:45 and 5:00 PM during the afternoon commute period.

It is anticipated that construction workers would primarily remain on-site throughout the day. The number of construction worker vehicles is estimated using an AVR of 1.135 persons per vehicle (as provided in the South Coast Air Quality Management District in its CEQA Air Quality Handbook). Therefore, it is estimated that approximately 19 inbound shuttle trips and 19 outbound shuttle trips could be generated to/from the off-site location(s) during the weekday AM and PM peak hours during the building construction phase/s at the project sites. It has been conservatively assumed that no construction workers would be able to park on-site during this phase. When accounting for the application of a PCE factor of 1.5 to account for the larger size of a 15-passenger van/shuttle, a total of 29 inbound shuttle PCE trips and 29 outbound shuttle PCE trips could potentially occur during the weekday AM and PM peak hours.

It is generally anticipated that construction worker-related traffic would be largely freeway oriented. Construction workers would likely arrive and depart via the on- and off-ramps serving the I-105 and I-405 Freeways. The most commonly used freeway ramps would be nearest the project sites, including the I-105 Freeway ramps at Sepulveda Boulevard and the I-405 Freeway Ramps at Artesia Boulevard during excavation activities. During building construction, other ramps to/from I-105 and I-405 Freeways would likely be used (e.g., the Aviation Boulevard ramps at I-105 Freeway). The construction work force would likely be generated from all parts of the Los Angeles region and are, thereby are assumed to arrive from all directions. This general distribution (i.e., 80 percent on the freeways and 20 percent on local roadways) could potentially result in less than 50 vehicle trips at any one study intersection near the off-site parking area during the commute peak hours. This increase is not anticipated to result in any significant impacts based on the City's significance criteria.

In addition to construction worker vehicles, additional trips may be generated by miscellaneous trucks traveling to and from the project site. These trucks may consist of larger vehicles delivering equipment and/or construction materials to the project site, or smaller pick-up trucks or four-wheel drive vehicles used by construction supervisors and/or City inspectors. During peak construction phases, which assumes concurrent building construction activities at both the Hermosa Beach and Manhattan Beach sites, it is estimated that approximately 50 trucks per day or 100 truck trips per day (i.e., 50 inbound truck trips and 50 outbound truck trips) could be made by miscellaneous trucks. To conservatively estimate the equivalent number of vehicles associated with the trucks, a PCE factor of

2.0 was utilized based on standard traffic engineering practice. Therefore, conservatively assuming 100 daily truck trips, it is estimated that the trucks would generate approximately 200 PCE trips (i.e., 100 inbound PCE trips and 100 outbound PCE trips) on a daily basis. It is estimated that approximately 10 PCE trips (ten inbound PCE trips and 10 outbound PCE trips) would occur during each of the weekday AM and PM peak hours, assuming ten percent of the daily PCE truck trips occur during the peak hours.

Taken together, the construction worker vehicles and miscellaneous trucks during building construction are forecast to generate significantly fewer vehicle trips than the forecast trips during excavation activities during the weekday AM peak hour and the greatest potential for impact on the adjacent street system during the weekday PM peak hour is during concurrent building construction.

11.4 Future With Construction Conditions – Peak Excavation Activities (AM Peak Hour) and Peak Building Construction (PM Peak Hour)

11.4.1 *City of Hermosa Beach Construction Traffic Analysis*

Access to nearby residential driveways will be maintained and not be obstructed during all concurrent construction activities. .As stated above, the greatest potential for impact on the adjacent street system during the weekday AM peak hour is expected to occur during the excavation construction period. In order to assess the potential impact of excavation activities, a worst-case scenario which assumes excavation of the Hermosa Beach Design Center and Executive Offices building sites and the Manhattan Beach building sites was assumed for weekday AM peak hour analysis purposes. The greatest potential for impact on the adjacent street system during the weekday PM peak hour is expected to occur during the building construction period. In order to assess the potential impact of building construction activities, a worst-case scenario which assumes building construction of the Hermosa Beach Design Center and Executive Offices building sites and the Manhattan Beach building sites was assumed for weekday PM peak hour analysis purposes.

As shown in ***Table 11-1,*** based on the forecast construction traffic generation, which also includes the redistribution of existing Skechers employees who currently park at off-site parking locations, street segment impacts due to construction activities are forecast to be less than significant, based on the still very good Levels of Service (i.e., LOS A at all six street segment locations closest to the project site). As shown in ***Table 11-2,*** based on the forecast construction traffic generation, which also includes redistribution of existing Skechers employees who currently park at off-site parking locations, intersection impacts due to construction activities are forecast to be significant at two intersections (i.e., at Intersection No. 14: PCH/30th Street during the weekday AM peak hour and at Intersection No. 15: Sepulveda Boulevard-PCH/Keats Street during the PM peak hour). It is important to note that these findings are conservative, in that the impacts were analyzed assuming concurrent construction of both the Hermosa Beach and Manhattan Beach building sites and employment of the City of Hermosa Beach's adopted significance thresholds which are intended for application with typical, recurring, conditions and not short-term, temporary conditions as occurs during construction activities. The construction traffic analysis data worksheets are provided in ***Appendix G***.

Table 11-1
CITY OF HERMOSA BEACH STREET SEGMENT LEVELS OF SERVICE SUMMARY
CONSTRUCTION TRAFFIC

					(1) EXISTING TRAFFIC			(2) FUTURE TRAFFIC WITHOUT CONSTRUCTION TRIPS			(3) FUTURE TRAFFIC WITH CONSTRUCTION TRIPS					
NO.	STREET SEGMENT	TIME PERIOD	DIRECTIONAL SPLIT [a]	TOTAL CAPACITY (PCPH) [b]	PEAK HOUR VOL [c]	V/C	LOS	PEAK HOUR VOL [d]	V/C	LOS	PROJECT TRIPS [e]	PEAK HOUR VOL [f]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [g]
2	Longfellow Avenue east of	AM	50 / 50	1,400	106	0.076	A	110	0.079	A	2	112	0.080	A	1.8%	NO
	Ardmore Avenue	PM	50 / 50	1,400	107	0.076	A	111	0.079	A	4	115	0.082	A	3.6%	NO
3	30th Street east of	AM	50 / 50	1,400	80	0.057	A	83	0.059	A	0	83	0.059	A	0.0%	NO
	Ardmore Avenue	PM	50 / 50	1,400	73	0.052	A	76	0.054	A	0	76	0.054	A	0.0%	NO
6	Tennyson Place between	AM	70 / 30	1,250	87	0.070	A	91	0.073	A	0	91	0.073	A	0.0%	NO
	Longfellow Avenue and 30th Street	PM	60 / 40	1,325	103	0.078	A	107	0.081	A	0	107	0.081	A	0.0%	NO
8	Boundary Place west of	AM	70 / 30	1,250	36	0.029	A	37	0.030	A	0	37	0.030	A	0.0%	NO
	Sepulveda Boulevard-Pacific Coast Highway	PM	60 / 40	1,325	30	0.023	A	31	0.023	A	0	31	0.023	A	0.0%	NO
9	Longfellow Avenue west of	AM	90 / 10	1,050	138	0.131	A	144	0.137	A	2	146	0.139	A	1.4%	NO
	Sepulveda Boulevard-Pacific Coast Highway	PM	90 / 10	1,050	169	0.161	A	176	0.168	A	4	180	0.171	A	2.3%	NO
10	30th Street west of	AM	60 / 40	1,325	125	0.094	A	130	0.098	A	0	130	0.098	A	0.0%	NO
	Pacific Coast Highway	PM	70 / 30	1,250	78	0.062	A	81	0.065	A	0	81	0.065	A	0.0%	NO

NOTES
PCPH = Passenger Cars Per Hour
[a] Directional split of the roadway is based on existing traffic count data.
[b] Total capacity (PCPH) is based on existing roadway directional split per County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines". However, please note that the PCPH capacity used in this analysis is one-half (i.e., 50%) of the County's identified capacities in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways, on-street parking, etc.) in order to provide a conservative analysis.
[c] Obtained from 24-hour machine counts conducted by City Traffic Counters in March 2016.
[d] Derived by applying an ambient growth factor of 1.00% per year to existing traffic volumes to reflect year 2020 conditions.
[e] Represents construction trips based on the peak trip generation period of the proposed construction schedule, and includes shifts in existing trips due to the reassignment of Skechers' off-site employee parking to the existing 225 S. Sepulveda Boulevard and 330 S. Sepulveda Boulevard buildings in Manhattan Beach. For purposes of this analysis, no trip reductions were applied to those segments where the net total project trips were determined to be negative.
[f] [d] + [e]
[g] According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines", January 1, 1997, Page 6: an impact is considered significant if the project related increase in Passenger Car Per Hour (PCPH) equals or exceeds the thresholds shown below. However, as noted above, the PCPH capacities used in this analysis are one-half (i.e., 50%) of the County's identified capacities in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways, on-street parking, etc.) in order to provide a conservative analysis.

		Percentage Increases in PCPH by Project		
		Pre-project LOS		
Directional Split	Total Capacity (PCPH)	C	D	E/F
50/50	1,400	4	2	1
60/40	1,325	4	2	1
70/30	1,250	4	2	1
80/20	1,150	4	2	1
90/10	1,050	4	2	1
100/0	1,000	4	2	1

Table 11-2
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
CONSTRUCTION TRAFFIC

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2016 EXISTING V/C or DELAY or VOLUME	LOS [c]	[3] YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY or VOLUME	LOS [c]	[4] YEAR 2020 FUTURE W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
1	Valley Drive/	AM	18.4	C	25.3	D	25.3	D	0.0	No
	Gould Avenue [a]	PM	26.1	D	45.7	E	45.7	E	0.0	No
		AM	1,158 veh.		1,269 veh.		1,269 veh.		0.0%	
		PM	1,315 veh.		1,499 veh.		1,499 veh.		0.0%	
2	Ardmore Avenue/	AM	11.6	B	12.6	B	12.6	B	0.0	No
	Duncan Avenue [a]	PM	10.1	B	10.6	B	10.6	B	0.0	No
		AM	646 veh.		682 veh.		682 veh.		0.0%	
		PM	662 veh.		710 veh.		709 veh.		-0.1%	
3	Ardmore Avenue/	AM	10.8	B	11.3	B	11.3	B	0.0	No
	30th Street [a]	PM	10.1	B	10.6	B	10.6	B	0.0	No
		AM	612 veh.		648 veh.		645 veh.		-0.5%	
		PM	655 veh.		702 veh.		699 veh.		-0.4%	
4	Ardmore Avenue/	AM	39.5	E	47.2	E	47.2	E	0.0	No
	Gould Ave [a]	PM	39.6	E	45.7	E	45.7	E	0.0	No
		AM	1,412 veh.		1,543 veh.		1,543 veh.		0.0%	
		PM	1,470 veh.		1,677 veh.		1,677 veh.		0.0%	
5	Dianthus Street/	AM	7.3	A	7.3	A	7.3	A	0.0	No
	Duncan Avenue [a]	PM	7.6	A	7.6	A	7.6	A	0.0	No
		AM	161 veh.		165 veh.		167 veh.		1.2%	
		PM	236 veh.		243 veh.		237 veh.		-2.5%	
6	Dianthus Street-Tennyson Place/	AM	7.0	A	7.0	A	7.0	A	0.0	No
	Boundary Place [a]	PM	7.1	A	7.1	A	7.1	A	0.0	No
		AM	82 veh.		85 veh.		85 veh.		0.0%	
		PM	104 veh.		107 veh.		100 veh.		-6.5%	
7	Tennyson Place/	AM	7.2	A	7.2	A	7.2	A	0.0	No
	Longfellow Avenue [a]	PM	7.3	A	7.3	A	7.3	A	0.0	No
		AM	125 veh.		129 veh.		131 veh.		1.6%	
		PM	142 veh.		148 veh.		145 veh.		-2.0%	
8	Tennyson Place/	AM	7.1	A	7.1	A	7.1	A	0.0	No
	30th Street [a]	PM	7.1	A	7.1	A	7.1	A	0.0	No
		AM	98 veh.		101 veh.		96 veh.		-5.0%	
		PM	104 veh.		107 veh.		96 veh.		-10.3%	
9	Sepulveda Boulevard/	AM	1.040	F	1.119	F	1.120	F	0.001	No
	Manhattan Beach Boulevard	PM	1.053	F	1.161	F	1.178	F	0.017	No
10	Sepulveda Boulevard/	AM	0.821	D	0.895	D	0.896	D	0.001	No
	8th Street	PM	0.700	B	0.814	D	0.818	D	0.004	No
11	Sepulveda Boulevard/	AM	0.868	D	0.942	E	0.943	E	0.001	No
	2nd Street	PM	0.712	C	0.786	C	0.791	C	0.005	No
12	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	>50.0	F	0.0	No
	Duncan Avenue-Duncan Drive [b]	PM	>50.0	F	>50.0	F	>50.0	F	0.0	No
		AM	4,138 veh.		4,582 veh.		4,635 veh.		1.2%	
		PM	3,821 veh.		4,411 veh.		4,445 veh.		0.8%	
13	Sepulveda Boulevard-Pacific Coast Highway/	AM	0.814	D	0.875	D	0.889	D	0.014	No
	Longfellow Avenue-Longfellow Drive	PM	0.668	B	0.743	C	0.754	C	0.011	No
14	Pacific Coast Highway/	AM	19.1	C	23.4	C	25.2	D	1.8	Yes
	30th Street [b]	PM	>50.0	F	>50.0	F	>50.0	F	[e]	No
		AM	4,116 veh.		4,561 veh.		4,609 veh.		1.1%	
		PM	3,908 veh.		4,501 veh.		4,551 veh.		1.1%	

Table 11-2 (Continued)
CITY OF HERMOSA BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
CONSTRUCTION TRAFFIC

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2016 EXISTING V/C or DELAY or VOLUME	LOS [c]	[3] YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY or VOLUME	LOS [c]	[4] YEAR 2020 FUTURE W/ PROPOSED PROJECT V/C or DELAY or VOLUME	LOS [c]	CHANGE V/C or DELAY or VOLUME [(4)-(3)]	SIGNIF. IMPACT [d]
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street [b]	AM	>50.0	F	>50.0	F	>50.0	F	0.0	No
		PM	19.7	C	24.7	C	25.3	D	0.6	Yes
		AM	4,108 veh.		4,552 veh.		4,609 veh.		1.3%	
		PM	3,944 veh.		4,539 veh.		4,585 veh.		1.0%	
16	Sepulveda Boulevard/ Tennyson Street [b]	AM	>50.0	F	>50.0	F	>50.0	F	[e]	No
		PM	34.3	D	>50.0	F	>50.0	F	0.0	No
		AM	3,976 veh.		4,419 veh.		4,479 veh.		1.4%	
		PM	3,876 veh.		4,485 veh.		4,489 veh.		0.1%	
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	AM	1.006	F	1.098	F	1.109	F	0.011	No
		PM	0.769	C	0.887	D	0.885	D	-0.002	No
18	Pacific Coast Highway/ 21st Street	AM	0.813	D	0.880	D	0.881	D	0.001	No
		PM	0.662	B	0.755	C	0.753	C	-0.002	No
19	Pacific Coast Highway/ 16th Street	AM	0.676	B	0.730	C	0.731	C	0.001	No
		PM	0.672	B	0.751	C	0.750	C	-0.001	No
20	Pacific Coast Highway/ Pier Avenue-14th Street	AM	0.658	B	0.713	C	0.714	C	0.001	No
		PM	0.707	C	0.802	D	0.801	D	-0.001	No
21	Pacific Coast Highway/ Aviation Boulevard-10th Street	AM	0.912	E	0.984	E	0.986	E	0.002	No
		PM	0.834	D	0.904	E	0.904	E	0.000	No
22	Prospect Avenue/ Artesia Boulevard	AM	0.699	B	0.773	C	0.778	C	0.005	No
		PM	0.743	C	0.868	D	0.867	D	-0.001	No
23	Prospect Avenue/ Aviation Boulevard	AM	0.695	B	0.726	C	0.726	C	0.000	No
		PM	0.758	C	0.801	D	0.801	D	0.000	No
24	Meadows Avenue/ Artesia Boulevard	AM	0.690	B	0.759	C	0.764	C	0.005	No
		PM	0.620	B	0.719	C	0.718	C	-0.001	No
25	Peck Avenue-Ford Avenue/ Artesia Boulevard	AM	0.813	D	0.903	E	0.908	E	0.005	No
		PM	0.600	A	0.726	C	0.725	C	-0.001	No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

11.4.2 *City of Manhattan Beach Construction Traffic Analysis*

As shown in ***Table 11-3,*** based on the forecast construction traffic generation, which includes the redistribution of existing Skechers employees who currently park at off-site parking locations, street segment impacts due to construction activities are forecast to be less than significant, based on the still very good Levels of Service (i.e., LOS A at all 13 Manhattan Beach street segment locations closest to the project site). As shown in ***Table 11-4,*** based on the forecast construction traffic generation, which includes the redistribution of existing Skechers employees who currently park at off-site parking locations, intersection impacts due to construction activities are forecast to be significant at two intersections (i.e., at Intersection No. 14: PCH/30th Street during the weekday PM peak hour and at Intersection No. 16: Sepulveda Boulevard/Tennyson Street during the weekday AM peak hour). It is important to note that these findings are conservative, in that the impacts were analyzed assuming concurrent construction of both the Hermosa Beach and Manhattan Beach building sites and employment of the City of Manhattan Beach's adopted significance thresholds which are intended for application with typical, recurring, conditions and not short-term, temporary conditions as occurs during construction activities. The construction traffic analysis data worksheets are provided in *Appendix G*.

11.5 Emergency Access During Construction

During the EIR scoping process, some comments and questions were raised pertaining to emergency access, particularly during the temporary closure of the southbound exterior Sepulveda Boulevard-Pacific Coast Highway curb lane, which is expected to occur only during a portion of the construction sequence. It is important to note that during most times of the day, curbside on-street parking is allowed along the Sepulveda Boulevard corridor. Therefore, the temporary closure of the southbound exterior Sepulveda Boulevard-Pacific Coast Highway curb lane during excavation activities will occur in the same area that is utilized for on-street parking during most of the day. It is thus expected that emergency vehicles using the corridor can continue to do so, access to/from the residential areas will be maintained, and no adverse impact to emergency response is expected.

The potential traffic impacts during construction have been analyzed as previously discussed in Subsection 11.4 above. Having stated the above with respect to potential traffic impacts at area intersections during construction activities, it is important to note that as required by the State of California Vehicle Code (i.e., specifically Section 21806, Authorized Emergency Vehicles), "upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet in front of a vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following:

> (a) (1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain stopped until the authorized emergency vehicle has passed.

Table 11-3
CITY OF MANHATTAN BEACH STREET SEGMENT LEVELS OF SERVICE SUMMARY
CONSTRUCTION TRAFFIC

NO.	STREET SEGMENT	TIME PERIOD	DIRECTIONAL SPLIT [a]	TOTAL CAPACITY (PCPH) [b]	(1) EXISTING TRAFFIC			(2) FUTURE TRAFFIC WITHOUT CONSTRUCTION TRIPS			(3) FUTURE TRAFFIC WITH CONSTRUCTION TRIPS					
					PEAK HOUR VOL [c]	V/C	LOS	PEAK HOUR VOL [d]	V/C	LOS	PROJECT TRIPS [e]	PEAK HOUR VOL [f]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [g]
1	Duncan Avenue east of Ardmore Avenue	AM PM	70 / 30 60 / 40	1,250 1,325	108 101	0.086 0.076	A A	112 105	0.090 0.079	A A	2 0	114 105	0.091 0.079	A A	1.8% 0.0%	NO NO
4	Dianthus Street north of Duncan Avenue	AM PM	80 / 20 60 / 40	1,150 1,325	93 115	0.081 0.087	A A	97 120	0.084 0.091	A A	0 0	97 120	0.084 0.091	A A	0.0% 0.0%	NO NO
5	Dianthus Street between Duncan Avenue and Boundary Place	AM PM	80 / 20 70 / 30	1,150 1,250	101 103	0.088 0.082	A A	105 107	0.091 0.086	A A	0 0	105 107	0.091 0.086	A A	0.0% 0.0%	NO NO
7	Duncan Avenue west of Sepulveda Boulevard	AM PM	50 / 50 70 / 30	1,400 1,250	96 152	0.069 0.122	A A	100 158	0.071 0.126	A A	6 0	106 158	0.076 0.126	A A	6.0% 0.0%	NO NO
11	Duncan Drive east of Sepulveda Boulevard	AM PM	60 / 40 60 / 40	1,325 1,325	60 82	0.045 0.062	A A	62 85	0.047 0.064	A A	6 0	68 85	0.051 0.064	A A	9.7% 0.0%	NO NO
12	Longfellow Drive east of Sepulveda Boulevard-Pacific Coast Highway	AM PM	60 / 40 70 / 30	1,325 1,250	152 142	0.115 0.114	A A	158 148	0.119 0.118	A A	23 2	181 150	0.137 0.120	A A	14.6% 1.4%	NO NO
13	Keats Street east of Sepulveda Boulevard-Pacific Coast Highway	AM PM	50 / 50 70 / 30	1,400 1,250	113 111	0.081 0.089	A A	118 116	0.084 0.093	A A	0 0	118 116	0.084 0.093	A A	0.0% 0.0%	NO NO
14	Kuhn Drive between Rhonda Drive and Duncan Drive	AM PM	60 / 40 60 / 40	1,325 1,325	37 47	0.028 0.035	A A	39 49	0.029 0.037	A A	0 0	39 49	0.029 0.037	A A	0.0% 0.0%	NO NO
15	Kuhn Drive between Duncan Drive and Longfellow Drive	AM PM	60 / 40 70 / 30	1,325 1,250	67 66	0.051 0.053	A A	70 69	0.053 0.055	A A	6 0	76 69	0.057 0.055	A A	8.6% 0.0%	NO NO

Table 11-3 (Continued)
CITY OF MANHATTAN BEACH STREET SEGMENT LEVELS OF SERVICE SUMMARY
CONSTRUCTION TRAFFIC

NO.	STREET SEGMENT	TIME PERIOD	DIRECTIONAL SPLIT [a]	TOTAL CAPACITY (PCPH) [b]	(1) EXISTING TRAFFIC PEAK HOUR VOL [c]	V/C	LOS	(2) FUTURE TRAFFIC WITHOUT CONSTRUCTION TRIPS PEAK HOUR VOL [d]	V/C	LOS	(3) FUTURE TRAFFIC WITH CONSTRUCTION TRIPS PROJECT TRIPS [e]	PEAK HOUR VOL [f]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [g]
16	Kuhn Drive between Longfellow Drive and Keats Street	AM PM	60 / 40 60 / 40	1,325 1,325	122 94	0.092 0.071	A A	127 98	0.096 0.074	A A	0 0	127 98	0.096 0.074	A A	0.0% 0.0%	NO NO
17	Keats Street between Kuhn Drive and Chabela Drive	AM PM	60 / 40 70 / 30	1,325 1,250	294 244	0.222 0.195	A A	306 254	0.231 0.203	A A	0 0	306 254	0.231 0.203	A A	0.0% 0.0%	NO NO
18	Prospect Avenue north of Artesia Boulevard	AM PM	70 / 30 60 / 40	1,250 1,325	227 278	0.182 0.210	A A	236 289	0.189 0.218	A A	0 0	236 289	0.189 0.218	A A	0.0% 0.0%	NO NO
19	Meadows Avenue north of Artesia Boulevard	AM PM	60 / 40 60 / 40	1,325 1,325	583 561	0.440 0.423	A A	607 584	0.458 0.441	A A	0 0	607 584	0.458 0.441	A A	0.0% 0.0%	NO NO

NOTES
PCPH = Passenger Cars Per Hour
[a] Directional split of the roadway is based on existing traffic count data.
[b] Total capacity (PCPH) is based on existing roadway directional split per County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines". However, please note that the PCPH capacity used in this analysis is one-half (i.e., 50%) of the County's identified capacities in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways, on-street parking, etc.) in order to provide a conservative analysis.
[c] Obtained from 24-hour machine counts conducted by City Traffic Counters in March 2016.
[d] Derived by applying an ambient growth factor of 1.00% per year to existing traffic volumes to reflect year 2020 conditions.
[e] Represents construction trips based on the peak trip generation period of the proposed construction schedule, and includes shifts in existing trips due to the reassignment of Skechers' off-site employee parking to the existing 225 S. Sepulveda Boulevard and 330 S. Sepulveda Boulevard buildings in Manhattan Beach. For purposes of this analysis, no trip reductions were applied to those segments where the net total project trips were determined to be negative.
[f] [d] + [e]
[g] According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines", January 1, 1997, Page 6: an impact is considered significant if the project related increase in Passenger Car Per Hour (PCPH) equals or exceeds the thresholds shown below. However, as noted above, the PCPH capacities used in this analysis are one-half (i.e., 50%) of the County's identified capacities in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways, on-street parking, etc.) in order to provide a conservative analysis.

Percentage Increases in PCPH by Project

Directional Split	Total Capacity (PCPH)	Pre-project LOS C	D	E/F
50/50	1,400	4	2	1
60/40	1,325	4	2	1
70/30	1,250	4	2	1
80/20	1,150	4	2	1
90/10	1,050	4	2	1
100/0	1,000	4	2	1

Table 11-4
CITY OF MANHATTAN BEACH - SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS
CONSTRUCTION TRAFFIC

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2016 EXISTING V/C or DELAY	LOS [c]	[3] YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY	LOS [c]	[4] YEAR 2020 FUTURE W/ PROPOSED PROJECT V/C or DELAY	LOS [c]	CHANGE V/C or DELAY [(4)-(3)]	SIGNIF. IMPACT [d]
2	Ardmore Avenue/ Duncan Avenue [a]	AM PM	11.6 10.1	B B	12.6 10.6	B B	12.6 10.6	B B	0.0 0.0	No No
5	Dianthus Street/ Duncan Avenue [a]	AM PM	7.3 7.6	A A	7.3 7.6	A A	7.3 7.6	A A	0.0 0.0	No No
6	Dianthus Street-Tennyson Place/ Boundary Place [a]	AM PM	7.0 7.1	A A	7.0 7.1	A A	7.0 7.1	A A	0.0 0.0	No No
9	Sepulveda Boulevard/ Manhattan Beach Boulevard	AM PM	1.040 1.053	F F	1.119 1.161	F F	1.120 1.178	F F	0.001 0.017	No No
10	Sepulveda Boulevard/ 8th Street	AM PM	0.821 0.700	D B	0.895 0.814	D D	0.896 0.818	D D	0.001 0.004	No No
11	Sepulveda Boulevard/ 2nd Street	AM PM	0.868 0.712	D C	0.942 0.786	E C	0.943 0.791	E C	0.001 0.005	No No
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive [b]	AM PM	>50.0 >50.0	F F	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 0.0	No No
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	AM PM	0.814 0.668	D B	0.875 0.743	D C	0.889 0.754	D C	0.014 0.011	No No
14	Pacific Coast Highway/ 30th Street [b]	AM PM	19.1 >50.0	C F	23.4 >50.0	C F	25.2 >50.0	D F	1.8 [e]	No Yes
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street [b]	AM PM	>50.0 19.7	F C	>50.0 24.7	F C	>50.0 25.3	F D	0.0 0.6	No No
16	Sepulveda Boulevard/ Tennyson Street [b]	AM PM	>50.0 34.3	F D	>50.0 >50.0	F F	>50.0 >50.0	F F	[e] 0.0	Yes No
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	AM PM	1.006 0.769	F C	1.098 0.887	F D	1.109 0.885	F D	0.011 -0.002	No No
22	Prospect Avenue/ Artesia Boulevard	AM PM	0.699 0.743	B C	0.773 0.868	C D	0.778 0.867	C D	0.005 -0.001	No No
24	Meadows Avenue/ Artesia Boulevard	AM PM	0.690 0.620	B B	0.759 0.719	C C	0.764 0.718	C C	0.005 -0.001	No No
25	Peck Avenue-Ford Avenue/ Artesia Boulevard	AM PM	0.813 0.600	D A	0.903 0.726	E C	0.908 0.725	E C	0.005 -0.001	No No

[a] All-way stop controlled intersection.
[b] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained movement of the intersection.
[c] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[d] Refer to report text for the significant impact thresholds.
[e] Oversaturated conditions.

(2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety.

(b) The operator of every street car shall immediately stop the street car, clear of any intersection, and remain stopped until the authorized emergency vehicle has passed.

(c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed."[7]

If required, drivers of emergency vehicles are also trained to utilize center turn lanes, or travel in opposing through lanes, to pass through crowded intersections or streets. Thus, the respect entitled to emergency vehicles and driver training allow emergency vehicles to negotiate typical street conditions in urban areas including areas near a temporary roadway closure. No significant impacts to emergency response times is therefore anticipated.

11.6 Construction Management and Haul Route Approval

Approvals required by the City of Hermosa Beach, the City of Manhattan Beach, and Caltrans for implementation of the proposed project include a Truck Haul Route program approved by Cities and an encroachment permit obtained by Caltrans. With regard to other construction traffic-related issues, construction equipment would be stored within the perimeter fence of the construction site. With the required haul route approval and other construction management practices, construction activity is considered to be temporarily significant. Impacts could be further reduced with the implementation of the following design features:

- Maintain existing access for the existing site uses and parking facilities;
- Limit any potential roadway lane closures to off-peak travel periods;
- Schedule receipt of construction materials to non-peak travel periods, to the extent possible;
- Coordinate deliveries to reduce the potential of trucks waiting to unload for protracted periods of times; and
- Prohibit parking by construction workers on adjacent streets and directing the construction workers to available parking within the project site.

In conclusion, short-term, temporary impacts during construction are found to be significant and unavoidable.

[7] Source: State of California Department of Motor Vehicles website; https://www.dmv.ca.gov/portal/dmv; Amended Sec. 68, Ch. 1154, Stats 1996 Effective September 30, 1996.

12.0 California Department of Transportation Analysis

In addition to the intersection analyses, which utilize the City of Hermosa Beach and the City of Manhattan Beach's methodologies, a supplemental analysis was prepared based on the latest edition of the *Highway Capacity Manual*[8] (HCM 2010) operational analysis methodologies pursuant to Caltrans' *Guide for the Preparation of Traffic Impact Studies*[9]. Based on recent coordination with Caltrans, analyses of Caltrans facilities should be conducted when and if a proposed project is expected to add 50 or more peak hour trips in either direction on a freeway mainline segment. The proposed project at build-out is not expected to generate 50 or more vehicle trips, during either the weekday AM or PM commute peak hours, at any freeway mainline location. Thus, any freeway mainline location would not exceed the threshold for preparation of a Caltrans freeway mainline analysis. However, the proposed project is expected to contribute trip generation along the Sepulveda Boulevard/Pacific Coast Highway corridor, which operates under joint jurisdiction with Caltrans and the Cities of Hermosa Beach and Manhattan Beach. Therefore, the Sepulveda Boulevard/Pacific Coast Highway corridor has been analyzed based on Caltrans methodology during the weekday AM and PM commute peak hours. The following Caltrans study intersections have been identified for analysis based on their proximity to the project site:

- Intersection No. 9: Sepulveda Boulevard/Manhattan Beach Boulevard
- Intersection No. 10: Sepulveda Boulevard/8th Street
- Intersection No. 11: Sepulveda Boulevard/2nd Street
- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive
- Intersection No. 13: Sepulveda Boulevard-PCH/Longfellow Avenue-Longfellow Drive
- Intersection No. 14: Sepulveda Boulevard-PCH/30th Street
- Intersection No. 15: Sepulveda Boulevard-PCH/Keats Street
- Intersection No. 16: Sepulveda Boulevard-PCH/Tennyson Street
- Intersection No. 17: Sepulveda Boulevard-PCH/Gould Avenue-Artesia Boulevard
- Intersection No. 18: Pacific Coast Highway/21st Street
- Intersection No. 19: Pacific Coast Highway/16th Street
- Intersection No. 20: Pacific Coast Highway/Pier Avenue-14th Street
- Intersection No. 21: Pacific Coast Highway/Aviation Boulevard-10th Street

---

8 *HCM2010 Highway Capacity Manual*, Transportation Research Board of the National Academies, 2010.

9 *Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December 2002.

According to the Caltrans document, the LOS for operating State highway facilities is based upon measures of effectiveness (MOEs). For state-controlled signalized study intersections, the MOE is determined based on control delay in seconds per vehicle (sec/veh). Caltrans "endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities"; it does not require that LOS D (shall) be maintained. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained. For this analysis, LOS D is the target level of service standard and will be utilized to assess the project impacts at the Caltrans study intersections. For signalized intersections, Caltrans considers a location to be impacted if the target MOE is not maintained and a corresponding change in control delay in seconds per vehicle (sec/veh) is 1.0 second or more.

12.1 Highway Capacity Manual Method of Analysis

Based on the HCM operations method of analysis, level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometries, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road.

The HCM signalized methodology calculates the control delay for each of the subject traffic movements and determines the level of service for each constrained movement. The control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall control delay is measured in seconds per vehicle and the level of service is then determined. The term Level of Service (LOS) is used to describe intersection operations. Intersection Levels of Service vary from LOS A (free flow) to LOS F (jammed condition). The six qualitative categories of Level of Service that have been defined along with the corresponding HCM control delay value range for signalized intersections are shown in ***Appendix H***.

12.2 Intersection Impact Analysis and Queuing Review

Intersection analyses were prepared utilizing the *Synchro 9* software package which implements the Highway Capacity Manual operational methods. A *Synchro* network was created based on existing conditions field reviews at the above 13 Caltrans study intersections. In addition, specifics such as lane configurations, storage lengths, crosswalk locations, posted speed limits, traffic signal phasing, and traffic volumes, were coded to complete the existing network.

12.2.1 *Combined Project Analyses*

Table 12-1 summarizes the intersection analyses for the existing, existing with combined project, and year 2020 future conditions both without and with the combined project. The first column [1] of *Table 12-1* presents a summary of existing traffic conditions. The second column [2] presents

Table 12-1
CALTRANS INTERSECTION IMPACT ANALYSIS [a]
COMBINED PROJECT

				[1]		[2]				[3]		[4]			
				YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ COMBINED PROJECT		CHANGE IN DELAY		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ COMBINED PROJECT		CHANGE IN DELAY	
NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	DELAY [b]	LOS [c]	DELAY [b]	LOS [c]	[(2)-(1)]	IMPACT	DELAY [b]	LOS [c]	DELAY [b]	LOS [c]	[(4)-(3)]	IMPACT
9	Sepulveda Boulevard/	Signalized	AM	60.8	E	62.0	E	1.2	Yes	74.4	E	76.3	E	1.9	Yes
	Manhattan Beach Boulevard		PM	>80.0	F	>80.0	F	0.6	No	>80.0	F	>80.0	F	0.9	No
10	Sepulveda Boulevard/	Signalized	AM	5.0	A	5.0	A	0.0	No	5.3	A	5.3	A	0.0	No
	8th Street		PM	3.4	A	3.4	A	0.0	No	3.7	A	3.7	A	0.0	No
11	Sepulveda Boulevard/	Signalized	AM	11.4	B	11.4	B	0.0	No	13.7	B	13.7	B	0.0	No
	2nd Street		PM	9.2	A	9.2	A	0.0	No	8.9	A	8.9	A	0.0	No
12	Sepulveda Boulevard/	Two-Way	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	[d]	Yes
	Duncan Avenue-Duncan Drive	Stop	PM	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	>50.0	F	[d]	Yes
13	Sepulveda Boulevard-Pacific Coast Highway/	Signalized	AM	6.0	A	6.5	A	0.5	No	6.8	A	7.5	A	0.7	No
	Longfellow Avenue-Longfellow Drive		PM	4.7	A	4.7	A	0.0	No	4.7	A	4.7	A	0.0	No
14	Pacific Coast Highway/	Two-Way	AM	19.1	C	23.5	C	4.4	No	23.4	C	31.4	D	8.0	No
	30th Street	Stop	PM	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	>50.0	F	[d]	Yes
15	Sepulveda Boulevard-Pacific Coast Highway/	Two-Way	AM	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	>50.0	F	[d]	Yes
	Keats Street	Stop	PM	19.7	C	>50.0	F	[d]	Yes	24.7	C	>50.0	F	[d]	Yes
16	Sepulveda Boulevard/	Two-Way	AM	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	>50.0	F	[d]	Yes
	Tennyson Street	Stop	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
17	Sepulveda Boulevard-Pacific Coast Highway/	Signalized	AM	59.0	E	66.8	E	7.8	Yes	67.3	E	75.8	E	8.5	Yes
	Gould Avenue-Artesia Boulevard		PM	50.0	D	56.0	E	6.0	Yes	71.9	E	77.2	E	5.3	Yes
18	Pacific Coast Highway/	Signalized	AM	16.8	B	17.0	B	0.2	No	18.1	B	18.5	B	0.4	No
	21st Street		PM	9.6	A	9.6	A	0.0	No	7.0	A	7.0	A	0.0	No
19	Pacific Coast Highway/	Signalized	AM	10.0	A	10.0	A	0.0	No	10.2	B	10.2	B	0.0	No
	16th Street		PM	38.3	D	38.6	D	0.3	No	42.1	D	43.8	D	1.7	No
20	Pacific Coast Highway/	Signalized	AM	9.4	A	9.4	A	0.0	No	9.0	A	9.0	A	0.0	No
	Pier Avenue-14th Street		PM	11.9	B	11.9	B	0.0	No	13.9	B	13.9	B	0.0	No
21	Pacific Coast Highway/	Signalized	AM	30.7	C	31.2	C	0.5	No	34.5	C	35.7	D	1.2	No
	Aviation Boulevard-10th Street		PM	37.0	D	37.2	D	0.2	No	39.4	D	39.4	D	0.0	No

[a] Intersection analysis based on the Highway Capacity Manual operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies, December 2002.*

[b] Reported control delay values in seconds per vehicle. For two-way stop controlled intersections, reported control delay values represent the delays associated with the most constrained movement of the intersection.

[c] Signalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Unsignalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[d] Oversaturated Conditions.

existing with combined project traffic conditions based on existing intersection geometry. The third column [3] presents year 2020 traffic conditions based on existing intersection geometry, but without any combined project-generated traffic. The fourth column [4] presents future forecast traffic conditions with the addition of project traffic.

As shown in *Table 12-1*, application of the Caltrans LOS standards and guidelines to the existing with combined project scenario indicates that the proposed project is expected to adversely impact the following six (6) of the 13 Caltrans study intersections:

- Intersection No. 9: Sepulveda Boulevard/Manhattan Beach Boulevard (AM peak hour)
- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive (PM peak hour)
- Intersection No. 14: Pacific Coast Highway/30th Street (PM peak hour)
- Intersection No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street (AM/PM peak hours)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM/PM peak hours)

Application of the Caltrans LOS standards and guidelines to the year 2020 future with combined project scenario indicates that the proposed project is expected to adversely impact the following six (6) of the 13 Caltrans study intersections:

- Intersection No. 9: Sepulveda Boulevard/Manhattan Beach Boulevard (AM peak hour)
- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive (AM/PM peak hours)
- Intersection No. 14: Pacific Coast Highway/30th Street (PM peak hour)
- Intersection No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street (AM/PM peak hours)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM/PM peak hours)

The corresponding weekday AM and PM peak hour HCM worksheets are contained in *Appendix H*.

In addition to the intersection analyses, a review of potential vehicle queuing was also conducted focusing on evaluation of the key northbound left-turn movements at the Pacific Coast Highway/Keats Street, Pacific Coast Highway /30th Street and Sepulveda Boulevard/Duncan Avenue intersections, and the southbound left-turn movement at the Pacific Coast Highway/Tennyson Street intersection. Please refer to Subsection 9.5 herein for a summary of the analysis.

12.2.2 *Hermosa Beach Project Only Analyses*

Table 12-2 summarizes the intersection analyses for the existing, existing with the Hermosa Beach project only, and year 2020 future conditions both without and with the Hermosa Beach project only. The first column [1] of *Table 12-2* presents a summary of existing traffic conditions. The second column [2] presents existing with Hermosa Beach project only traffic conditions based on existing intersection geometry. The third column [3] presents year 2020 traffic conditions based on existing intersection geometry, but without any Hermosa Beach project-generated traffic. The fourth column [4] presents future forecast traffic conditions with the addition of the Hermosa Beach project only traffic.

As shown in *Table 12-2*, application of the Caltrans LOS standards and guidelines to the existing with Hermosa Beach project only scenario indicates that the proposed project is expected to adversely impact the following five (5) of the 13 Caltrans study intersections:

- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive (PM peak hour)
- Intersection No. 14: Pacific Coast Highway/30th Street (PM peak hour)
- Intersection No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street (AM/PM peak hours)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM/PM peak hours)

Application of the Caltrans LOS standards and guidelines to the year 2020 future with Hermosa Beach project only scenario indicates that the proposed project is expected to adversely impact the following five (5) of the 13 Caltrans study intersections:

- Intersection No. 9: Sepulveda Boulevard/Manhattan Beach Boulevard (AM peak hour)
- Intersection No. 14: Pacific Coast Highway/30th Street (PM peak hour)
- Intersection No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street (PM peak hour)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM/PM peak hours)

The corresponding weekday AM and PM peak hour HCM worksheets are contained in *Appendix H*.

Table 12-2
CALTRANS INTERSECTION IMPACT ANALYSIS [a]
HERMOSA BEACH PROJECT ONLY

NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	[1] YEAR 2016 EXISTING DELAY [b]	[1] LOS [c]	[2] YEAR 2016 EXISTING W/ COMBINED PROJECT DELAY [b]	[2] LOS [c]	[2] CHANGE IN DELAY [(2)-(1)]	[2] IMPACT	[3] YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. DELAY [b]	[3] LOS [c]	[4] YEAR 2020 FUTURE W/ COMBINED PROJECT DELAY [b]	[4] LOS [c]	[4] CHANGE IN DELAY [(4)-(3)]	[4] IMPACT
9	Sepulveda Boulevard/ Manhattan Beach Boulevard	Signalized	AM PM	60.8 >80.0	E F	61.7 >80.0	E F	0.9 0.4	No No	74.4 >80.0	E F	75.8 >80.0	E F	1.4 0.6	Yes No
10	Sepulveda Boulevard/ 8th Street	Signalized	AM PM	5.0 3.4	A A	5.0 3.4	A A	0.0 0.0	No No	5.3 3.7	A A	5.3 3.7	A A	0.0 0.0	No No
11	Sepulveda Boulevard/ 2nd Street	Signalized	AM PM	11.4 9.2	B A	11.4 9.2	B A	0.0 0.0	No No	13.7 8.9	B A	13.7 8.9	B A	0.0 0.0	No No
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive	Two-Way Stop	AM PM	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 [d]	No Yes	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 0.0	No No
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	Signalized	AM PM	6.0 4.7	A A	6.0 4.7	A A	0.0 0.0	No No	6.8 4.7	A A	6.8 4.7	A A	0.0 0.0	No No
14	Pacific Coast Highway/ 30th Street	Two-Way Stop	AM PM	19.1 >50.0	C F	24.6 >50.0	C F	5.5 [d]	No Yes	23.4 >50.0	C F	33.9 >50.0	D F	10.5 [d]	No Yes
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	Two-Way Stop	AM PM	>50.0 19.7	F C	>50.0 >50.0	F F	[d] [d]	Yes Yes	>50.0 24.7	F C	>50.0 >50.0	F F	0.0 [d]	No Yes
16	Sepulveda Boulevard/ Tennyson Street	Two-Way Stop	AM PM	>50.0 34.3	F D	>50.0 34.3	F D	[d] 0.0	Yes No	>50.0 >50.0	F F	>50.0 >50.0	F F	[d] 0.0	Yes No
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	Signalized	AM PM	59.0 50.0	E D	64.4 55.1	E E	5.4 5.1	Yes Yes	67.3 71.9	E E	73.2 75.8	E E	5.9 3.9	Yes Yes
18	Pacific Coast Highway/ 21st Street	Signalized	AM PM	16.8 9.6	B A	16.9 9.6	B A	0.1 0.0	No No	18.1 7.0	B A	18.3 7.0	B A	0.2 0.0	No No
19	Pacific Coast Highway/ 16th Street	Signalized	AM PM	10.0 38.3	A D	10.0 38.5	A D	0.0 0.2	No No	10.2 42.1	B D	10.2 43.3	B D	0.0 1.2	No No
20	Pacific Coast Highway/ Pier Avenue-14th Street	Signalized	AM PM	9.4 11.9	A B	9.4 11.9	A B	0.0 0.0	No No	9.0 13.9	A B	9.0 13.9	A B	0.0 0.0	No No
21	Pacific Coast Highway/ Aviation Boulevard-10th Street	Signalized	AM PM	30.7 37.0	C D	31.0 37.1	C D	0.3 0.1	No No	34.5 39.4	C D	35.3 39.6	D D	0.8 0.2	No No

[a] Intersection analysis based on the Highway Capacity Manual operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies, December 2002.*

[b] Reported control delay values in seconds per vehicle. For two-way stop controlled intersections, reported control delay values represent the delays associated with the most constrained movement of the intersection.

[c] Signalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Unsignalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[d] Oversaturated Conditions.

In addition to the intersection analyses, a review of potential vehicle queuing was also conducted focusing on evaluation of the key northbound left-turn movements at the Pacific Coast Highway/Keats Street, Pacific Coast Highway /30th Street and Sepulveda Boulevard/Duncan Avenue intersections, and the southbound left-turn movement at the Pacific Coast Highway/Tennyson Street intersection. Please refer to Subsection 9.5 herein for a summary of the analysis.

12.2.3 *Manhattan Beach Projects Only Analyses*

Table 12-3 summarizes the intersection analyses for the existing, existing with the Manhattan Beach projects only, and year 2020 future conditions both without and with the Manhattan Beach projects only. The first column [1] of *Table 12-3* presents a summary of existing traffic conditions. The second column [2] presents existing with Manhattan Beach projects only traffic conditions based on existing intersection geometry. The third column [3] presents year 2020 traffic conditions based on existing intersection geometry, but without any Manhattan Beach projects-generated traffic. The fourth column [4] presents future forecast traffic conditions with the addition of the Manhattan Beach projects only traffic.

As shown in *Table 12-3*, application of the Caltrans LOS standards and guidelines to the existing with Manhattan Beach projects only scenario indicates that the proposed project is expected to adversely impact the following four (4) of the 13 Caltrans study intersections:

- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive (PM peak hour)
- Intersection No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street (AM peak hour)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM peak hour)

Application of the Caltrans LOS standards and guidelines to the year 2020 future with Manhattan Beach projects only scenario indicates that the proposed project is expected to adversely impact the following four (4) of the 13 Caltrans study intersections:

- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive (PM peak hour)
- Intersection No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street (AM peak hour)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM/PM peak hours)

The corresponding weekday AM and PM peak hour HCM worksheets are contained in *Appendix H*.

Table 12-3
CALTRANS INTERSECTION IMPACT ANALYSIS [a]
MANHATTAN BEACH PROJECTS

NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	[1] YEAR 2016 EXISTING DELAY [b]	[1] LOS [c]	[2] YEAR 2016 EXISTING W/ COMBINED PROJECT DELAY [b]	[2] LOS [c]	[2] CHANGE IN DELAY [(2)-(1)]	[2] IMPACT	[3] YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. DELAY [b]	[3] LOS [c]	[4] YEAR 2020 FUTURE W/ COMBINED PROJECT DELAY [b]	[4] LOS [c]	[4] CHANGE IN DELAY [(4)-(3)]	[4] IMPACT
9	Sepulveda Boulevard/	Signalized	AM	60.8	E	61.1	E	0.3	No	74.4	E	74.8	E	0.4	No
	Manhattan Beach Boulevard		PM	>80.0	F	>80.0	F	0.2	No	>80.0	F	>80.0	F	0.1	No
10	Sepulveda Boulevard/	Signalized	AM	5.0	A	5.0	A	0.0	No	5.3	A	5.3	A	0.0	No
	8th Street		PM	3.4	A	3.4	A	0.0	No	3.7	A	3.7	A	0.0	No
11	Sepulveda Boulevard/	Signalized	AM	11.4	B	11.4	B	0.0	No	13.7	B	13.7	B	0.0	No
	2nd Street		PM	9.2	A	9.2	A	0.0	No	8.9	A	8.9	A	0.0	No
12	Sepulveda Boulevard/	Two-Way	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	Duncan Avenue-Duncan Drive	Stop	PM	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	>50.0	F	[d]	Yes
13	Sepulveda Boulevard-Pacific Coast Highway/	Signalized	AM	6.0	A	6.6	A	0.6	No	6.8	A	7.7	A	0.9	No
	Longfellow Avenue-Longfellow Drive		PM	4.7	A	4.7	A	0.0	No	4.7	A	4.8	A	0.1	No
14	Pacific Coast Highway/	Two-Way	AM	19.1	C	19.1	C	0.0	No	23.4	C	23.4	C	0.0	No
	30th Street	Stop	PM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
15	Sepulveda Boulevard-Pacific Coast Highway/	Two-Way	AM	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	>50.0	F	[d]	Yes
	Keats Street	Stop	PM	19.7	C	19.7	C	0.0	No	24.7	C	24.7	C	0.0	No
16	Sepulveda Boulevard/	Two-Way	AM	>50.0	F	>50.0	F	[d]	Yes	>50.0	F	>50.0	F	[d]	Yes
	Tennyson Street	Stop	PM	34.3	D	34.3	D	0.0	No	>50.0	F	>50.0	F	0.0	No
17	Sepulveda Boulevard-Pacific Coast Highway/	Signalized	AM	59.0	E	61.1	E	2.1	Yes	67.3	E	69.5	E	2.2	Yes
	Gould Avenue-Artesia Boulevard		PM	50.0	D	53.4	D	3.4	No	71.9	E	73.1	E	1.2	Yes
18	Pacific Coast Highway/	Signalized	AM	16.8	B	16.9	B	0.1	No	18.1	B	18.2	B	0.1	No
	21st Street		PM	9.6	A	9.6	A	0.0	No	7.0	A	7.0	A	0.0	No
19	Pacific Coast Highway/	Signalized	AM	10.0	A	10.0	A	0.0	No	10.2	B	10.2	B	0.0	No
	16th Street		PM	38.3	D	38.3	D	0.0	No	42.1	D	42.4	D	0.3	No
20	Pacific Coast Highway/	Signalized	AM	9.4	A	9.4	A	0.0	No	9.0	A	9.0	A	0.0	No
	Pier Avenue-14th Street		PM	11.9	B	11.9	B	0.0	No	13.9	B	13.9	B	0.0	No
21	Pacific Coast Highway/	Signalized	AM	30.7	C	30.9	C	0.2	No	34.5	C	34.8	C	0.3	No
	Aviation Boulevard-10th Street		PM	37.0	D	37.1	D	0.1	No	39.4	D	39.5	D	0.1	No

[a] Intersection analysis based on the Highway Capacity Manual operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies, December 2002.*

[b] Reported control delay values in seconds per vehicle. For two-way stop controlled intersections, reported control delay values represent the delays associated with the most constrained movement of the intersection.

[c] Signalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Unsignalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[d] Oversaturated Conditions.

In addition to the intersection analyses, a review of potential vehicle queuing was also conducted focusing on evaluation of the key northbound left-turn movements at the Pacific Coast Highway/Keats Street, Pacific Coast Highway /30th Street and Sepulveda Boulevard/Duncan Avenue intersections, and the southbound left-turn movement at the Pacific Coast Highway/Tennyson Street intersection. Please refer to Subsection 9.5 herein for a summary of the analysis.

12.2.4 *305 S. Sepulveda Boulevard Project Only Analyses*

Table 12-3-1 summarizes the intersection analyses for the existing, existing with the 305 S. Sepulveda Boulevard project only, and year 2020 future conditions both without and with the 305 S. Sepulveda Boulevard project only. This analysis was performed for locations along the Sepulveda Boulevard-Pacific Coast Highway corridor that were determined either to be significantly impacted by both Manhattan Beach projects (as summarized in Subsection 12.2.3 above), or located in between the impacted locations. The first column [1] of *Table 12-3-1* presents a summary of existing traffic conditions. The second column [2] presents existing with the 305 S. Sepulveda Boulevard project only traffic conditions based on existing intersection geometry. The third column [3] presents year 2020 traffic conditions based on existing intersection geometry, but without any 305 S. Sepulveda Boulevard project-generated traffic. The fourth column [4] presents future forecast traffic conditions with the addition of project traffic.

As shown in *Table 12-3-1*, application of the Caltrans LOS standards and guidelines to the existing with 305 S. Sepulveda Boulevard project only scenario indicates that the proposed project is expected to adversely impact the following four (4) of the 13 Caltrans study intersections:

- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive (PM peak hour)
- Intersection No. 15: Sepulveda Boulevard-Pacific Coast Highway/Keats Street (AM peak hour)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM peak hour)

Application of the Caltrans LOS standards and guidelines to the year 2020 future with 305 S. Sepulveda Boulevard project only scenario indicates that the proposed project is expected to adversely impact the following three (3) of the 13 Caltrans study intersections:

- Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive (PM peak hour)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM/PM peak hours)
- Intersection No. 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard (AM peak hour)

The corresponding weekday AM and PM peak hour HCM worksheets are contained in *Appendix H*.

Table 12-3-1
CALTRANS INTERSECTION IMPACT ANALYSIS [a]
305 S. SEPULVEDA BOULEVARD PROJECT ONLY

NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	[1] YEAR 2016 EXISTING DELAY [b]	[1] LOS [c]	[2] YEAR 2016 EXISTING W/ PROJECT DELAY [b]	[2] LOS [c]	[2] CHANGE IN DELAY [(2)-(1)]	[2] IMPACT	[3] YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. DELAY [b]	[3] LOS [c]	[4] YEAR 2020 FUTURE W/ PROJECT DELAY [b]	[4] LOS [c]	[4] CHANGE IN DELAY [(4)-(3)]	[4] IMPACT
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive	Two-Way Stop	AM PM	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 [d]	No Yes	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 [d]	No Yes
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	Signalized	AM PM	6.0 4.7	A A	6.1 4.7	A A	0.1 0.0	No No	6.8 4.7	A A	7.0 4.7	A A	0.2 0.0	No No
14	Pacific Coast Highway/ 30th Street	Two-Way Stop	AM PM	19.1 >50.0	C F	19.1 >50.0	C F	0.0 0.0	No No	23.4 >50.0	C F	23.4 >50.0	C F	0.0 0.0	No No
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	Two-Way Stop	AM PM	>50.0 19.7	F C	>50.0 19.7	F C	[d] 0.0	Yes No	>50.0 24.7	F C	>50.0 24.7	F C	0.0 0.0	No No
16	Sepulveda Boulevard/ Tennyson Street	Two-Way Stop	AM PM	>50.0 34.3	F D	>50.0 34.3	F D	[d] 0.0	Yes No	>50.0 >50.0	F F	>50.0 >50.0	F F	[d] [d]	Yes Yes
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	Signalized	AM PM	59.0 50.0	E D	60.2 53.1	E D	1.2 3.1	Yes No	67.3 71.9	E E	68.5 72.7	E E	1.2 0.8	Yes No

[a] Intersection analysis based on the Highway Capacity Manual operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies, December 2002.*

[b] Reported control delay values in seconds per vehicle. For two-way stop controlled intersections, reported control delay values represent the delays associated with the most constrained movement of the intersection.

[c] Signalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Unsignalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[d] Oversaturated Conditions.

In addition to the intersection analyses, a review of potential vehicle queuing was also conducted focusing on evaluation of the key northbound left-turn movements at the Pacific Coast Highway/Keats Street, Pacific Coast Highway /30th Street and Sepulveda Boulevard/Duncan Avenue intersections, and the southbound left-turn movement at the Pacific Coast Highway/Tennyson Street intersection. Please refer to Subsection 9.5 herein for a summary of the analysis.

12.2.5 *330 S. Sepulveda Boulevard Expansion Project Only Analyses*

Table 12-3-2 summarizes the intersection analyses for the existing, existing with the 330 S. Sepulveda Boulevard expansion project only, and year 2020 future conditions both without and with the 330 S. Sepulveda Boulevard expansion project only. This analysis was performed for locations along the Sepulveda Boulevard-Pacific Coast Highway corridor that were determined either to be significantly impacted by both Manhattan Beach projects (as summarized in Subsection 12.2.3 above), or located in between the impacted locations. The first column [1] of *Table 12-3-2* presents a summary of existing traffic conditions. The second column [2] presents existing with the 330 S. Sepulveda Boulevard expansion project only traffic conditions based on existing intersection geometry. The third column [3] presents year 2020 traffic conditions based on existing intersection geometry, but without any 330 S. Sepulveda Boulevard expansion project-generated traffic. The fourth column [4] presents future forecast traffic conditions with the addition of project traffic.

As shown in *Table 12-3-2,* application of the Caltrans LOS standards and guidelines to the existing with 330 S. Sepulveda Boulevard expansion project only scenario indicates that the proposed project is expected to adversely impact the following one (1) of the 13 Caltrans study intersections:

- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)

Application of the Caltrans LOS standards and guidelines to the year 2020 future with 330 S. Sepulveda Boulevard expansion project only scenario indicates that the proposed project is expected to adversely impact the following two (2) study intersections:

- Intersection No. 14: Pacific Coast Highway/30th Street (PM peak hour)
- Intersection No. 16: Sepulveda Boulevard/Tennyson Street (AM peak hour)

The corresponding weekday AM and PM peak hour HCM worksheets are contained in *Appendix H*.

In addition to the intersection analyses, a review of potential vehicle queuing was also conducted focusing on evaluation of the key northbound left-turn movements at the Pacific Coast Highway/Keats Street, Pacific Coast Highway /30th Street and Sepulveda Boulevard/Duncan Avenue intersections, and the southbound left-turn movement at the Pacific Coast Highway/Tennyson Street intersection. Please refer to Subsection 9.5 herein for a summary of the analysis.

Table 12-3-2
CALTRANS INTERSECTION IMPACT ANALYSIS [a]
330 S. SEPULVEDA BOULEVARD EXPANSION PROJECT ONLY

				[1]		[2]				[3]		[4]			
				YEAR 2016 EXISTING		YEAR 2016 EXISTING W/ PROJECT		CHANGE IN		YEAR 2020 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ.		YEAR 2020 FUTURE W/ PROJECT		CHANGE IN	
NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	DELAY [b]	LOS [c]	DELAY [b]	LOS [c]	DELAY [(2)-(1)]	IMPACT	DELAY [b]	LOS [c]	DELAY [b]	LOS [c]	DELAY [(4)-(3)]	IMPACT
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive	Two-Way Stop	AM PM	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 0.0	No No	>50.0 >50.0	F F	>50.0 >50.0	F F	0.0 0.0	No No
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	Signalized	AM PM	6.0 4.7	A A	6.5 4.9	A A	0.5 0.2	No No	6.8 4.7	A A	7.4 4.9	A A	0.6 0.2	No No
14	Pacific Coast Highway/ 30th Street	Two-Way Stop	AM PM	19.1 >50.0	C F	19.1 >50.0	C F	0.0 0.0	No No	23.4 >50.0	C F	23.4 >50.0	C F	0.0 [d]	No Yes
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	Two-Way Stop	AM PM	>50.0 19.7	F C	>50.0 19.7	F C	0.0 0.0	No No	>50.0 24.7	F C	>50.0 24.7	F C	0.0 0.0	No No
16	Sepulveda Boulevard/ Tennyson Street	Two-Way Stop	AM PM	>50.0 34.3	F D	>50.0 34.3	F D	[d] 0.0	Yes No	>50.0 >50.0	F F	>50.0 >50.0	F F	[d] 0.0	Yes No
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	Signalized	AM PM	59.0 50.0	E D	59.8 50.2	E D	0.8 0.2	No No	67.3 71.9	E E	68.2 72.2	E E	0.9 0.3	No No

[a] Intersection analysis based on the Highway Capacity Manual operational analysis methodologies, per the Caltrans' *Guide for the Preparation of Traffic Impact Studies, December 2002.*

[b] Reported control delay values in seconds per vehicle. For two-way stop controlled intersections, reported control delay values represent the delays associated with the most constrained movement of the intersection.

[c] Signalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Unsignalized Intersection Levels of Service are based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[d] Oversaturated Conditions.

13.0 TRANSPORTATION IMPROVEMENT MEASURES

The results of the intersection capacity analyses are summarized in *Tables 9-1, 9-2, 9-3, 9-3-1 and 9-3-2 (*City of Hermosa Beach Analysis Methodology/Criteria*), 10-1, 10-2, 10-3, 10-3-1, and 10-3-2 (*City of Manhattan Beach Analysis Methodology/Criteria), and *12-1, 12-2, 12-3, 12-3-1, and 12-3-2 (*Caltrans Analysis Methodology/Criteria). ***Table 13-1*** and ***Table 13-2*** summarize all of the impact analysis results for the combined projects, the Hermosa Beach Project, the Manhattan Beach projects and each of the Manhattan Beach Projects independently.

Transportation mitigation measures typically consist of travel demand management programs and/or improvements such as roadway and/or intersection restriping and roadway widening to accommodate additional travel lanes, and/or traffic signal installations/modifications. The following subsection (i.e., Subsection 13.1) summarizes the recommended transportation mitigation measures, however, because the study intersections are under shared jurisdiction, the improvements are not under sole control of the City of Hermosa Beach as Lead Agency, and/or the City of Manhattan Beach. As such, these impacts have been conservatively considered unavoidable for environmental review purposes.

As previously noted (refer to Subsections 3.1.6 and 3.2.6 herein), access improvement measures are recommended to facilitate access to and from the planned project site. In addition, it is recommended that transportation demand management (TDM) measures be implemented as part of the proposed project. The subsections below provide summaries of the recommended mitigation measures, access improvement measures and TDM measures.

13.1 Summary of Project Mitigation

A summary of the impacted study locations and measures reviewed for mitigation is presented in *Tables 13-1* and *Table 13-2* and is described more fully in the following paragraphs.

<u>Intersection No. 9: Sepulveda Boulevard/Manhattan Beach Boulevard</u>

A feasible mitigation measure has been identified for the Sepulveda Boulevard/Manhattan Beach Boulevard intersection. Mitigation consists of a traffic signal modification to provide eastbound right-turn and northbound left-turn overlap phasing, which allows the two traffic movements to clear the intersection concurrently. In addition, traffic signal timing adjustments are also expected. While these improvements are expected to reduce the project’s traffic impacts to less than significant levels, due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project’s traffic impacts at this location would remain unavoidable (until such time as the improvement is completed).

Table 13-1
SUMMARY OF IMPACTED LOCATIONS BY PROJECT SCENARIO AND JURISDICTION

		PROJECT SCENARIO															
		COMBINED PROJECT				HERMOSA BEACH ONLY PROJECT				305 S. SEPULVEDA BLVD. ONLY PROJECT				330 S. SEPULVEDA BLVD. EXP ONLY PROJECT			
NO.	INTERSECTION	Hermosa Beach Criteria	Manh. Beach Criteria	Caltrans Criteria	CMP Criteria	Hermosa Beach Criteria	Manh. Beach Criteria	Caltrans Criteria	CMP Criteria	Hermosa Beach Criteria	Manh. Beach Criteria	Caltrans Criteria	CMP Criteria	Hermosa Beach Criteria	Manh. Beach Criteria	Caltrans Criteria	CMP Criteria
9	Sepulveda Boulevard/ Manhattan Beach Boulevard			X	N/A			X	N/A				N/A				N/A
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive		X	X	N/A		X	X	N/A		X	X	N/A				N/A
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	X			N/A				N/A				N/A				N/A
14	Pacific Coast Highway/ 30th Street	X	X	X	N/A	X	X	X	N/A				N/A		X	X	N/A
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	X	X	X	N/A	X	X	X	N/A		X	X	N/A				N/A
16	Sepulveda Boulevard/ Tennyson Street		X	X	N/A		X	X	N/A		X	X	N/A		X	X	N/A
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	X	X	X	X		X	X	X			X					
TOTAL IMPACTED LOCATIONS BY JURISDICTION/CRITERIA		**4**	**5**	**6**	**1**	**2**	**5**	**6**	**1**	**0**	**3**	**4**	**0**	**0**	**2**	**2**	**0**

		LEFT-TURN POCKET VEHICLE QUEUING [1]			
NO.	INTERSECTION	COMBINED PROJECT	HERMOSA BEACH ONLY PROJECT	305 S. SEPULVEDA BLVD. ONLY PROJECT	330 S. SEPULVEDA BLVD. EXP ONLY PROJECT
16	Sepulveda Boulevard/ Tennyson Street	X	X		

[1] The results presented do not assume a traffic signal is approved for installation at the Sepulveda Boulevard-PCH/Keats Street intersection. Should a signal be approved and installed as part of the proposed project, the southbound left-turn pocket at this location would not need to be modified. Refer also to Table 13-2.

Table 13-2
SUMMARY OF RECOMMENDED MITIGATION MEASURES AND FINDINGS OF SIGNIFICANCE

INT. NO.	INTERSECTION	PEAK HOUR IMPACT(S)	MITIGATION OPTIONS	CONCLUSION
			OPERATIONAL IMPACTS	
9	Sepulveda Boulevard/ Manhattan Beach Boulevard	AM	◊ Mitigation consists of a traffic signal modification to provide an EB right-turn and NB left-turn overlap phasing and traffic signal timing adjustments. ◊ Due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's AM peak hour impact at this location would remain significant and unavoidable.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
12	Sepulveda Boulevard/Duncan Avenue-Duncan Drive	AM PM	Mitigation measures considered: ◊ Traffic signal installation; however, due to both proximity to the traffic signal at Longfellow Avenue and progression a signal may be deemed by Caltrans as too close from a spacing/timing perspective. ◊ Installation of a second EB approach lane on Duncan Avenue; while this measure would reduce delay at the intersection, it would not improve conditions to a point that would be considered less than significant. ◊ Restrict EB approach movements to right-turn only; while this measure would reduce delay at the intersection, it would not improve conditions to a point that would be considered less than significant. ◊ Restrict both EB and WB approach movements to right-turn only; while this measure would mitigate the AM peak hour, it would not mitigate the PM peak hour. ◊ Due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's peak hour impacts at this location would remain significant and unavoidable.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
13	Sepulveda Boulevard-Pacific Coast Highway/ Longfellow Avenue-Longfellow Drive	AM	◊ Mitigation considered included installation of a northbound right-turn only lane; however, based on the very low right-turn volume during the AM peak hour, this measure was not recommended as it would in essence eliminate the parkway along the east side of Sepulveda Boulevard. ◊ Due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's peak hour impacts at this location would remain significant and unavoidable.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
14	Sepulveda Boulevard-Pacific Coast Highway/ 30th Street	AM PM	Mitigation measures considered: ◊ Traffic signal installation; however, due to proximity to both the traffic signal at Longfellow Avenue and the proposed signal at Keats Street, the signal installation is likely to be deemed by Caltrans as being too close from a spacing/timing perspective. ◊ Installation of a second EB approach lane on 30th Street; while this measure would reduce delay at the intersection, it would not improve conditions to a point that would be considered less than significant. ◊ Restrict EB approach movements to right-turn only; while this measure would reduce delay at the intersection, it would not improve conditions to a point that would be considered less than significant. ◊ Due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's peak hour impacts at this location would remain significant and unavoidable.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	AM PM	◊ Mitigation consists of a traffic signal installation. ◊ Due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's peak hour impacts at this location would remain significant and unavoidable.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)

Table 13-2 (Continued)
SUMMARY OF RECOMMENDED MITIGATION MEASURES AND FINDINGS OF SIGNIFICANCE

INT. NO.	INTERSECTION	PEAK HOUR IMPACT(S)	MITIGATION OPTIONS	CONCLUSION
			OPERATIONAL IMPACTS (Continued)	
16	Sepulveda Boulevard/Tennyson Street	AM PM	◊ After extensive review, no feasible mitigation measures are available.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
17	Sepulveda Boulevard-Pacific Coast Highway/ Gould Avenue-Artesia Boulevard	AM PM	Mitigation measures considered: ◊ Conversion of the exterior westbound through lane to a combination through/right-turn lane. This measure would mitigate the AM peak hour but not the PM peak hour. ◊ Installation of an exclusive EB right-turn only lane. ◊ Due to the issues noted in Section 13.0 of the traffic study regarding this intersection as well as multi-jurisdictional and timing issues, it has been conservatively concluded that the project's peak hour impacts at this location would remain significant and unavoidable.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
			OPERATIONAL IMPACTS - LEFT-TURN POCKET VEHICLE QUEUING	
16	Sepulveda Boulevard/Tennyson Street	AM	Conditional mitigation measure: ◊ Should a traffic signal not be approved for installation at the Sepulveda Boulevard-PCH/Keats Street intersection as part of the proposed project, the southbound left-turn pocket on Sepulveda Boulevard at Tennyson Street shall be monitored during the AM peak hour within six months of occupancy of the project. If the southbound left-turn queue extends beyond the available storage, the Applicant shall implement corrective action (e.g., lengthen the southbound left-turn pocket) or provide another equal mitigation to the satisfaction of the City and Caltrans.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
			CONSTRUCTION IMPACTS	
14	Pacific Coast Highway/30th Street	AM (HB) PM (MB)	◊ None - temporary construction-related impact.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	PM (HB)	◊ None - temporary construction-related impact.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)
16	Sepulveda Boulevard/Tennyson Street	AM (MB)	◊ None - temporary construction-related impact.	Remains Impacted Significant & Unavoidable (Multi-jurisdictional)

Intersection No. 12: Sepulveda Boulevard/Duncan Avenue-Duncan Drive

Four mitigation measures were also considered for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection:

- The first measure considered was a traffic signal installation. Converting from the existing two-way stop-control operations to traffic signal control operations are not expected to result in any adverse impacts to the intersection operations and can improve safety, as one accident (refer to Section 9.4) was documented to be attributable to unsafe speed which can be correctable through traffic signal control. In addition, under the traffic signal control, pedestrian crossings would be controlled and accommodated via the installation of formal crosswalks (i.e., crosswalk/s across Sepulveda Boulevard do not exist today)and activation of the pedestrian push buttons. These crossings are expected to enhance safety given the likely interaction and synergy between all Skechers' buildings and employees walking between buildings to access the Design Center and employee cafeteria.

- Standard Caltrans traffic signal warrant calculations were prepared for the subject study intersection. The determination of whether the installation of a traffic signal is warranted was based on criteria set forth in Chapter 4C of the *California Manual on Uniform Traffic Control Devices*[10] (MUTCD). The traffic signal warrant calculations were based on existing and future forecast peak traffic volumes. Refer to Section 13.2 below for a summary of the traffic signal warrant analyses. It is important to note that this intersection is also under joint jurisdiction with both the City of Manhattan Beach and Caltrans and therefore, construction of the improvement is not entirely within the City's control. While the associated Caltrans-required Permit Engineering Evaluation Report (PEER), subsequent traffic engineering design plan preparation and the eventual construction will be a requirement of the project applicant, the timing of Caltrans review and approval is not yet determined. Therefore, while these improvements are expected to reduce the project's traffic impacts to less than significant levels, due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's significant traffic impacts at this location would remain significant and unavoidable (until such time as the improvement is completed). Further, it is noted that given the proximity to the existing traffic signal at Longfellow Avenue (i.e., a centerline to centerline distance between Duncan Avenue and Longfellow Avenue of roughly 415 feet), an independently-operated traffic signal could be deemed by Caltrans as being too close from a spacing/timing perspective (while it would reduce the significant traffic impact to less than significant levels).

- The second measure considered was the installation of another eastbound approach lane on Duncan Avenue at Sepulveda Boulevard. This measure would convert the existing left/right combination approach lane to one exclusive left-turn lane and one exclusive right-turn lane. While this measure reduced delay at the intersection, it would not improve conditions to a point that would be considered less than significant. This measure is also expected to result in sight distance concerns as an eastbound vehicle waiting to turn left (north) at Sepulveda Boulevard would impede the line of sight of an eastbound vehicle waiting to turn right (south).The third measure considered was the installation of signs/measures restricting eastbound Duncan Avenue motorists approaching Sepulveda Boulevard to only right-turns (i.e., motorists could only access southbound Sepulveda Boulevard). While this measure reduced delay at the intersection, it would not improve conditions to a point that would be considered less than significant.The fourth measure considered, and preferred by the City of Manhattan Beach, was the installation of signs/measures restricting both eastbound Duncan Avenue and westbound Duncan Drive motorists approaching Sepulveda Boulevard to only right-turns. While this measure is expected to reduce the impact to less than significant during the AM peak hour, it would not improve conditions to a point that would be considered less than significant during the PM peak hour.

Due to the above noted issues, timing (implementation) issues and the multi-jurisdictional nature of the location, it has been concluded that the project's traffic impacts at this location would remain significant and unavoidable.

<u>Intersection No 13: Sepulveda Boulevard-Pacific Coast Highway/Longfellow Avenue-Longfellow Drive</u>

A measure involving the construction of a northbound right-turn only lane via roadway widening, roadway restriping and a traffic signal modification was considered as part of this traffic impact study. This measure would involve a substantial roadway widening along the east side of Sepulveda Boulevard-Pacific Coast Highway, would in essence eliminate the current parkway which exists today and require the approval of Caltrans. While this measure could be expected to reduce the project's significant traffic impact during the AM peak hour to less than significant levels, due to the very low AM peak hour northbound right-turn volume (i.e., less than 35 AM peak hour trips)and multi-jurisdictional and timing issues, it has been conservatively concluded that the project's significant traffic impacts at this location would remain significant and unavoidable.

<u>Intersection No. 14: Pacific Coast Highway/30th Street</u>

Three mitigation measures were considered for the Pacific Coast Highway/30th Street intersection:

- The first measure considered was a traffic signal installation. Converting from the existing two-way stop-control operations to traffic signal control operations are not expected to result in any adverse impacts to the intersection operations and can improve safety, as several accidents (refer to Section 9.4) have been documented to be attributable to unsafe speed which can be correctable through traffic signal control. In addition, under the traffic signal control, pedestrian crossings would be controlled and accommodated via the installation of

[10] *California Manual on Uniform Traffic Control Devices (MUTCD),* State of California Business, Transportation and Housing Agency, Department of Transportation, 2014 Edition.

formal crosswalks (i.e., crosswalk/s across Sepulveda Boulevard do not exist today)and activation of the pedestrian push buttons. These crossings are expected to enhance safety given the likely interaction and synergy between all Skechers' buildings and employees walking between buildings to access the Design Center and employee cafeteria. However, given the proximity to the proposed traffic signal at the main Pacific Coast Highway/Keats Street intersection (i.e., a centerline to centerline distance between 30th Street and Keats Street of roughly 190 feet), an independently-operated traffic signal could be deemed by Caltrans as being too close from a spacing/timing perspective (while it would reduce the significant traffic impact to less than significant levels). Further, the distance between the "T" intersection with 30th Street and the future "4-legged" intersection with Keats Street (along Pacific Coast Highway), while generally acceptable for the locations to be controlled under one traffic signal controller as one single, larger, intersection, is also likely to be of concern to Caltrans given the proximity of this potential new traffic signal to the existing traffic signal at Longfellow Avenue (i.e., a centerline to centerline distance between 30th Street and Longfellow Avenue of roughly 260 feet).

- The second measure considered was the installation of another eastbound approach lane on 30th Street at Pacific Coast Highway. This measure would convert the existing left/right combination approach lane to one exclusive left-turn lane and one exclusive right-turn lane. While this measure reduced delay at the intersection, it would not improve conditions to a point that would be considered less than significant. This measure is also expected to result in sight distance concerns as an eastbound vehicle waiting to turn left (north) at Pacific Coast Highway would impede the line of sight of an eastbound vehicle waiting to turn right (south).

- The third measure considered was the installation of signs/measures restricting eastbound 30th Street motorists approaching Pacific Coast Highway to only right-turns (i.e., motorists could only access southbound Pacific Coast Highway). While this measure reduced delay at the intersection, it would not improve conditions to a point that would be considered less than significant.

Lastly, due to the above noted issues, timing (implementation) issues and the multi-jurisdictional nature of the location, it has been concluded that the project's traffic impacts at this location would remain significant and unavoidable.

<u>Intersection No. 15: Pacific Coast Highway/Keats Street</u>

A traffic signal is proposed at the Pacific Coast Highway/Keats Street intersection which is currently stop-sign controlled. Converting from the existing two-way stop-control operations to traffic signal control operations are not expected to result in any adverse impacts to the intersection operations and can improve safety, as some accidents (refer to Subsection 9.4) have been documented to be attributable to unsafe speed which can be correctable through traffic signal control. In addition, under the traffic signal control, pedestrian crossings would be controlled and accommodated via the installation of formal crosswalks (i.e., crosswalk/s across Sepulveda Boulevard do not exist today)and activation of the pedestrian push buttons. These crossings are expected to enhance safety given the likely interaction and synergy between all Skechers' buildings and employees walking between buildings to access the Design Center and employee cafeteria.

Standard Caltrans traffic signal warrant calculations were prepared for the subject study intersection. The determination of whether the installation of a traffic signal is warranted was based on criteria set forth in Chapter 4C of the MUTCD. The traffic signal warrant calculations were based on existing and future forecast peak traffic volumes. Refer to Section 13.2 below for a summary of the traffic signal warrant analyses. It is important to note that this intersection is also under joint jurisdiction with both the City of Manhattan Beach and Caltrans and therefore, construction of the improvement is not entirely within the City's control. While the associated Caltrans-required Permit Engineering Evaluation Report (PEER), subsequent traffic engineering design plan preparation and the eventual construction will be a requirement of the project applicant, the timing of Caltrans review and approval is not yet determined. Therefore, while these improvements are expected to reduce the project's traffic impacts to less than significant levels, due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's significant traffic impacts at this location would remain significant and unavoidable (until such time as the improvement is completed).

Intersection No 16: Sepulveda Boulevard/Tennyson Street

It has been concluded that the project's traffic impacts at this location would also remain unavoidable. With respect to the southbound left-turn pocket vehicle queuing analysis prepared for this location, it is recommended as a conditional mitigation measure that the southbound left-turn pocket on Sepulveda Boulevard at Tennyson Street be monitored during the AM peak hour within six months of the occupancy of the project (i.e., the Combined Project, the Hermosa Beach Project, or the Manhattan Beach Projects) and if the southbound left-turn queue extends beyond the available storage, the Applicant shall implement corrective action (e.g., lengthen the southbound left-turn pocket) or provide another equal mitigation to the satisfaction of the City and Caltrans. As stated previously, should a traffic signal be approved by Caltrans at the Sepulveda Boulevard/Keats Street intersection, no monitoring would be required.

Intersection No 17: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard

Two mitigation measures were considered for the Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard intersection, which is under shared jurisdiction with the City of Hermosa Beach, City of Manhattan Beach and Caltrans.

- The first measure considered (and preferred by the City of Manhattan Beach due to very high westbound AM peak hour right-turn volume), was the conversion of the exterior westbound through lane to a combination through-right-turn lane. This measure would in essence result in two westbound right-turn lanes since a single westbound right-turn only lane exists today. The existing overlap traffic signal phasing at the intersection (i.e., the southbound left-turn arrow which runs concurrently with the westbound right-turn arrow) could either be maintained or be eliminated with the lane conversion. While this measure would be expected to reduce the AM peak hour impact to less than significant levels, it would not mitigate the PM peak hour significant traffic impact. In addition, this intersection is also under shared jurisdiction with Caltrans.

- The second measured considered involved the installation of an eastbound right-turn only lane. While this measure would be expected to reduce the PM peak hour impact to less than significant levels, it would likely involve roadway widening along the south side of Gould Avenue that would result in inadequate sidewalk widths absent additional right-of-way (i.e., which is currently not available), removal of some on-street parking spaces as well as roadway restriping. Due to the right-of-way, ADA and on-street parking removals, this measure was not considered further.

Due to the above noted issues and the multi-jurisdictional nature of the location, it has been concluded that the project's traffic impacts at this location would remain significant and unavoidable.

13.2 Traffic Signal Warrant Analysis

Traffic signal warrant analyses have been prepared to determine whether traffic signals are warranted at the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections upon completion of the proposed combined project. The determination of whether the installation of a traffic signal is warranted was based on criteria set forth in Chapter 4C of the MUTCD. It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if none of the traffic signal warrants are met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency must carefully consider all aspects related to installation of traffic controls.

Traffic signal warrants were prepared for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections. Specifically, Warrant No. 3 (Peak Hour Volume) and Warrant No. 7 (Crash Experience) traffic signal warrants were prepared for both intersections. The traffic signal warrant calculations were based on existing AM and PM peak hour volumes and future with project traffic volumes. The traffic signal warrant worksheets are provided in ***Appendix I***.

The following paragraphs provide detailed discussions of the traffic signal warrants prepared for the intersections.

Warrant 3: Peak Hour Volume

The Peak Hour Warrant consists of Part A and Part B and is intended for application where traffic conditions are such that for one hour of the day minor street traffic suffers undue delay in entering or crossing the major street. The Peak Hour warrant applies when one of the following criteria are satisfied:

- Part A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
    - The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds 4 vehicle-hours for a one-lane approach, or 5 vehicle-hours for a two-lane approach, and
    - The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
    - The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.
- Part B of Warrant No. 3 is satisfied when the plotted point, representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for one hour of an average day, falls above the curve in Figure 4C-3 for the applicable number of approach lanes. The lower threshold for a minor street approach with one lane is 100 vehicles per hour while a minor street with two or more lanes is 150 vehicles per hour. As shown in the worksheet, the signal warrant is met when the plotted point falls above the appropriate curve.

Warrant 7: Crash Experience

The Crash Experience Warrant is intended for application where the severity and frequency of collisions are the primary reasons to consider installation of a traffic signal. The Crash Experience warrant applies when the following criteria are satisfied:

- Condition A or B of Warrant No. 1 is satisfied to the extent of 80 percent or more of the stated numerical values, or Warrant No. 4 (Pedestrian Volume) is satisfied to the extent of 80 percent or more of the stated numerical values, and
- Adequate trial of less restrictive remedies has failed to reduce the accident frequency, and

- Five or more reported accidents of types susceptible to correction by traffic signal control have occurred within the most recent 12-month period, or two per year during the most recent three-year period.

As stated above, a lead agency/jurisdiction may elect to proceed with a traffic signal installation when other issues are present, such as a need for further assignment of motorist right-of-way, even though none of the industry standard warrants are met.

13.2.1 *Sepulveda Boulevard/Duncan Avenue-Duncan Drive Intersection*

As described above, traffic signal warrants were prepared for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection. Specifically, Warrant No. 3 (Peak Hour Volume) and Warrant No. 7 (Crash Experience) traffic signal warrants were prepared. In reviewing the traffic signal warrant analysis for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection, it is important to note the following:

- For the signal warrant analysis, Sepulveda Boulevard was assumed to be the major street while Duncan Avenue-Duncan Drive was assumed to be the minor street.

- Weekday AM and PM peak period manual traffic counts were conducted when local schools were in session. Summary data worksheets of the current traffic counts for the subject intersection are contained in *Appendix B*.

The following lane configurations have been assumed for the intersection:

- Northbound approach: one left-turn lane, two through lanes and one combination through/right-turn lane

- Southbound approach: one left-turn lane, two through lanes and one combination through/right-turn lane

- Eastbound approach: one combination left-turn/through/right-turn lane

- Westbound approach: one combination left-turn/through/right-turn lane

The resulting warrant analysis is described below:

<u>Warrant 3 – Peak Hour Volume</u>: As previously described in Section 13.2, when either Part A or Part B of the Peak Hour Volume Warrant is met, the warrant can be considered satisfied. As shown in Figure 4C-3 provided in *Appendix I*, the plotted point for the peak hour falls above the applicable curve for future with combined project conditions for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection. Therefore, Part B of Warrant No. 3-Peak Hour is met for future with combined project conditions. Thus, preparation of the Part A warrant was not required since Part B of Warrant No. 3 is satisfied under future with combined project conditions for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection.

Warrant 7 – Crash Experience: As described more extensively in Section 9.4 above, research was conducted of available accident records in order to determine, to the extent feasible, any existing accident trends. Accident records were requested for the most recent five year period (August 2010 through July 2015) from the Statewide Integrated Traffic Records System (SWITRS) database. As noted in Section 9.4 and in *Appendix Table F*, more recent accidents (August 2015 to February 2016) also were considered in the collision analysis. Records were requested for accidents within the City of Manhattan Beach. The records were then categorized in order to review accidents that occurred at the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection. A total of four (4) accidents occurred over the most recent five year period at this location. The overall trends for the primary collision factors were related to unsafe speed and driver alcohol/drug use. *Appendix F* contains a summary of the SWITRS data. As the number of accidents at or near this intersection did not exceed five or more accidents during the most recent 12-month period or two accidents per year during the most recent 3-year period, Warrant No. 7 is not satisfied for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection.

In conclusion, Warrant No. 3 is satisfied and Warrant No. 7 is not satisfied under future with combined project conditions for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection. It is recommended that additional consultation be undertaken with the City of Manhattan Beach and Caltrans in order to determine feasibility of this traffic signal installation. It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency/agencies must carefully consider all aspects related to installation of traffic controls.

13.2.2 *Sepulveda Boulevard-Pacific Coast Highway/Keats Street Intersection*

As described above, traffic signal warrants were prepared for the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection. Specifically, Warrant No. 3 (Peak Hour Volume), and Warrant No. 7 (Crash Experience) traffic signal warrants were prepared. In reviewing the traffic signal warrant analysis for the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection, it is important to note the following:

- For the signal warrant analysis, Sepulveda Boulevard-Pacific Coast Highway was assumed to be the major street while Keats Street/project driveway was assumed to be the minor street.

- Weekday AM and PM peak period manual traffic counts were conducted when local schools were in session. Summary data worksheets of the current traffic counts for the subject intersection are contained in *Appendix B.*

The following lane configurations have been assumed for the intersection:

- Northbound approach: one left-turn lane, two through lanes and one combination through/right-turn lane
- Southbound approach: one left-turn lane, two through lanes and one combination through/right-turn lane
- Eastbound approach: one right-turn only lane for vehicles exiting the project site
- Westbound approach: one combination left-turn/through/right-turn lane

The resulting warrant analysis is described below:

<u>Warrant 3 – Peak Hour Volume</u>: As previously described in Section 13.2, when either Part A or Part B of the Peak Hour Volume Warrant is met, the warrant can be considered satisfied. As shown in Figure 4C-3 provided in *Appendix I*, the plotted point for the peak hour falls above the applicable curve for future with combined project conditions for the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection. Therefore, Part B of Warrant No. 3-Peak Hour is met for future with combined project conditions. Thus, preparation of the Part A warrant was not required since Part B of Warrant No. 3 is satisfied under future with combined project conditions for the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection.

<u>Warrant 7 – Crash Experience</u>: As described more extensively in Section 9.4 above, research was conducted of available accident records in order to determine, to the extent feasible, any existing accident trends. Accident records were requested for the most recent five year period (August 2010 through July 2015) from the Statewide Integrated Traffic Records System (SWITRS) database. As noted in Section 9.4 and in *Appendix Table F*, more recent accidents (August 2015 to February 2016) also were considered in the collision analysis. Records were requested for the Cities of Hermosa Beach and Manhattan Beach. The records were then categorized in order to review accidents that occurred at the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection. A total of eight (8) accidents occurred over the most recent five year period at this location. The overall trends for the primary collision factors were related to unsafe speed and driver alcohol/drug use. *Appendix F* contains a summary of the SWITRS data. The number of accidents at or near this intersection exceeded five or more accidents during the most recent 12-month period (i.e., five accidents occurred between January 2015 and October 2015), however, as noted above, all parts of the warrant must be met in order to satisfy the criteria of Warrant No. 7. As there has been no adequate trial of less restrictive remedies at the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection, this first criteria of Warrant No. 7 is not met. Therefore, Warrant No. 7 is not satisfied for the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection.

In conclusion, Warrant No. 3 is satisfied and Warrant No. 7 is not satisfied under future with combined project conditions for the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection. It is recommended that additional consultation be undertaken with the City of Hermosa Beach, the City of Manhattan Beach, and Caltrans in order to determine feasibility of this traffic signal installation. It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation. The lead agency/agencies must carefully consider all aspects related to installation of traffic controls.

13.3 Caltrans Intersection Control Evaluation (ICE)

In addition to the traffic signal warrant analyses prepared to determine whether traffic signals are warranted at the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections, an evaluation has been prepared pursuant to the Intersection Control Evaluation (ICE) directive (No. 13-02) issued by Caltrans on August 20, 2013 a bit earlier in the process than is typical (i.e., prior to the Caltrans-required PEER as part of the formal encroachment permit process). The ICE directive requires an evaluation of all types of intersection control strategies at State Highway intersections. The intersection control strategies include an unsignalized (stop-sign) control, a roundabout, and a traffic signal. The purpose of this ICE directive is to select the appropriate traffic control strategy for a particular intersection relative to balancing mobility for all modes and attaining performance goals (i.e., capacity and safety).

The ICE analyses have been prepared based on the HCM 2010 operational analysis methodologies pursuant to Caltrans' *Guide for the Preparation of Traffic Impact Studies*. According to the Caltrans document, the LOS for operating State highway facilities is based upon the appropriate measure of effectiveness (MOE). For typical state-controlled intersections, the appropriate MOE is control delay measured in seconds per vehicle (sec/veh).

Summaries of the delays and corresponding LOS values for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections (where potential changes in the intersection traffic control strategies may be considered) are summarized in ***Table 13-3***. *Table 13-3* provides a summary of the AM and PM peak hour intersection operations associated with the two subject intersections for existing and future conditions. For the future conditions, *Table 13-3* summarizes the corresponding delays and LOS values for each control strategy including two-way stop-control (TWSC), roundabout, and traffic signal control.

Table 13-3
SUMMARY OF INTERSECTION DELAY & LEVELS OF SERVICE (ICE) [a]

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2015 EXISTING (TWSC) [b] Delay (Sec/Veh)	LOS	[2] YEAR 2020 FUTURE WITH PROJECT (TWSC) [b] Delay (Sec/Veh)	LOS	[3] YEAR 2020 FUTURE WITH PROJECT (Roundabout) [c] Delay (Sec/Veh)	LOS	[4] YEAR 2020 FUTURE WITH PROJECT (Traffic Signal) [d] Delay (Sec/Veh)	LOS
12	Sepulveda Boulevard/ Duncan Avenue-Duncan Drive	AM	>50.0 [e]	F	>50.0 [e]	F	>50.0 [e]	F	4.6	A
		PM	>50.0 [e]	F	>50.0 [e]	F	>50.0 [e]	F	7.1	A
15	Sepulveda Boulevard-Pacific Coast Highway/ Keats Street	AM	>50.0 [e]	F	>50.0 [e]	F	>50.0 [e]	F	7.1	A
		PM	19.7	C	>50.0 [e]	F	>50.0 [e]	F	6.1	A

Notes:
[a] Delay values (in seconds per vehicle) based on HCM 2010 methodologies.
[b] Intersection analyzed using the HCM 2010 Two-Way Stop-Control Intersection methodology.
[c] Intersection analyzed using the HCM 2010 Roundabout Intersection methodology.
[d] Intersection analyzed using the HCM 2010 Signalized Intersection methodology.
[e] Oversaturated conditions.

13.3.1 *Existing Conditions*

As shown previously, both the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections are currently operated under stop-sign controls, with stop signs facing the respective minor street approaches (i.e., the Duncan Avenue, Duncan Drive, and Keats Street approaches). While Sepulveda Boulevard-Pacific Coast Highway provides three through travel lanes in each direction with separate left-turn lanes, the respective minor streets provide single lane approaches at the two subject intersections. As shown in *Table 13-3*, the Sepulveda Boulevard/Duncan Avenue-Duncan Drive intersection is currently operating at LOS F conditions during both the weekday AM and PM peak hours. Additionally, the Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersection is currently operating at LOS F and LOS C conditions during the weekday AM and PM peak hours, respectively.

13.3.2 *Future With Combined Project Build-out ICE Traffic Analysis*

The following section presents the Future with Combined Project traffic analysis for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections. *Table 13-3* summarizes the operations for each control strategy including TWSC, roundabout, and traffic signal control for both intersections.

- *Two-Way Stop-Control*: As shown in *Table 13-3*, in the future with combined project conditions (maintaining the existing two-way stop-control operations), both the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections are forecast to operate at LOS F conditions during the respective AM and PM peak hours. Motorists on Duncan Avenue, Duncan Drive, and Keats Street would experience additional delays given the added traffic volumes along Sepulveda Boulevard due to the project and other cumulative development projects.

- *Roundabout*: Based on the number of through travel lanes currently provided on Sepulveda Boulevard, its roadway classification, as well as the corresponding traffic volumes, three-lane roundabouts would be appropriate for consideration for both the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections. However, it should be noted that the current HCM 2010 operational analysis methodologies pursuant to Caltrans' *Guide for the Preparation of Traffic Impact Studies* only support delay and LOS evaluation of roundabouts with up to two entry lanes of travel. As three-lane roundabout analysis procedures and methodologies are not yet available, the results presented in *Table 13-3* are for informational purposes only. As shown in *Table 13-3*, in the future with combined project conditions assuming two-lane roundabout operations, both the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections are forecast to operate at LOS F conditions during the respective AM and PM peak hours. Given LLG's professional experience, a three-lane roundabout would be expected to improve operations when compared to a two-lane roundabout, but not to the same degree as under traffic signal control.

From a geometric design perspective, a review was conducted based on guidelines provided by the *National Cooperative Highway Research Program (NCHRP) Report 672 – Roundabouts – An Informational Guide* (Transportation Research Board, Second Edition, 2010). According to the NCHRP document, a three-lane roundabout typically requires an inscribed circle diameter that ranges between 220 feet to 300 feet. Modification of the two existing intersections to accommodate three-lane roundabouts will therefore require significant right-of-way acquisitions from the adjacent properties which would require eminent domain. Furthermore, two-lane roundabouts at the subject intersections are not recommended due to the high volumes of existing and future traffic on Sepulveda Boulevard-Pacific Coast Highway which would result in excessive delays. It should be noted that even if two-lane roundabouts were to be considered, they typically require an inscribed circle diameter that ranges between 165 to 220 feet which is also not available without right-of-way acquisitions from the adjacent properties. Therefore, based on the capacity analyses shown in *Table 13-3*, right-of-way constraints, and goals of the ICE, roundabouts are <u>not</u> recommended for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections.

- *Traffic Signal*: As shown in *Table 13-3*, in the future with combined project conditions assuming traffic signal control, both the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections are forecast to operate at LOS A conditions during the respective AM and PM peak hours. Converting from the existing two-way stop-control operations to traffic signal control operations are not expected to result in any adverse impacts to the intersection operations and can improve safety, as several accidents (refer to Section 9.4) have been documented to be attributable to unsafe speed which can be correctable through traffic signal control. In addition, under the traffic signal control, pedestrian crossings would be controlled and accommodated via the installation of formal crosswalks which do not exist today and activation of the pedestrian push buttons. These crossings are expected to enhance safety given the likely interaction and synergy between all Skechers buildings and employees walking between buildings to access the Design Center and employee cafeteria.

Based on the above analyses and goals of the ICE directive, control via roundabouts is not recommended at the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections. It is important to note that improving overall intersection delay operations by itself is not necessarily justification for the installation of traffic signal controls. Traffic congestion/progression, signal warrants, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by the existing stop sign control operations may be demonstrated. The lead agency/agencies must carefully consider all aspects related to installation of traffic controls.

As discussed in Section 12, while converting the existing two-way stop-control operations to traffic signal control operations are expected to reduce the combined project's traffic impacts to less than significant levels at both subject intersections, due to the multi-jurisdictional and timing issues it has been conservatively concluded that the project's significant traffic impacts at the two subject intersections would remain significant and unavoidable (until such time as the improvements are completed). The corresponding weekday AM and PM peak hour HCM data worksheets for the Sepulveda Boulevard/Duncan Avenue-Duncan Drive and Sepulveda Boulevard-Pacific Coast Highway/Keats Street intersections under two-way stop-control, roundabout, and traffic signal control operations are contained in *Appendix H*.

13.4 Project Access Recommendations

The following measures are recommended to facilitate access to and from the planned Hermosa Beach project site:

Design Center Building

- Direct project site guests and visitors to utilize the PCH project driveway to access the site.
- Direct vendors to access the PCH driveway only via PCH to preclude site-related service/delivery vehicles from traveling through the residential neighborhood.
- Develop a parking management plan for the proposed project, including details on the internal parking operations to ensure that any potential queuing onto public right-of-way will not occur.
- Install appropriate pavement markings (i.e., stop bar with STOP legend) on the project drive aisle at the public sidewalk to ensure that motorists stop prior to the sidewalk along PCH before exiting the site.
- Install a pavement right-turn arrow prior to the stop bar/STOP legend and appropriate, corresponding signage at the PCH project driveway to reinforce the right-turn only movement for motorists exiting the site. Should a traffic signal be approved in the future by the City and Caltrans at the PCH driveway across from Keats Street, the exiting approach at the traffic signal will be restriped to allow for left, through and right-turn egress turning movements.
- Provide bicycle parking within the parking facility of the project site in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

Executive Offices Building

- Direct project site guests and patrons of the coffee house to utilize the 30th Street project driveway to access the site.

- Develop a parking management plan for the proposed project, including details on the internal parking operations to ensure that any potential queuing onto public right-of-way will not occur.

- Install appropriate pavement markings (i.e., stop bar with STOP legend) on the project drive aisle at the public sidewalk to ensure that motorists stop prior to the sidewalk along 30th Street before exiting the site.

- Provide bicycle parking within the parking facility of the project site in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

The following measures are recommended to facilitate access to and from the planned Manhattan Beach project sites:

- Direct project site guests and visitors to utilize the Duncan Avenue project driveway via Sepulveda Boulevard to access the 305 S. Sepulveda Boulevard project site. Left-turn egress will be prohibited at the 305 S. Sepulveda driveway and the driveway will be constructed to physically prevent the outbound left-turn movement.

- Direct project site guests and visitors to utilize the existing 330 S. Sepulveda Boulevard project driveways via Sepulveda Boulevard and Longfellow Drive to access the 330 S. Sepulveda Boulevard Expansion project parking garage which is interconnected with the existing 330 S. Sepulveda Boulevard parking garage.

- Direct vendors to access the loading area during off-peak periods for both Manhattan Beach buildings so as to avoid the weekday AM and PM peak commute peak hours. At the 305 S. Sepulveda Boulevard building, truck deliveries on Boundary Place will occur only via Sepulveda Boulevard and will be prohibited west of the project site. The north side curb return radius will be increased to accommodate truck turning movements and the south side curb return will be increased if feasible.

- Develop a parking management plan for the proposed project, including details on the internal parking operations to ensure that any potential queuing onto public right-of-way will not occur.

- Install appropriate pavement markings (i.e., stop bar with STOP legend) for the 305 S. Sepulveda Boulevard building project drive aisle at the public sidewalk to ensure that motorists stop prior to the sidewalk along Duncan Avenue before exiting the site.

- Provide bicycle parking within the parking facilities in a readily accessible location(s). The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting will be provided to increase safety and provide theft protection during any night-time parking.

- Public sidewalks and curb ramps will be reconstructed as necessary to provide full ADA access along the project frontages and connecting intersections.

13.5 Transportation Demand Management

The applicant will be required to comply with the City of Hermosa Beach and City of Manhattan Beach codes and/or ordinances pertaining to trip reduction and travel demand management measures (i.e., comply with Chapter 17.48 of the City of Hermosa Beach's Municipal Code and the City of Manhattan Beach's Ordinance No. 1901). Transportation demand management (TDM) measures are aimed at reducing vehicular traffic and parking generated at project sites. TDM measures decrease the number of vehicular trips generated by persons traveling to/from the site by offering specific facilities, services and actions designed to increase the use of alternative transportation modes (e.g., transit, walking, and bicycling) and ridesharing. These measures, many of which can be considered for implementation, are expected to reduce the potential project's traffic impacts. As it cannot be determined at this time which components of a program could be expanded upon, the following menu of measures is provided for informational purposes only. As such, no formal trip reductions have been incorporated into the traffic analysis.

- *On-Site Employee Transportation Coordinator*. While it is recognized that Skechers may not already provide an Employee Transportation Coordinator at the existing buildings, an On-Site Employee Transportation Coordinator (ETC) could be designated for the proposed project. The ETC would manage all aspects of an enhanced TDM program and would also participate in City-sponsored workshops and information roundtables. The ETC could also establish a *Transportation Information Center and Transportation Fairs.* Skechers could provide transportation fairs and provide on-site information at its buildings for employees and visitors about local public transit services (including bus lines, existing and future light rail lines and connections, bus fare programs, rideshare programs and shuttles) and bicycle facilities (including routes, rental and sales locations, on-site bicycle racks and showers). Walking and biking maps could also be provided for employees, visitors and residents, which would include but not be limited to information about convenient local services and restaurants within walking distance of the project. Information could also be provided to regarding local rental housing agencies. Such transportation information may be provided through a computer terminal with access to the Internet, as well as through the office of the ETC located at the project site. Transportation information should also be maintained at the administrative offices of the buildings, or by directing inquiries to the Skechers' web site as a portal.

- *TDM Web Site Information*. Transportation information should be provided in a highly visible and accessible location on Skechers' web site, including links to local transit providers, area walking, bicycling maps, etc., to inform employees and visitors of available alternative transportation modes to access the project and other existing Skechers' buildings and travel in the area. The web site should also highlight the environmental benefits of utilization of alternative transportation modes.

- *TDM Promotional Material*. Skechers should provide and exhibit in public places information materials on options for alternative transportation modes and opportunities. In addition, transit fare media and day/month passes should be made available to employees and visitors during typical business hours.

- *Transit Welcome Package*. All new employees could be provided with a Transit Welcome Package (TWP) in addition to holding Transportation Fair on an annual basis. The TWP at a minimum could include information regarding Skechers arrangement for free or discounted use of the transit system, area bus/rail transit route and connections/transfers information, bicycle facilities (including routes, rental and sales locations, on-site bicycle racks, walking and biking maps), and convenient local services and restaurants within walking distance of the project.

- *Integration of a Shuttle*. An inter-building shuttle circulator could be implemented to provide connections to downtown and/or other regional transportation systems and opportunities. Such shuttle service could be provided free of charge or be discounted to Skechers' employees.

- *Carpool Program for Employees*. Skechers will provide preferential parking within the parking garages for employees who commute to work in registered carpools. An employee who drives to work with at least one other employee to the site may register as a carpool entitled to preferential parking within the meaning of this provision.

- *Public Transit Stop Enhancements.* Working in cooperation with other transit agencies and the Cities of Manhattan Beach and Hermosa Beach, Skechers could seek to improve existing bus stops with enhanced shelters and transit information within the immediate vicinity of the buildings. Enhancements could include enhanced weather/sun protection, lighting, benches, and trash receptacles. These improvements would be intended to make riding the bus a safer and more attractive alternative.

- *Convenient Parking for Bicycle Riders*. Skechers will provide locations at the sites for convenient parking for bicycle commuters for working employees and visitors. The bicycle parking will be located within the buildings such that long-term and short-term parkers can be accommodated. Bicycle parking may mean bicycle racks, a locked cage, or other similar parking area. Skechers should observe utilization of bicycles at the other existing buildings and, if necessary, make arrangements for additional bicycle parking if the demand for bicycle parking spaces exceeds the supply.

- *Employee Walking Incentive*. Skechers could offer a program that each time an employee walks to work that they accrue points and those points/incentives could be accrued at the end of each calendar year for prizes/awards.

- *Local Hiring Program*. To the extent feasible, when hiring Skechers could conduct outreach to residents who live within one to two miles of the project sites (or other buildings where the position of employment is offered), based on satisfaction of other requirements of the available positions.

- *Expanded Bicycle Routes*. Skechers could coordinate with the Cities of Hermosa Beach and Manhattan Beach in an effort to enhance and expand the current network of bicycle routes serving the project sites and existing buildings.

14.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program for Los Angeles County, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, 2010.

14.1 Intersections

The following CMP intersection monitoring location in the project vicinity has been identified:

CMP Station	Intersection
Station No. 22	Pacific Coast Highway/Artesia Boulevard-Gould Avenue

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak hours. The proposed project is expected to add 50 or more trips during either the AM or PM weekday peak hours (i.e., of adjacent street traffic) at the above CMP monitoring intersection in the project vicinity, which is stated in the CMP manual as the threshold criteria for a traffic impact assessment. Therefore, this location has been reviewed (i.e., Study Intersection No. 17) as part of this traffic impact study.

14.2 Freeways

No CMP freeway monitoring locations are located in the project vicinity. Further, the CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed project will not add 150 or more trips (in either direction), during either the AM or PM weekday peak hours to the CMP freeway monitoring location, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

14.3 Transit Impact Review

As required by the *2010 Congestion Management Program for Los Angeles County*, a review has been made of the CMP transit service. Existing transit service is provided in the vicinity of the proposed project.

The combined project trip generation, as shown in *Table 7-1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for 14 transit trips during the weekday AM peak hour. During the weekday PM peak hour, the proposed project also is anticipated to generate demand for 12 transit trips. Over a 24-hour period, the proposed project is forecast to generate demand for 64 daily transit trips. The calculations are as follows:

- Weekday AM Peak Hour = 279 × 1.4 × 0.035 = 14 Transit Trips
- Weekday PM Peak Hour = 254 × 1.4 × 0.035 = 12 Transit Trips
- Weekday Daily Trips = 1,312 × 1.4 × 0.035 = 64 Transit Trips

As shown in *Table 4-3*, three of the eight bus transit lines and routes are provided adjacent to or in close proximity to the project site via bus transfers. Metro's Route 232 runs directly along the Sepulveda Boulevard/Pacific Coast Highway corridor adjacent to the project sites. Metro Route 130 runs along the Artesia Boulevard/Pacific Coast Highway/Gould Avenue corridor and Metro Route 126 runs along the Manhattan Beach Boulevard corridor. As outlined in *Table 4-3* under the "No. of Buses During Peak Hour" column, these three transit lines provide service for an average (i.e., an average of the directional number of buses during the peak hours) of approximately 15 buses during the weekday AM peak hour and 12 buses during the weekday PM peak hour. Therefore, based on the above calculated peak hour transit trips, this would correspond to no more than one transit rider per bus during peak hours. Considering all of the available bus routes via transfers, an increase of one transit rider every two to three buses during peak hours could be expected. Thus, given the low number of generated transit trips per bus, no impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

15.0 SUMMARY OF FINDINGS AND CONCLUSIONS

Project Description – The proposed project consists of three discrete developments; one in Hermosa Beach and two in Manhattan Beach. Although each of these projects are independent of each other, they are also being combined for analysis and environmental review purposes under CEQA. Specifically, the project applicant proposes the following:

- The proposed project consists of three new buildings and an addition to an existing building to be constructed along the Sepulveda Boulevard/Pacific Coast Highway corridor to accommodate Skechers growth and expansion into new product lines. Skechers started in Manhattan Beach and considers the local beach communities to be home.

- The buildings to be constructed include two new buildings in Hermosa Beach which are referred to as the Design Center and Executive Offices; one new building in Manhattan Beach (305 S. Sepulveda Boulevard); and an expansion of the existing 330 S. Sepulveda Boulevard building in Manhattan Beach (300 S. Sepulveda Boulevard).

Study Scope – A total of 44 study locations, including of 25 study intersections and 19 study street segments, have been identified for evaluation during the weekday morning and afternoon peak hours based upon coordination with City of Hermosa Beach and City of Manhattan Beach staff.

Project Trip Generation – The combined project is expected to generate 279 net new vehicle trips (253 inbound trips and 26 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the combined project is expected to generate 254 net new vehicle trips (30 inbound trips and 224 outbound trips). Over a 24-hour period, the combined project is forecast to generate 1,312 net new daily trip ends during a typical weekday (656 inbound trips and 656 outbound trips).

Related Projects Trip Generation – A total of 29 related projects were included in the traffic analysis along with application of an ambient traffic growth factor in order to provide a conservative estimate of future traffic volumes at the study intersections. The related projects are expected to generate a combined total of 47,251 daily trips during a typical weekday, 2,071 trips (1,139 inbound trips and 932 outbound trips) during the weekday AM peak hour, and 3,689 trips (1,922 inbound trips and 1,767 outbound trips) during the weekday PM peak hour. Additionally, a one percent (1.0%) ambient traffic growth factor has been employed in this analysis in order to provide a conservative, worst case forecast of future traffic volumes in the area. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

Existing (Year 2016) Traffic Conditions – A total of 17 of the 25 study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The remaining study intersections are presently operating at LOS E and/or F during the weekday AM and/or PM peak hours under existing conditions.

***Future (Year 2020) Without Project Traffic Conditions* –** A total of 14 of the 25 study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The remaining study intersections are expected to operate at LOS E and/or F during the weekday AM and/or PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions.

***Future (Year 2020) With Combined Project Traffic Conditions* –** The combined project is expected to result in significant traffic impacts at a total of seven (7) of the 25 study intersections, depending on the jurisdictional significance threshold criteria employed (i.e., City of Hermosa Beach, City of Manhattan Beach, Caltrans, and CMP). *Table 13-1* summarizes these impacts. While mitigation measures are proposed for several of the intersections, they are not entirely under the control of a single jurisdiction. Therefore, these significant traffic impacts have been concluded to remain significant and unavoidable.

***Future (Year 2020) With Hermosa Beach Project Only Traffic Conditions* –** The Hermosa Beach project only is expected to result in significant traffic impacts at a total of six (6) of the 25 study intersections, depending on the jurisdictional significance threshold criteria employed (i.e., City of Hermosa Beach, City of Manhattan Beach, Caltrans, and CMP). *Table 13-1* summarizes these impacts. While mitigation measures are proposed for several of the intersections, they are not entirely under the control of a single jurisdiction. Therefore, these significant traffic impacts have been concluded to remain significant and unavoidable.

***Future (Year 2020) With 305 S. Sepulveda Boulevard Only Traffic Conditions* –** The 305 S. Sepulveda Boulevard project only is expected to result in significant traffic impacts at a total of four (4) of the 25 study intersections, depending on the jurisdictional significance threshold criteria employed (i.e., City of Hermosa Beach, City of Manhattan Beach, Caltrans, and CMP). *Table 13-1* summarizes these impacts. While mitigation measures are proposed for two of the intersections, they are not entirely under the control of a single jurisdiction. Therefore, these significant traffic impacts have been concluded to remain significant and unavoidable.

***Future (Year 2020) With 330 S. Sepulveda Boulevard Expansion Only Traffic Conditions* –** The 330 S. Sepulveda Boulevard Expansion project only is expected to result in significant traffic impacts at a total of two (2) of the 25 study intersections, depending on the jurisdictional significance threshold criteria employed (i.e., City of Hermosa Beach, City of Manhattan Beach, Caltrans, and CMP). *Table 13-1* summarizes these impacts. These significant traffic impacts have been concluded to remain significant and unavoidable.

***Street Segment Analysis* –** Application of the County's two-lane roadway threshold criteria for street segment analysis (modified to reflect local conditions) indicates that the operational traffic due to the projects is not anticipated to significantly impact the analyzed street segments under either the existing or future year 2020 conditions. Thus, no mitigation measures are required or recommended.

Construction Traffic Impact Analysis – Based on the forecast construction traffic generation intersection impacts due to construction activities are forecast to be significant at three (3) of the 25 study intersections. It is important to note that these findings are conservative, in that the impacts were analyzed through employment of each City's adopted significance thresholds which are intended for application with typical, recurring, conditions and not short-term, temporary conditions as occurs during construction activities. These short-term impacts would remain as significant and unavoidable.

CMP Traffic Assessment **–** The results of the Los Angeles CMP indicated that the proposed Skechers Design Center and Offices project will adversely affect one CMP intersection monitoring station but will not adversely affect any CMP freeway monitoring locations, as well as nearby transit operations. No improvement measures/mitigation measures have been identified that will fully mitigate the project impacts at CMP intersection monitoring station location No. 22 (analyzed as Study Intersection No. 17).

Parking Supply-Code Analysis **–** The required number of parking spaces for the proposed Hermosa Beach project and the Manhattan Beach projects will more than meet each City's Code parking requirement.

Trip Reduction/Transportation Demand Management **–** The applicant will be required to comply with the City of Hermosa Beach and City of Manhattan Beach codes/ordinances pertaining to trip reduction and travel demand management measures (i.e., comply with Chapter 17.48 of the City of Hermosa Beach's Municipal Code and the City of Manhattan Beach's Ordinance No. 1901). While no specific additional trip reduction has been assumed for the required implementation of these trip reduction/travel demand management measures, the impacts are expected to be less than reported herein.

APPENDIX A

SUMMARY OF CODE PARKING REQUIREMENTS BY VEHICLE TYPE

HERMOSA - Design Center - 2901 PCH

62,868 SF – lot area; 38,953 – lot coverage; 100,296 SF – bldg.

PARKING	**Required**	**Proposed (without tandem)**	**Proposed with tandem**	**Code Requirement**
Spaces	**401**	**427**	**520**	**1:250 – Office** **1:100 – coffee house**
Regular	270 – min (per 401)	346		70% minimum of required (less accessible spaces)
Compact	120 – max (per 401)	70		30% maximum of required spaces
Accessible – Building Code Table 11B-208.2	11 (2 van) – based on total of 520 spaces	11		Based on total spaces provided: 401 – 500 = 8 501+ = 2% of total 1:6 van
Tandem	N/A		93 (all compact size)	
Bicycle – HBMC 17.48.030B.2	5	26		4 per 50,000 SF + 1 for each additional 50,000 SF (round after 0.5)
Bicycle – Cal Green Building Code 5.106.4.1	26 – based on total of 520 spaces	26		Based on total spaces provided 5% of tenant spaces
EV Infrastructure – Cal Green Building Code – 5.106.5.3.3	16 – based on total of 520 spaces	16 (6 actual chargers installed)		Based on total spaces provided 201+ = 3% Chargers do not have to be installed; just infrastructure
Carpool/vanpool – HBMC 17.48.030B.2	52 – based on total of 520 spaces	52		Based on total spaces provided: 10% preferential for carpool/vanpool with at least one marked space (only for buildings over 50,000 SF)
Low-emitting/fuel efficient, carpool/vanpool – Cal Green Building Code 5.106.5.2	42 – based on total of 520 spaces	52		Based on total spaces provided 76 – 100 = 8 201+ = 8%
Loading	N/A		curbside	

HERMOSA - Executive Center – 3001 PCH

15,813 – lot area; 7,924 – lot coverage; 20,209 SF - bldg

PARKING	Required	Proposed	Code Requirement
Spaces	**87** **77 for office** **10 for coffee house**	**89**	**1:250 – Office** **1:100 – coffee house**
Regular	57 – min	81	70% minimum (less accessible spaces)
Compact	27 - max	2	30% maximum of required spaces
Accessible - Building Code Table 11B-208.2	4 (1 van)	4	Based on total spaces provided 76 – 100 = 4 1:6 van
Tandem	N/A	2 (all compact size)	
Bicycle – HBMC 17.48.030B.2	0	6	4 per 50,000 SF + 1 for each additional 50,000 SF (round after 0.5)
Bicycle – Cal Green Building Code 5.106.4.1	4.25 + 2 space bicycle rack for coffee house	6	Based on total spaces provided 5% of tenant spaces + 5% of visitor parking with bicycle rack w/in 200 feet of door, minimum of 2 space bicycle rack
EV Infrastructure – Cal Green Building Code – 5.106.5.3.3	2 – based on 89 spaces	2 (2 actual chargers installed)	Based on total spaces provided 76 – 100 = 2 Chargers do not have to be installed; just infrastructure
Carpool/vanpool – HBMC 17.48.030B.2	0	8	10% preferential for carpool/vanpool with at least one marked space (only for buildings over 50,000 SF)
Low-emitting/fuel efficient, carpool/vanpool – Cal Green Building Code 5.106.5.2	8 - based on 89 spaces	8	Based on total spaces provided 76 – 100 = 8 201+ = 8%
Loading	N/A	1	

Manhattan Beach – 305 Sepulveda – 28,492 – lot area; 20,594 – lot coverage; 37,174 SF – bldg.

PARKING	Required	Proposed	Code Requirement
Spaces	**124**	**199**	1:300 - Office
Regular	87 – min	130	70% minimum (less accessible spaces)
Compact – MBMC 10.64.100	37 max (per 124)	63	30% maximum based on required
Accessible - Building Code Table 11B-208.2	6 (1 van)	6	Based on total spaces provided 151 – 200 = 6 201 – 300 = 7 1:6 van
Tandem	N/A	0	N/A
Bicycle – MBMC 10.64.080	6.2	12	Based on required spaces (racks okay) 5%
Bicycle – Cal Green Building Code 5.106.4.1	9.95	12	Based on total spaces provided 5% of tenant spaces
EV Infrastructure – Cal Green Building Code – 5.106.5.3.3	3	3 (3 actual chargers installed)	Based on total spaces provided 101-200 = 3 201+ = 3% Chargers do not have to be installed; just infrastructure
Carpool/vanpool – TDM Ordinance	0	16	10% preferential for carpool/vanpool with at least one marked space (only for buildings over 50,000 SF)
Low-emitting/fuel efficient, carpool/vanpool – Cal Green Building Code 5.106.5.2	16 X – Carpool Y – Fuel Efficient vehicles	16	Based on total spaces provided 151 - 200 = 16 201+ = 8%
Loading – MBMC 10.64.030	1	1	12 x 35 x 14

Manhattan Beach – 300 Sepulveda/330 Sepulveda – addition is 20,328 SF; existing is 54,875 – total of 75,203

PARKING	Required	Proposed	Code Requirement
Spaces	**338 (original approval for 330 required 270 minimum + 68 for new space)**	**389**	1:300 - Office
Regular	233 – based on 389	283	70% minimum (less accessible spaces)
Compact – MBMC 10.64.100	156 max– based on 389	98	30% maximum
Accessible - Building Code Table 11B-208.2	8 (2 van) – based on 397	8	Based on total spaces provided 301-400 = 8 1:6 van
Tandem	N/A	0	
Bicycle – MBMC 10.64.080	16.9 – based on 338	20	Based on required spaces (racks okay) 5%
Bicycle – Cal Green Building Code 5.106.4.1	19.45 – based on 389	20	Based on total spaces 5% of tenant spaces
EV Infrastructure – Cal Green Building Code – 5.106.5.3.3	11.67 – based on 389	12 (6 actual chargers installed)	Based on total spaces 201+ = 3% Chargers do not have to be installed; just infrastructure
Carpool/vanpool – TDM Ordinance	38.9	39	10% preferential for carpool/vanpool with at least one marked space (only for buildings over 50,000 SF)
Low-emitting/fuel efficient, carpool/vanpool – Cal Green Building Code 5.106.5.2	31.12 - based on 389	31	Based on total spaces 201+ = 8%
Loading – MBMC 10.64.030	2	2	12 x 35 x 14

APPENDIX B

TRAFFIC COUNT DATA

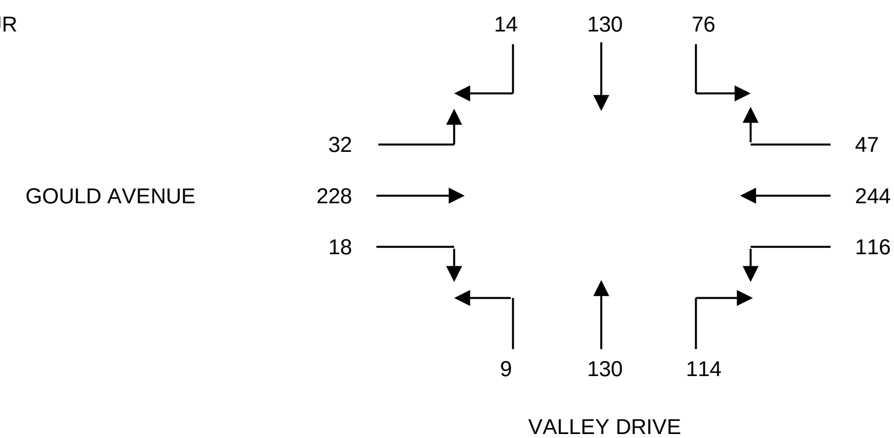
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		07:00 AM TO 09:00 AM
INTERSECTION	N/S	VALLEY DRIVE
	E/W	GOULD AVENUE
FILE NUMBER:		1-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	2	15	7	7	36	13	5	28	5	8	40	5
0715-0730	1	20	14	12	45	17	15	24	3	3	50	7
0730-0745	3	30	19	10	59	20	28	31	2	4	57	8
0745-0800	3	35	18	17	56	32	25	25	2	6	69	5
0800-0815	5	33	16	12	71	37	39	36	4	6	52	10
0815-0830	3	32	23	8	58	27	22	38	1	2	50	9
0830-0845	3	29	18	8	69	20	17	29	4	1	57	9
0845-0900	1	31	26	11	64	17	14	36	4	4	58	4

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	9	100	58	46	196	82	73	108	12	21	216	25	946
0715-0815	12	118	67	51	231	106	107	116	11	19	228	30	1096
0730-0830	14	130	76	47	244	116	114	130	9	18	228	32	1158
0745-0845	14	129	75	45	254	116	103	128	11	15	228	33	1151
0800-0900	12	125	83	39	262	101	92	139	13	13	217	32	1128

A.M. PEAK HOUR
0730-0830



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

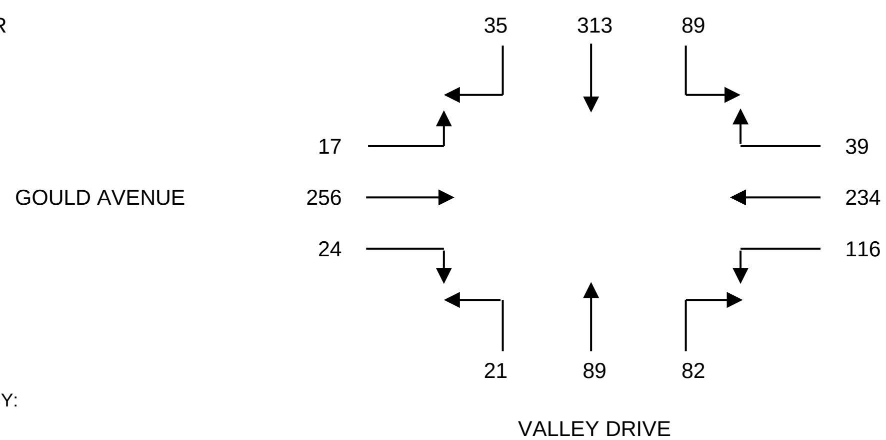
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		04:00 PM TO 07:00 PM
INTERSECTION	N/S	VALLEY DRIVE
	E/W	GOULD AVENUE
FILE NUMBER:		1-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	5	73	29	8	55	29	28	24	5	9	56	8
0415-0430	6	54	29	5	58	33	29	19	5	5	64	5
0430-0445	7	80	21	9	58	27	23	15	4	8	68	5
0445-0500	12	68	24	10	52	26	21	20	4	6	72	3
0500-0515	8	88	20	10	53	28	23	32	8	5	59	6
0515-0530	8	77	24	10	71	35	15	22	5	5	57	3
0530-0545	8	88	21	9	63	22	19	19	3	10	52	7
0545-0600	13	78	21	8	60	17	12	15	4	10	63	5
0600-0615	7	89	16	7	74	20	13	14	3	11	64	9
0615-0630	8	67	21	10	72	17	16	18	5	7	52	5
0630-0645	10	88	24	5	54	26	11	15	4	8	43	4
0645-0700	10	67	21	6	46	21	8	10	3	7	39	2

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	30	275	103	32	223	115	101	78	18	28	260	21	1284
0415-0515	33	290	94	34	221	114	96	86	21	24	263	19	1295
0430-0530	35	313	89	39	234	116	82	89	21	24	256	17	1315
0445-0545	36	321	89	39	239	111	78	93	20	26	240	19	1311
0500-0600	37	331	86	37	247	102	69	88	20	30	231	21	1299
0515-0615	36	332	82	34	268	94	59	70	15	36	236	24	1286
0530-0630	36	322	79	34	269	76	60	66	15	38	231	26	1252
0545-0645	38	322	82	30	260	80	52	62	16	36	222	23	1223
0600-0700	35	311	82	28	246	84	48	57	15	33	198	20	1157

P.M. PEAK HOUR
0430-0530



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: VALLEY DRIVE / GOULD AVENUE

FILE: 1AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	3	1	0
0715-0730	0	8	1	1
0730-0745	0	14	2	0
0745-0800	1	14	3	3
0800-0815	3	11	1	3
0815-0830	0	24	3	0
0830-0845	0	11	8	0
0845-0900	1	13	4	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	2	0	0
0715-0730	0	0	0	0
0730-0745	0	1	1	0
0745-0800	3	0	0	3
0800-0815	1	1	0	2
0815-0830	2	0	1	0
0830-0845	1	1	1	0
0845-0900	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	39	7	4	51
0715-0815	4	47	7	7	65
0730-0830	4	63	9	6	82
0745-0845	4	60	15	6	85
0800-0900	4	59	16	3	82

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	3	3	1	3	10
0715-0815	4	2	1	5	12
0730-0830	6	2	2	5	15
0745-0845	7	2	2	5	16
0800-0900	4	2	2	2	10

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 04:00 PM TO 07:00 PM

INTERSECTION: VALLEY DRIVE / GOULD AVENUE

FILE: 1PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	1	5	2	1
0415-0430	2	4	2	2
0430-0445	0	7	8	1
0445-0500	0	6	2	1
0500-0515	1	18	8	0
0515-0530	1	14	0	2
0530-0545	1	11	1	0
0545-0600	0	8	5	0
0600-0615	0	7	2	0
0615-0630	1	6	2	1
0630-0645	1	7	0	0
0645-0700	2	10	2	2

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	1	1	1
0430-0445	3	0	0	3
0445-0500	0	0	1	2
0500-0515	2	1	0	1
0515-0530	0	1	1	0
0530-0545	0	0	0	0
0545-0600	0	0	0	1
0600-0615	0	0	1	1
0615-0630	1	1	0	0
0630-0645	0	0	2	0
0645-0700	1	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	3	22	14	5	44
0415-0515	3	35	20	4	62
0430-0530	2	45	18	4	69
0445-0545	3	49	11	3	66
0500-0600	3	51	14	2	70
0515-0615	2	40	8	2	52
0530-0630	2	32	10	1	45
0545-0645	2	28	9	1	40
0600-0700	4	30	6	3	43

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	3	1	2	6	12
0415-0515	5	2	2	7	16
0430-0530	5	2	2	6	15
0445-0545	2	2	2	3	9
0500-0600	2	2	1	2	7
0515-0615	0	1	2	2	5
0530-0630	1	1	1	2	5
0545-0645	1	1	3	2	7
0600-0700	2	1	3	1	7

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

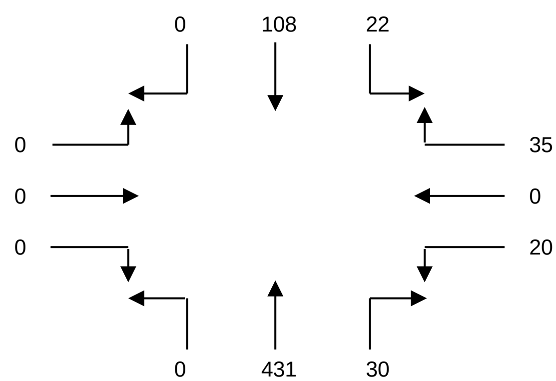
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		07:00 AM TO 09:00 AM
INTERSECTION	N/S	ARDMORE AVENUE
	E/W	DUNCAN AVENUE
FILE NUMBER:		2-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	0	7	1	5	0	4	4	65	0	0	0	0
0715-0730	0	13	2	11	0	2	2	76	0	0	0	0
0730-0745	0	28	5	7	0	4	6	84	0	0	0	0
0745-0800	0	35	7	8	0	7	6	114	0	0	0	0
0800-0815	0	30	4	7	0	7	8	102	0	0	0	0
0815-0830	0	23	5	8	0	4	9	111	0	0	0	0
0830-0845	0	20	6	12	0	2	7	104	0	0	0	0
0845-0900	0	17	7	7	0	1	3	100	0	0	0	0

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	0	83	15	31	0	17	18	339	0	0	0	0	503
0715-0815	0	106	18	33	0	20	22	376	0	0	0	0	575
0730-0830	0	116	21	30	0	22	29	411	0	0	0	0	629
0745-0845	0	108	22	35	0	20	30	431	0	0	0	0	646
0800-0900	0	90	22	34	0	14	27	417	0	0	0	0	604

A.M. PEAK HOUR
0745-0845

DUNCAN AVENUE



ARDMORE AVENUE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

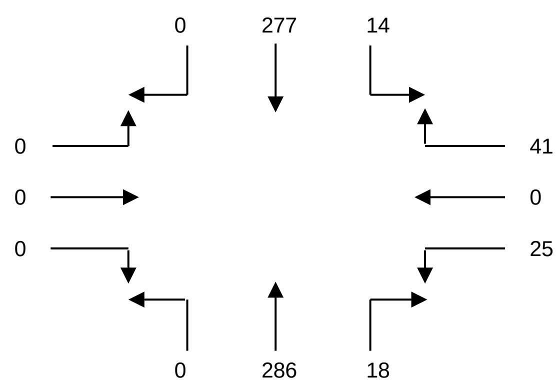
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		04:00 PM TO 07:00 PM
INTERSECTION	N/S	ARDMORE AVENUE
	E/W	DUNCAN AVENUE
FILE NUMBER:		2-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
0400-0415	0	41	3	4	0	3	1	69	0	0	0	0
0415-0430	0	59	6	9	0	6	4	71	0	0	0	0
0430-0445	0	51	6	11	0	6	2	66	0	0	0	0
0445-0500	0	75	4	11	0	7	5	70	0	0	0	0
0500-0515	0	74	2	10	0	8	3	79	0	0	0	0
0515-0530	0	69	5	8	0	6	6	63	0	0	0	0
0530-0545	0	59	3	12	0	4	4	74	0	0	0	0
0545-0600	0	55	6	10	0	6	5	71	0	0	0	0
0600-0615	0	58	2	7	0	9	2	69	0	0	0	0
0615-0630	0	50	4	9	0	7	0	63	0	0	0	0
0630-0645	0	46	4	8	0	3	1	41	0	0	0	0
0645-0700	0	46	3	7	0	2	2	57	0	0	0	0

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
0400-0500	0	226	19	35	0	22	12	276	0	0	0	0	590
0415-0515	0	259	18	41	0	27	14	286	0	0	0	0	645
0430-0530	0	269	17	40	0	27	16	278	0	0	0	0	647
0445-0545	0	277	14	41	0	25	18	286	0	0	0	0	661
0500-0600	0	257	16	40	0	24	18	287	0	0	0	0	642
0515-0615	0	241	16	37	0	25	17	277	0	0	0	0	613
0530-0630	0	222	15	38	0	26	11	277	0	0	0	0	589
0545-0645	0	209	16	34	0	25	8	244	0	0	0	0	536
0600-0700	0	200	13	31	0	21	5	230	0	0	0	0	500

P.M. PEAK HOUR
0445-0545

DUNCAN AVENUE



ARDMORE AVENUE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: ARDMORE AVENUE / DUNCAN AVENUE

FILE: 2AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	1	1	0	0
0715-0730	2	0	0	0
0730-0745	2	0	0	0
0745-0800	0	1	0	0
0800-0815	0	0	0	0
0815-0830	2	0	1	0
0830-0845	0	0	2	0
0845-0900	1	1	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	1	0	0	0
0715-0730	0	0	0	0
0730-0745	0	1	0	0
0745-0800	1	0	0	0
0800-0815	0	1	0	0
0815-0830	0	0	0	0
0830-0845	0	0	0	0
0845-0900	0	2	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	5	2	0	0	7
0715-0815	4	1	0	0	5
0730-0830	4	1	1	0	6
0745-0845	2	1	3	0	6
0800-0900	3	1	3	0	7

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	2	1	0	0	3
0715-0815	1	2	0	0	3
0730-0830	1	2	0	0	3
0745-0845	1	1	0	0	2
0800-0900	0	3	0	0	3

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 04:00 PM TO 07:00 PM

INTERSECTION: ARDMORE AVENUE / DUNCAN AVENUE

FILE: 2PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	1	5	1	0
0415-0430	6	3	1	0
0430-0445	4	0	0	0
0445-0500	2	1	0	0
0500-0515	5	0	0	0
0515-0530	2	2	0	0
0530-0545	1	0	0	0
0545-0600	0	1	1	0
0600-0615	2	1	1	0
0615-0630	0	0	0	0
0630-0645	0	0	0	0
0645-0700	1	0	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	1	0	0
0430-0445	0	0	0	0
0445-0500	0	0	0	0
0500-0515	0	0	0	0
0515-0530	0	1	1	0
0530-0545	0	0	0	0
0545-0600	0	1	1	0
0600-0615	0	0	0	0
0615-0630	0	0	1	0
0630-0645	0	1	0	0
0645-0700	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	13	9	2	0	24
0415-0515	17	4	1	0	22
0430-0530	13	3	0	0	16
0445-0545	10	3	0	0	13
0500-0600	8	3	1	0	12
0515-0615	5	4	2	0	11
0530-0630	3	2	2	0	7
0545-0645	2	2	2	0	6
0600-0700	3	1	1	0	5

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	1	0	0	1
0415-0515	0	1	0	0	1
0430-0530	0	1	1	0	2
0445-0545	0	1	1	0	2
0500-0600	0	2	2	0	4
0515-0615	0	2	2	0	4
0530-0630	0	1	2	0	3
0545-0645	0	2	2	0	4
0600-0700	0	1	1	0	2

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

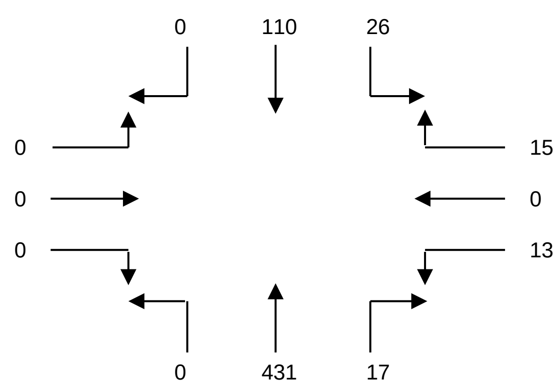
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		07:00 AM TO 09:00 AM
INTERSECTION	N/S	ARDMORE AVENUE
	E/W	30TH STREET
FILE NUMBER:		3-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	0	10	2	0	0	1	2	55	0	0	0	0
0715-0730	0	20	4	3	0	1	4	70	0	0	0	0
0730-0745	0	31	6	8	0	2	7	94	0	0	0	0
0745-0800	0	35	8	6	0	3	5	95	0	0	0	0
0800-0815	0	28	4	2	0	3	5	108	0	0	0	0
0815-0830	0	26	8	2	0	5	3	115	0	0	0	0
0830-0845	0	21	6	5	0	2	4	113	0	0	0	0
0845-0900	0	16	4	4	0	1	2	83	0	0	0	0

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	0	96	20	17	0	7	18	314	0	0	0	0	472
0715-0815	0	114	22	19	0	9	21	367	0	0	0	0	552
0730-0830	0	120	26	18	0	13	20	412	0	0	0	0	609
0745-0845	0	110	26	15	0	13	17	431	0	0	0	0	612
0800-0900	0	91	22	13	0	11	14	419	0	0	0	0	570

A.M. PEAK HOUR
0745-0845

30TH STREET



ARDMORE AVENUE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

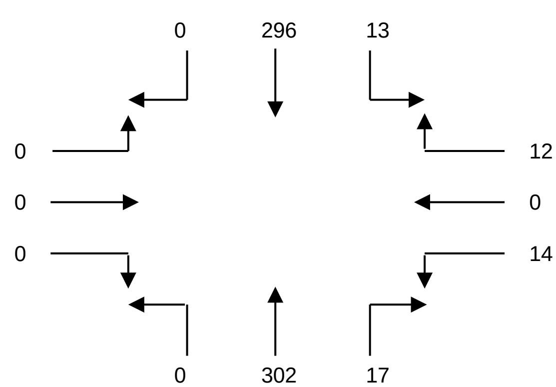
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		04:00 PM TO 07:00 PM
INTERSECTION	N/S	ARDMORE AVENUE
	E/W	30TH STREET
FILE NUMBER:		3-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	0	51	4	3	0	3	5	61	0	0	0	0
0415-0430	0	54	6	3	0	2	5	74	0	0	0	0
0430-0445	0	62	8	2	0	4	2	64	0	0	0	0
0445-0500	0	73	5	2	0	3	4	87	0	0	0	0
0500-0515	0	83	3	3	0	4	6	69	0	0	0	0
0515-0530	0	74	1	4	0	3	3	76	0	0	0	0
0530-0545	0	66	4	3	0	4	4	70	0	0	0	0
0545-0600	0	55	5	5	0	1	5	80	0	0	0	0
0600-0615	0	55	2	5	0	3	3	61	0	0	0	0
0615-0630	0	57	7	0	0	5	3	57	0	0	0	0
0630-0645	0	48	3	4	0	3	5	41	0	0	0	0
0645-0700	0	44	4	3	0	2	4	58	0	0	0	0

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	0	240	23	10	0	12	16	286	0	0	0	0	587
0415-0515	0	272	22	10	0	13	17	294	0	0	0	0	628
0430-0530	0	292	17	11	0	14	15	296	0	0	0	0	645
0445-0545	0	296	13	12	0	14	17	302	0	0	0	0	654
0500-0600	0	278	13	15	0	12	18	295	0	0	0	0	631
0515-0615	0	250	12	17	0	11	15	287	0	0	0	0	592
0530-0630	0	233	18	13	0	13	15	268	0	0	0	0	560
0545-0645	0	215	17	14	0	12	16	239	0	0	0	0	513
0600-0700	0	204	16	12	0	13	15	217	0	0	0	0	477

P.M. PEAK HOUR
0445-0545

30TH STREET



ARDMORE AVENUE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: ARDMORE AVENUE / 30 TH STREET

FILE: 3AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	0	0
0730-0745	1	1	0	0
0745-0800	0	0	0	0
0800-0815	1	0	0	0
0815-0830	0	1	0	0
0830-0845	0	0	0	0
0845-0900	1	0	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	0	0
0730-0745	0	1	1	0
0745-0800	0	0	0	0
0800-0815	0	0	0	0
0815-0830	0	1	0	0
0830-0845	0	0	0	0
0845-0900	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	1	0	0	2
0715-0815	2	1	0	0	3
0730-0830	2	2	0	0	4
0745-0845	1	1	0	0	2
0800-0900	2	1	0	0	3

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	1	1	0	2
0715-0815	0	1	1	0	2
0730-0830	0	2	1	0	3
0745-0845	0	1	0	0	1
0800-0900	0	1	0	0	1

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 04:00 PM TO 07:00 PM

INTERSECTION: ARDMORE AVENUE / 30 TH STREET

FILE: 3PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	1	0	0
0430-0445	0	0	0	0
0445-0500	1	0	0	0
0500-0515	0	1	0	0
0515-0530	0	2	0	0
0530-0545	0	0	1	0
0545-0600	0	0	1	0
0600-0615	0	0	0	0
0615-0630	0	0	0	0
0630-0645	0	0	2	0
0645-0700	4	0	7	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	2	0	0
0430-0445	0	0	0	0
0445-0500	0	1	0	0
0500-0515	0	0	0	0
0515-0530	0	0	0	0
0530-0545	0	1	0	0
0545-0600	0	1	0	0
0600-0615	0	1	0	0
0615-0630	0	2	0	0
0630-0645	1	0	0	0
0645-0700	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	1	1	0	0	2
0415-0515	1	2	0	0	3
0430-0530	1	3	0	0	4
0445-0545	1	3	1	0	5
0500-0600	0	3	2	0	5
0515-0615	0	2	2	0	4
0530-0630	0	0	2	0	2
0545-0645	0	0	3	0	3
0600-0700	4	0	9	0	13

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	3	0	0	3
0415-0515	0	3	0	0	3
0430-0530	0	1	0	0	1
0445-0545	0	2	0	0	2
0500-0600	0	2	0	0	2
0515-0615	0	3	0	0	3
0530-0630	0	5	0	0	5
0545-0645	1	4	0	0	5
0600-0700	1	3	0	0	4

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

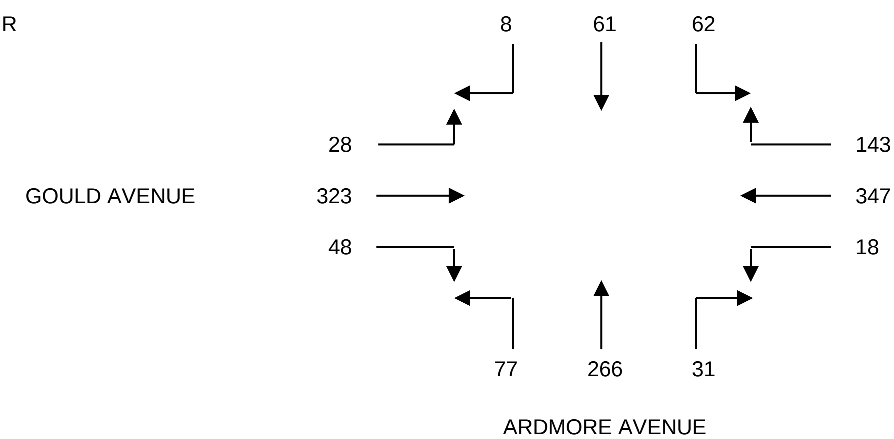
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION N/S ARDMORE AVENUE
E/W GOULD AVENUE
FILE NUMBER: 4-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	2	7	5	19	55	2	5	33	8	6	58	3
0715-0730	1	6	10	21	69	3	5	54	12	9	73	2
0730-0745	0	10	19	22	74	2	2	62	11	4	91	5
0745-0800	0	15	23	30	90	3	5	60	16	8	83	9
0800-0815	2	20	19	48	95	6	10	54	22	14	81	6
0815-0830	3	15	12	36	84	3	9	77	20	16	84	6
0830-0845	3	11	8	29	78	6	7	75	19	10	75	7
0845-0900	0	10	8	31	74	2	7	55	14	11	71	4

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	3	38	57	92	288	10	17	209	47	27	305	19	1112
0715-0815	3	51	71	121	328	14	22	230	61	35	328	22	1286
0730-0830	5	60	73	136	343	14	26	253	69	42	339	26	1386
0745-0845	8	61	62	143	347	18	31	266	77	48	323	28	1412
0800-0900	8	56	47	144	331	17	33	261	75	51	311	23	1357

A.M. PEAK HOUR
0745-0845



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

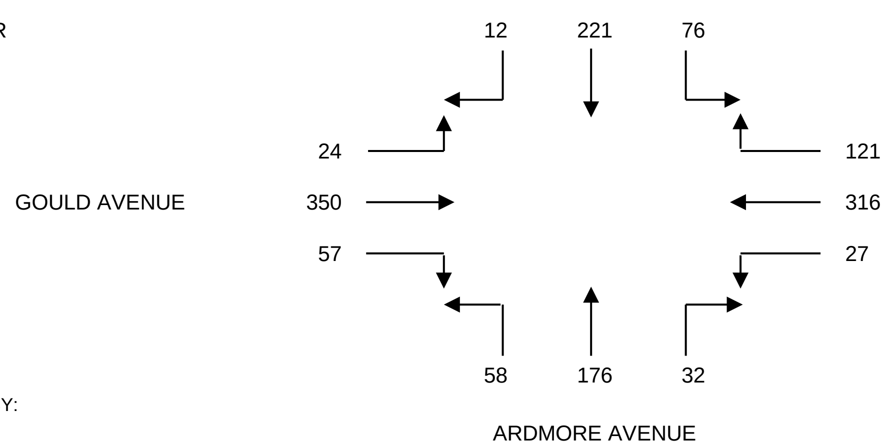
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 04:00 PM TO 07:00 PM
INTERSECTION N/S ARDMORE AVENUE
E/W GOULD AVENUE
FILE NUMBER: 4-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	4	30	18	23	84	5	7	29	6	9	95	5
0415-0430	2	43	21	34	76	7	10	47	11	14	99	4
0430-0445	2	46	20	22	77	6	11	38	13	12	97	4
0445-0500	3	51	21	34	76	6	6	47	14	13	96	7
0500-0515	5	55	18	35	71	10	5	43	16	18	87	7
0515-0530	2	69	17	30	92	5	10	48	15	14	70	6
0530-0545	3	52	19	32	81	6	7	31	16	10	78	5
0545-0600	2	41	14	33	73	6	7	44	10	7	82	6
0600-0615	2	40	12	34	87	8	10	37	11	11	81	4
0615-0630	3	47	18	24	81	4	8	36	13	9	70	2
0630-0645	4	35	15	16	75	8	5	24	14	11	66	3
0645-0700	4	25	18	19	60	9	8	38	8	9	54	3

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	11	170	80	113	313	24	34	161	44	48	387	20	1405
0415-0515	12	195	80	125	300	29	32	175	54	57	379	22	1460
0430-0530	12	221	76	121	316	27	32	176	58	57	350	24	1470
0445-0545	13	227	75	131	320	27	28	169	61	55	331	25	1462
0500-0600	12	217	68	130	317	27	29	166	57	49	317	24	1413
0515-0615	9	202	62	129	333	25	34	160	52	42	311	21	1380
0530-0630	10	180	63	123	322	24	32	148	50	37	311	17	1317
0545-0645	11	163	59	107	316	26	30	141	48	38	299	15	1253
0600-0700	13	147	63	93	303	29	31	135	46	40	271	12	1183

P.M. PEAK HOUR
0430-0530



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: ARDMORE AVENUE / GOULD AVENUE

FILE: 4AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	1	0	4	0
0715-0730	0	0	1	0
0730-0745	0	0	1	0
0745-0800	0	0	1	0
0800-0815	0	0	2	0
0815-0830	2	0	4	0
0830-0845	0	0	4	0
0845-0900	3	0	5	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	1	2	0
0715-0730	0	0	0	1
0730-0745	1	0	0	1
0745-0800	0	1	0	0
0800-0815	0	0	1	0
0815-0830	2	0	1	0
0830-0845	4	3	0	0
0845-0900	1	1	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	0	7	0	8
0715-0815	0	0	5	0	5
0730-0830	2	0	8	0	10
0745-0845	2	0	11	0	13
0800-0900	5	0	15	0	20

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	2	2	2	7
0715-0815	1	1	1	2	5
0730-0830	3	1	2	1	7
0745-0845	6	4	2	0	12
0800-0900	7	4	2	0	13

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 04:00 PM TO 07:00 PM

INTERSECTION: ARDMORE AVENUE / GOULD AVENUE

FILE: 4PMPED-BIKE

15-MINUTE PERIOD	PEDESTRIAN MOVEMENTS NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	1	0	4	0
0415-0430	1	0	2	0
0430-0445	1	0	3	0
0445-0500	0	0	1	0
0500-0515	0	1	4	0
0515-0530	0	0	1	0
0530-0545	1	0	1	0
0545-0600	0	0	4	0
0600-0615	0	0	4	0
0615-0630	0	0	1	0
0630-0645	0	0	0	0
0645-0700	0	0	3	0

15-MINUTE PERIOD	BICYCLIST MOVEMENTS NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	2	0	0	0
0430-0445	1	1	0	1
0445-0500	1	0	1	0
0500-0515	2	2	0	0
0515-0530	0	0	1	0
0530-0545	0	0	0	0
0545-0600	1	0	0	0
0600-0615	0	1	0	0
0615-0630	1	0	0	0
0630-0645	0	3	2	0
0645-0700	0	0	1	0

1-HOUR PERIOD	PEDESTRIAN MOVEMENTS NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	3	0	10	0	13
0415-0515	2	1	10	0	13
0430-0530	1	1	9	0	11
0445-0545	1	1	7	0	9
0500-0600	1	1	10	0	12
0515-0615	1	0	10	0	11
0530-0630	1	0	10	0	11
0545-0645	0	0	9	0	9
0600-0700	0	0	8	0	8

1-HOUR PERIOD	BICYCLIST MOVEMENTS NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	4	1	1	1	7
0415-0515	6	3	1	1	11
0430-0530	4	3	2	1	10
0445-0545	3	2	2	0	7
0500-0600	3	2	1	0	6
0515-0615	1	1	1	0	3
0530-0630	2	1	0	0	3
0545-0645	2	4	2	0	8
0600-0700	1	4	3	0	8

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

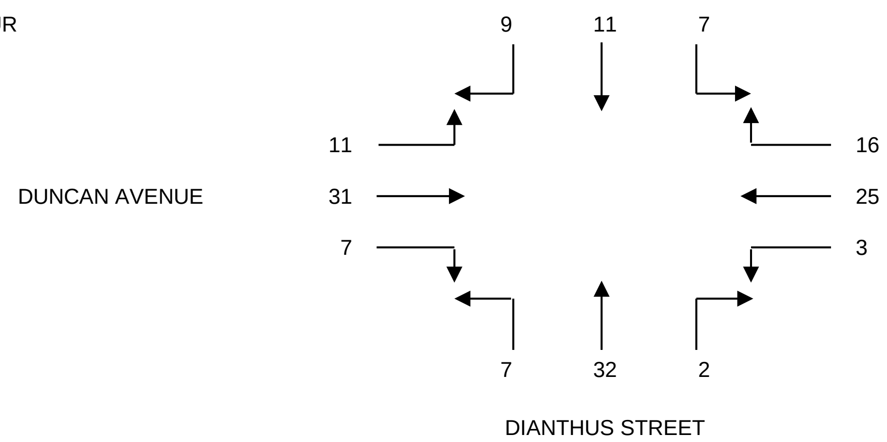
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION N/S DIANTHUS STREET
E/W DUNCAN AVENUE
FILE NUMBER: 5-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	1	1	0	2	5	0	0	3	0	0	2	1
0715-0730	1	3	2	4	6	0	0	4	3	0	3	2
0730-0745	0	5	1	5	6	1	0	6	0	0	6	3
0745-0800	4	5	1	2	8	0	0	8	2	1	7	2
0800-0815	3	2	1	7	5	1	0	10	2	2	7	2
0815-0830	1	2	3	5	6	1	1	8	2	2	8	3
0830-0845	1	2	2	2	6	1	1	6	1	2	9	4
0845-0900	0	5	2	1	5	0	1	9	1	2	7	3

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	6	14	4	13	25	1	0	21	5	1	18	8	116
0715-0815	8	15	5	18	25	2	0	28	7	3	23	9	143
0730-0830	8	14	6	19	25	3	1	32	6	5	28	10	157
0745-0845	9	11	7	16	25	3	2	32	7	7	31	11	161
0800-0900	5	11	8	15	22	3	3	33	6	8	31	12	157

A.M. PEAK HOUR
0745-0845



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

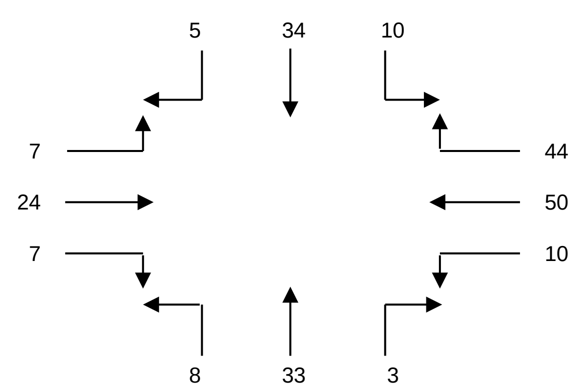
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		04:00 PM TO 07:00 PM
INTERSECTION	N/S	DIANTHUS STREET
	E/W	DUNCAN AVENUE
FILE NUMBER:		5-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	1	6	3	9	4	1	2	4	0	0	9	2
0415-0430	1	5	5	9	9	3	2	6	1	1	8	3
0430-0445	2	6	4	6	10	2	1	6	3	3	10	3
0445-0500	2	10	2	7	14	2	0	8	1	2	5	3
0500-0515	2	7	1	11	14	4	2	6	0	3	6	0
0515-0530	1	8	4	15	13	2	1	9	5	1	6	1
0530-0545	0	9	3	11	9	2	0	10	2	1	7	3
0545-0600	1	5	2	10	9	1	1	10	1	1	4	0
0600-0615	2	7	0	8	8	2	1	8	2	0	3	0
0615-0630	2	4	0	5	5	2	1	5	2	2	6	2
0630-0645	1	2	0	5	6	1	0	3	1	1	5	0
0645-0700	0	1	0	2	9	2	0	3	1	2	3	1

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	6	27	14	31	37	8	5	24	5	6	32	11	206
0415-0515	7	28	12	33	47	11	5	26	5	9	29	9	221
0430-0530	7	31	11	39	51	10	4	29	9	9	27	7	234
0445-0545	5	34	10	44	50	10	3	33	8	7	24	7	235
0500-0600	4	29	10	47	45	9	4	35	8	6	23	4	224
0515-0615	4	29	9	44	39	7	3	37	10	3	20	4	209
0530-0630	5	25	5	34	31	7	3	33	7	4	20	5	179
0545-0645	6	18	2	28	28	6	3	26	6	4	18	2	147
0600-0700	5	14	0	20	28	7	2	19	6	5	17	3	126

P.M. PEAK HOUR
0445-0545

DUNCAN AVENUE



DIANTHUS STREET

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: DIANTHUS STREET / DUNCAN AVENUE

FILE: 5AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	1	1
0715-0730	0	0	0	0
0730-0745	0	0	0	0
0745-0800	0	0	0	0
0800-0815	0	1	0	2
0815-0830	0	1	1	1
0830-0845	0	1	0	3
0845-0900	1	0	0	1

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	1	0	0	0
0730-0745	0	0	0	0
0745-0800	0	0	0	0
0800-0815	0	0	0	0
0815-0830	0	0	0	0
0830-0845	0	0	0	0
0845-0900	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	0	1	1	2
0715-0815	0	1	0	2	3
0730-0830	0	2	1	3	6
0745-0845	0	3	1	6	10
0800-0900	1	3	1	7	12

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	0	0	0	1
0715-0815	1	0	0	0	1
0730-0830	0	0	0	0	0
0745-0845	0	0	0	0	0
0800-0900	0	0	0	0	0

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 04:00 PM TO 07:00 PM
INTERSECTION: DIANTHUS STREET / DUNCAN AVENUE

FILE: 5PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	4	1	2	2
0415-0430	2	0	0	3
0430-0445	0	1	2	4
0445-0500	0	0	0	0
0500-0515	2	1	0	2
0515-0530	0	1	1	1
0530-0545	0	0	0	0
0545-0600	0	0	0	0
0600-0615	0	0	0	0
0615-0630	0	0	0	1
0630-0645	0	2	0	2
0645-0700	0	0	0	10

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	0	0	0
0430-0445	0	0	0	0
0445-0500	0	0	0	0
0500-0515	0	0	0	0
0515-0530	0	0	0	0
0530-0545	0	0	0	0
0545-0600	0	0	0	0
0600-0615	0	0	0	0
0615-0630	0	0	0	0
0630-0645	0	0	0	0
0645-0700	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	6	2	4	9	21
0415-0515	4	2	2	9	17
0430-0530	2	3	3	7	15
0445-0545	2	2	1	3	8
0500-0600	2	2	1	3	8
0515-0615	0	1	1	1	3
0530-0630	0	0	0	1	1
0545-0645	0	2	0	3	5
0600-0700	0	2	0	13	15

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	0	0	0	0
0415-0515	0	0	0	0	0
0430-0530	0	0	0	0	0
0445-0545	0	0	0	0	0
0500-0600	0	0	0	0	0
0515-0615	0	0	0	0	0
0530-0630	0	0	0	0	0
0545-0645	0	0	0	0	0
0600-0700	0	0	0	0	0

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

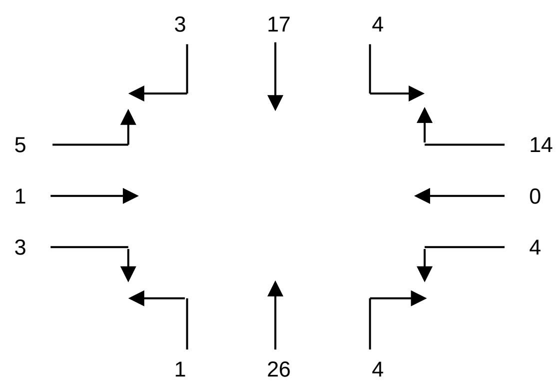
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		07:00 AM TO 09:00 AM
INTERSECTION	N/S	DIANTHUS STREET - TENNYSON PLACE
	E/W	BOUNDARY PLACE
FILE NUMBER:		6-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	0	1	0	0	0	0	0	3	0	0	0	0
0715-0730	1	2	0	3	0	0	0	4	0	0	0	0
0730-0745	0	5	1	3	0	1	1	6	0	1	1	1
0745-0800	0	5	0	0	0	2	3	8	1	1	0	1
0800-0815	1	4	3	4	0	1	1	6	0	0	0	3
0815-0830	1	3	0	2	0	0	2	6	0	1	0	0
0830-0845	1	5	1	3	0	1	1	6	1	1	0	1
0845-0900	0	5	0	5	0	2	0	8	0	1	1	1

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	1	13	1	6	0	3	4	21	1	2	1	2	55
0715-0815	2	16	4	10	0	4	5	24	1	2	1	5	74
0730-0830	2	17	4	9	0	4	7	26	1	3	1	5	79
0745-0845	3	17	4	9	0	4	7	26	2	3	0	5	80
0800-0900	3	17	4	14	0	4	4	26	1	3	1	5	82

A.M. PEAK HOUR
0800-0900

BOUNDARY PLACE



DIANTHUS STREET - TENNYSON PLACE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

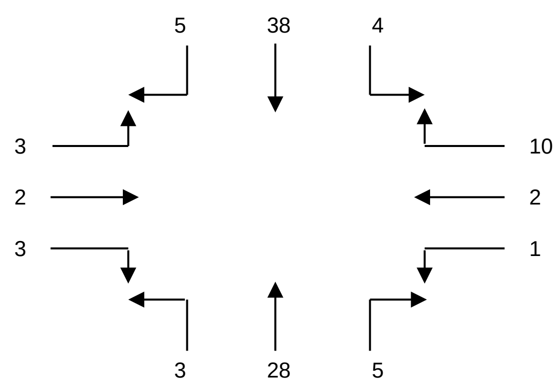
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		04:00 PM TO 07:00 PM
INTERSECTION	N/S	DIANTHUS STREET - TENNYSON PLACE
	E/W	BOUNDRY PLACE
FILE NUMBER:		6-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	1	6	0	2	1	1	1	4	2	1	0	0
0415-0430	1	8	1	2	0	1	0	6	0	0	0	0
0430-0445	0	8	1	2	0	1	1	7	1	0	0	2
0445-0500	1	9	2	3	2	0	2	4	0	1	0	1
0500-0515	2	12	0	2	0	0	1	6	1	1	1	0
0515-0530	1	8	2	2	0	0	1	9	1	1	0	2
0530-0545	1	9	0	3	0	1	1	9	1	0	1	0
0545-0600	1	8	0	2	0	1	0	8	0	2	0	1
0600-0615	0	12	0	1	0	1	1	7	1	1	0	2
0615-0630	0	7	0	4	0	4	0	8	1	0	0	0
0630-0645	0	3	0	0	0	2	1	5	1	0	0	0
0645-0700	0	3	1	0	0	0	1	2	1	0	0	0

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	3	31	4	9	3	3	4	21	3	2	0	3	86
0415-0515	4	37	4	9	2	2	4	23	2	2	1	3	93
0430-0530	4	37	5	9	2	1	5	26	3	3	1	5	101
0445-0545	5	38	4	10	2	1	5	28	3	3	2	3	104
0500-0600	5	37	2	9	0	2	3	32	3	4	2	3	102
0515-0615	3	37	2	8	0	3	3	33	3	4	1	5	102
0530-0630	2	36	0	10	0	7	2	32	3	3	1	3	99
0545-0645	1	30	0	7	0	8	2	28	3	3	0	3	85
0600-0700	0	25	1	5	0	7	3	22	4	1	0	2	70

P.M. PEAK HOUR
0445-0545

BOUNDRY PLACE



DIANTHUS STREET - TENNYSON PLACE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: DIANTHUS STREET - TENNYSON PLACE / BOUNDARY PLACE

FILE: 6AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	1	0
0730-0745	1	0	0	0
0745-0800	0	0	1	0
0800-0815	0	2	1	1
0815-0830	0	2	1	2
0830-0845	0	0	0	0
0845-0900	0	3	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	0	0
0730-0745	0	0	0	0
0745-0800	0	0	0	0
0800-0815	0	0	0	0
0815-0830	0	0	0	0
0830-0845	0	1	1	0
0845-0900	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	0	2	0	3
0715-0815	1	2	3	1	7
0730-0830	1	4	3	3	11
0745-0845	0	4	3	3	10
0800-0900	0	7	2	3	12

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	0	0	0	0
0715-0815	0	0	0	0	0
0730-0830	0	0	0	0	0
0745-0845	0	1	1	0	2
0800-0900	0	1	1	0	2

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 04:00 PM TO 07:00 PM

INTERSECTION: DIANTHUS STREET - TENNYSON PLACE / BOUNDARY PLACE

FILE: 6PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	1	0	2
0415-0430	0	0	0	2
0430-0445	2	2	0	1
0445-0500	0	0	0	4
0500-0515	0	0	0	0
0515-0530	0	1	0	3
0530-0545	0	1	1	0
0545-0600	0	1	1	0
0600-0615	0	0	0	1
0615-0630	0	0	0	0
0630-0645	0	4	0	2
0645-0700	0	0	0	10

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	0	0	0
0430-0445	0	0	0	0
0445-0500	0	0	0	0
0500-0515	0	0	0	0
0515-0530	0	1	0	2
0530-0545	0	0	0	0
0545-0600	0	1	0	0
0600-0615	0	0	0	0
0615-0630	0	0	0	0
0630-0645	0	0	0	0
0645-0700	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	2	3	0	9	14
0415-0515	2	2	0	7	11
0430-0530	2	3	0	8	13
0445-0545	0	2	1	7	10
0500-0600	0	3	2	3	8
0515-0615	0	3	2	4	9
0530-0630	0	2	2	1	5
0545-0645	0	5	1	3	9
0600-0700	0	4	0	13	17

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	0	0	0	0
0415-0515	0	0	0	0	0
0430-0530	0	1	0	2	3
0445-0545	0	1	0	2	3
0500-0600	0	2	0	2	4
0515-0615	0	2	0	2	4
0530-0630	0	1	0	0	1
0545-0645	0	1	0	0	1
0600-0700	0	0	0	0	0

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

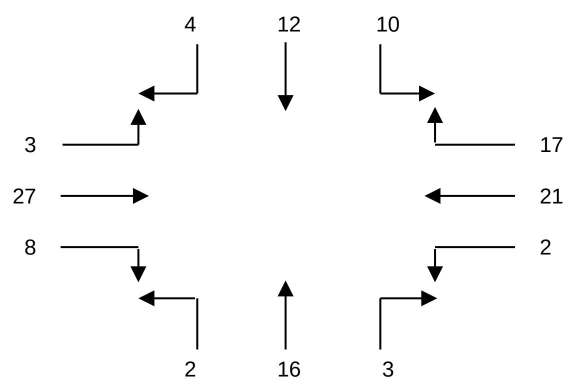
CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION N/S TENNYSON PLACE
E/W LONGFELLOW AVENUE
FILE NUMBER: 7-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	0	0	1	1	2	0	1	2	0	1	2	0
0715-0730	1	2	0	1	2	1	1	1	0	1	4	1
0730-0745	0	3	3	3	7	0	1	4	0	2	6	2
0745-0800	2	2	5	8	3	0	0	6	2	1	11	0
0800-0815	2	4	1	4	6	0	1	3	0	1	7	0
0815-0830	0	3	1	2	5	2	1	3	0	4	3	1
0830-0845	1	3	2	4	7	2	2	2	0	1	4	3
0845-0900	3	4	4	2	5	0	2	5	2	1	6	0

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	3	7	9	13	14	1	3	13	2	5	23	3	96
0715-0815	5	11	9	16	18	1	3	14	2	5	28	3	115
0730-0830	4	12	10	17	21	2	3	16	2	8	27	3	125
0745-0845	5	12	9	18	21	4	4	14	2	7	25	4	125
0800-0900	6	14	8	12	23	4	6	13	2	7	20	4	119

A.M. PEAK HOUR
0730-0830

LONGFELLOW AVENUE



TENNYSON PLACE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

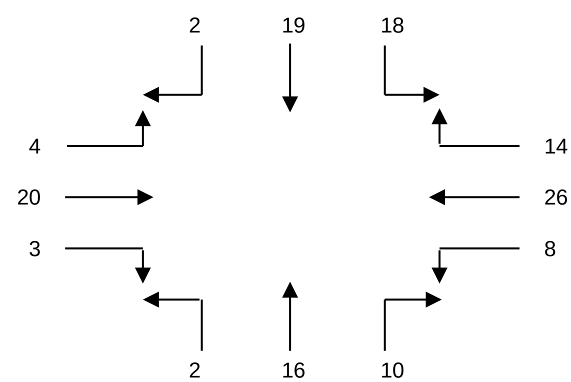
CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 04:00 PM TO 07:00 PM
INTERSECTION N/S TENNYSON PLACE
E/W LONGFELLOW AVENUE
FILE NUMBER: 7-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	0	4	3	3	4	2	1	3	0	0	7	1
0415-0430	1	4	2	3	6	2	3	3	0	1	6	1
0430-0445	0	7	5	5	8	2	1	2	1	2	7	1
0445-0500	2	3	5	2	6	1	4	5	1	0	5	2
0500-0515	0	4	5	3	5	3	2	3	0	1	3	0
0515-0530	0	5	3	4	7	2	3	6	0	0	5	1
0530-0545	1	9	2	5	6	2	2	4	0	1	3	0
0545-0600	2	6	3	2	4	2	2	6	0	0	5	1
0600-0615	1	5	5	3	9	1	0	5	0	0	3	0
0615-0630	2	3	4	4	8	1	2	5	0	2	1	0
0630-0645	4	2	4	4	6	2	2	2	0	1	0	1
0645-0700	0	0	1	3	2	1	0	1	0	1	1	1

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	3	18	15	13	24	7	9	13	2	3	25	5	137
0415-0515	3	18	17	13	25	8	10	13	2	4	21	4	138
0430-0530	2	19	18	14	26	8	10	16	2	3	20	4	142
0445-0545	3	21	15	14	24	8	11	18	1	2	16	3	136
0500-0600	3	24	13	14	22	9	9	19	0	2	16	2	133
0515-0615	4	25	13	14	26	7	7	21	0	1	16	2	136
0530-0630	6	23	14	14	27	6	6	20	0	3	12	1	132
0545-0645	9	16	16	13	27	6	6	18	0	3	9	2	125
0600-0700	7	10	14	14	25	5	4	13	0	4	5	2	103

P.M. PEAK HOUR
0430-0530

LONGFELLOW AVENUE



TENNYSON PLACE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: TENNYSON PLACE / LONGFELLOW AVENUE

FILE: 7AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	0	0
0730-0745	1	0	0	0
0745-0800	0	0	1	0
0800-0815	2	2	0	0
0815-0830	1	2	0	4
0830-0845	0	2	0	2
0845-0900	2	1	1	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	0	0
0730-0745	1	0	0	0
0745-0800	0	0	0	0
0800-0815	0	0	0	0
0815-0830	0	0	0	0
0830-0845	0	0	0	0
0845-0900	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	0	1	0	2
0715-0815	3	2	1	0	6
0730-0830	4	4	1	4	13
0745-0845	3	6	1	6	16
0800-0900	5	7	1	6	19

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	0	0	0	1
0715-0815	1	0	0	0	1
0730-0830	1	0	0	0	1
0745-0845	0	0	0	0	0
0800-0900	0	0	0	0	0

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA
PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE: THURSDAY, MARCH 03, 2016
PERIOD: 04:00 PM TO 07:00 PM
INTERSECTION: TENNYSON PLACE / LONGFELLOW AVENUE

FILE: 7PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	1	1	1
0415-0430	1	0	0	1
0430-0445	0	1	0	0
0445-0500	2	0	0	1
0500-0515	2	0	0	0
0515-0530	2	1	2	1
0530-0545	0	0	0	0
0545-0600	2	0	1	0
0600-0615	0	0	0	0
0615-0630	0	0	0	0
0630-0645	0	0	0	2
0645-0700	0	0	0	10

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	0	0	0
0430-0445	0	0	0	0
0445-0500	0	0	0	0
0500-0515	0	0	0	0
0515-0530	0	0	0	0
0530-0545	0	0	0	0
0545-0600	0	0	0	0
0600-0615	0	0	0	0
0615-0630	0	0	0	0
0630-0645	0	0	1	0
0645-0700	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	3	2	1	3	9
0415-0515	5	1	0	2	8
0430-0530	6	2	2	2	12
0445-0545	6	1	2	2	11
0500-0600	6	1	3	1	11
0515-0615	4	1	3	1	9
0530-0630	2	0	1	0	3
0545-0645	2	0	1	2	5
0600-0700	0	0	0	12	12

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	0	0	0	0
0415-0515	0	0	0	0	0
0430-0530	0	0	0	0	0
0445-0545	0	0	0	0	0
0500-0600	0	0	0	0	0
0515-0615	0	0	0	0	0
0530-0630	0	0	0	0	0
0545-0645	0	0	1	0	1
0600-0700	0	0	1	0	1

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

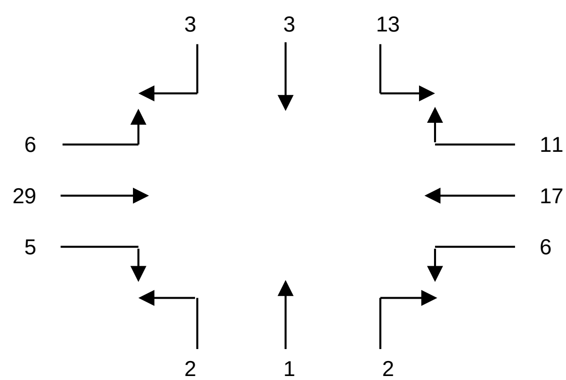
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		07:00 AM TO 09:00 AM
INTERSECTION	N/S	TENNYSON PLACE
	E/W	30TH STREET
FILE NUMBER:		8-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	0	0	2	1	1	1	1	0	0	0	3	1
0715-0730	0	0	3	3	2	0	0	0	0	0	4	0
0730-0745	0	1	3	2	3	2	1	0	0	4	6	2
0745-0800	0	1	2	4	5	1	0	0	1	1	9	1
0800-0815	0	0	3	2	4	2	1	1	1	0	9	1
0815-0830	3	1	5	3	5	1	0	0	0	0	5	2
0830-0845	0	1	4	1	3	0	0	1	0	0	5	2
0845-0900	0	0	4	2	6	2	1	1	1	0	4	1

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	0	2	10	10	11	4	2	0	1	5	22	4	71
0715-0815	0	2	11	11	14	5	2	1	2	5	28	4	85
0730-0830	3	3	13	11	17	6	2	1	2	5	29	6	98
0745-0845	3	3	14	10	17	4	1	2	2	1	28	6	91
0800-0900	3	2	16	8	18	5	2	3	2	0	23	6	88

A.M. PEAK HOUR
0730-0830

30TH STREET



TENNYSON PLACE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877

.

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

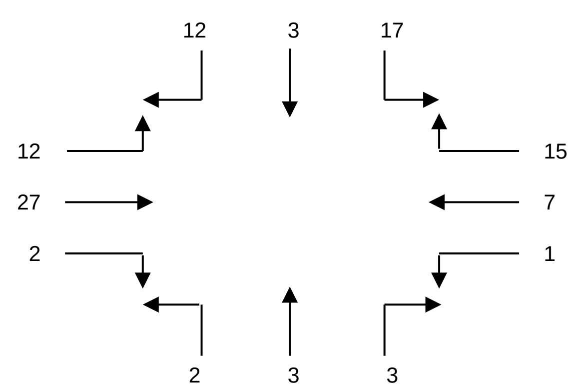
CLIENT:		LLG - PASADENA
PROJECT:		HERMOSA BEACH / MANHATTAN BEACH PROJECT
DATE:		THURSDAY, MARCH 03, 2016
PERIOD:		04:00 PM TO 07:00 PM
INTERSECTION	N/S	TENNYSON PLACE
	E/W	30TH STREET
FILE NUMBER:		8-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0400-0415	1	1	2	2	3	0	0	0	1	0	3	2
0415-0430	2	1	3	3	3	0	1	1	0	2	8	2
0430-0445	2	1	4	4	2	0	1	2	1	0	4	3
0445-0500	3	1	5	2	3	1	0	0	0	1	5	2
0500-0515	4	0	5	4	1	0	0	0	1	0	6	2
0515-0530	1	1	2	5	2	1	0	1	1	0	7	4
0530-0545	3	0	5	3	2	0	2	1	0	1	6	4
0545-0600	4	2	5	3	2	0	1	1	0	1	8	2
0600-0615	4	0	3	2	3	0	0	0	2	1	4	1
0615-0630	3	0	1	5	2	0	3	3	0	1	4	1
0630-0645	4	1	0	2	4	0	2	0	0	0	2	2
0645-0700	0	1	0	1	2	0	0	0	0	0	2	1

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0400-0500	8	4	14	11	11	1	2	3	2	3	20	9	88
0415-0515	11	3	17	13	9	1	2	3	2	3	23	9	96
0430-0530	10	3	16	15	8	2	1	3	3	1	22	11	95
0445-0545	11	2	17	14	8	2	2	2	2	2	24	12	98
0500-0600	12	3	17	15	7	1	3	3	2	2	27	12	104
0515-0615	12	3	15	13	9	1	3	3	3	3	25	11	101
0530-0630	14	2	14	13	9	0	6	5	2	4	22	8	99
0545-0645	15	3	9	12	11	0	6	4	2	3	18	6	89
0600-0700	11	2	4	10	11	0	5	3	2	2	12	5	67

P.M. PEAK HOUR
0500-0600

30TH STREET



TENNYSON PLACE

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877
.

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 07:00 AM TO 10:00 AM

INTERSECTION: TENNYSON PLACE / 30TH STREET

FILE: 8AMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	1
0715-0730	1	1	0	1
0730-0745	0	0	0	0
0745-0800	0	0	0	0
0800-0815	0	2	0	0
0815-0830	2	1	0	0
0830-0845	1	2	0	0
0845-0900	0	2	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0700-0715	0	0	0	0
0715-0730	0	0	0	0
0730-0745	0	1	0	0
0745-0800	0	0	0	0
0800-0815	0	0	1	0
0815-0830	0	0	0	0
0830-0845	0	0	0	0
0845-0900	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	1	1	0	2	4
0715-0815	1	3	0	1	5
0730-0830	2	3	0	0	5
0745-0845	3	5	0	0	8
0800-0900	3	7	0	0	10

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0700-0800	0	1	0	0	1
0715-0815	0	1	1	0	2
0730-0830	0	1	1	0	2
0745-0845	0	0	1	0	1
0800-0900	0	0	1	0	1

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

PEDESTRIAN - BICYCLE COUNT SUMMARY

CLIENT: LLG - PASADENA

PROJECT: HERMOSA BEACH / MANHATTAN BEACH PROJECT

DATE: THURSDAY, MARCH 03, 2016

PERIOD: 04:00 PM TO 07:00 PM

INTERSECTION: TENNYSON PLACE / 30TH STREET

FILE: 8PMPED-BIKE

	PEDESTRIAN MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	2
0415-0430	0	0	0	0
0430-0445	0	0	0	0
0445-0500	1	0	0	0
0500-0515	0	0	0	0
0515-0530	0	0	0	0
0530-0545	0	0	0	0
0545-0600	0	0	0	0
0600-0615	0	1	1	1
0615-0630	0	0	0	0
0630-0645	0	0	0	0
0645-0700	0	8	0	0

	BICYCLIST MOVEMENTS			
15-MINUTE PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D
0400-0415	0	0	0	0
0415-0430	0	0	0	0
0430-0445	0	0	0	0
0445-0500	0	0	0	0
0500-0515	0	0	0	0
0515-0530	0	0	0	0
0530-0545	0	1	0	1
0545-0600	0	0	0	0
0600-0615	0	0	0	0
0615-0630	0	0	0	0
0630-0645	0	0	0	0
0645-0700	0	0	0	0

	PEDESTRIAN MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	1	0	0	2	3
0415-0515	1	0	0	0	1
0430-0530	1	0	0	0	1
0445-0545	1	0	0	0	1
0500-0600	0	0	0	0	0
0515-0615	0	1	1	1	3
0530-0630	0	1	1	1	3
0545-0645	0	1	1	1	3
0600-0700	0	9	1	1	11

	BICYCLIST MOVEMENTS				
1-HOUR PERIOD	NORTH LEG A	EAST LEG B	SOUTH LEG C	WEST LEG D	TOTALS
0400-0500	0	0	0	0	0
0415-0515	0	0	0	0	0
0430-0530	0	0	0	0	0
0445-0545	0	1	0	1	2
0500-0600	0	1	0	1	2
0515-0615	0	1	0	1	2
0530-0630	0	1	0	1	2
0545-0645	0	0	0	0	0
0600-0700	0	0	0	0	0

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE
626.446.2877 FAX
trafsolutn@aol.com

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_ManhattanBeach
Site Code : 00000000
Start Date : 3/8/2016
Page No : 1

Groups Printed- Unshifted

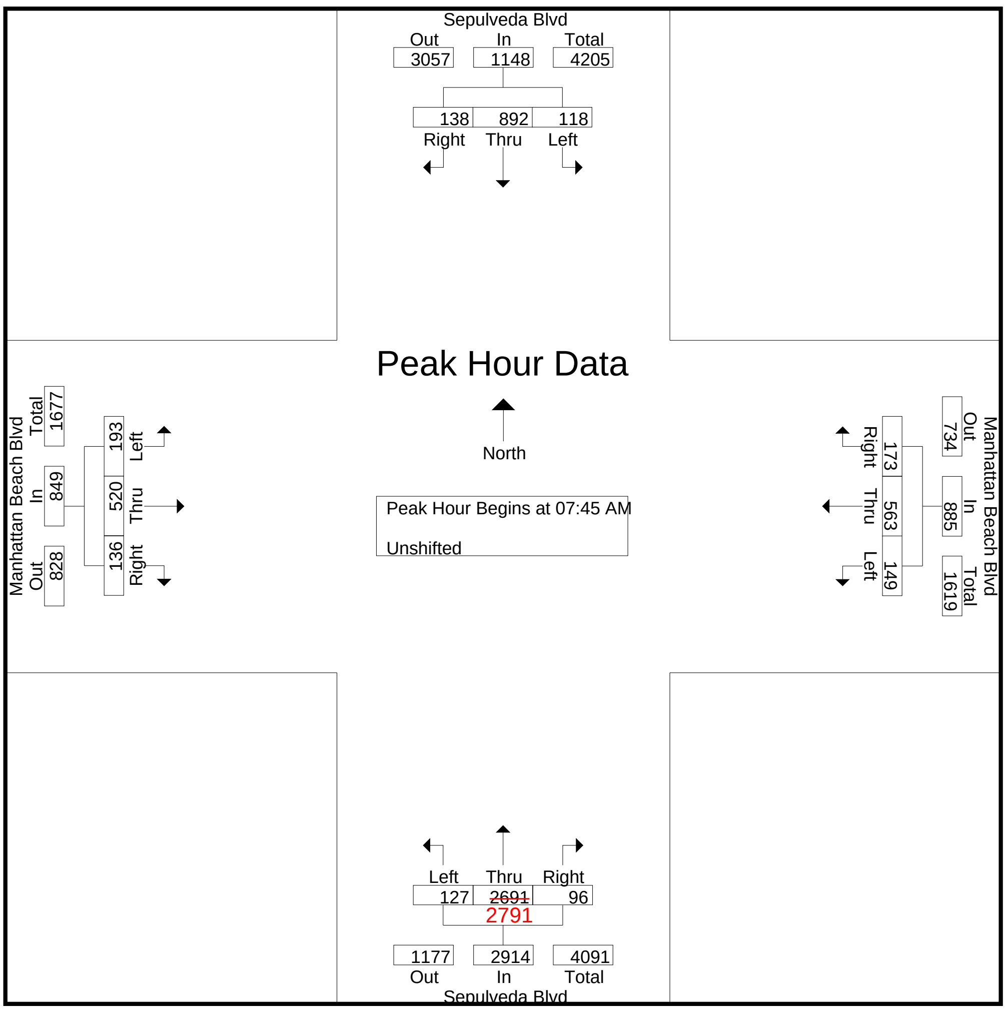
	Sepulveda Blvd Southbound			Manhattan Beach Blvd Westbound			Sepulveda Blvd Northbound			Manhattan Beach Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	7	140	17	21	70	32	23	643	10	24	73	13	1073
07:15 AM	11	171	21	40	99	34	28	788	17	27	63	34	1333
07:30 AM	18	251	31	26	121	52	29	704	20	32	76	30	1390
07:45 AM	38	246	35	33	159	33	37	672	15	40	153	32	1493
Total	74	808	104	120	449	151	117	2807	62	123	365	109	5289
08:00 AM	27	214	42	37	134	47	27	693	30	52	120	35	1458
08:15 AM	21	194	27	35	158	53	34	655	20	54	155	34	1440
08:30 AM	32	238	34	44	112	40	29	671	31	47	92	35	1405
08:45 AM	38	187	48	46	163	55	36	619	18	45	109	32	1396
Total	118	833	151	162	567	195	126	2638	99	198	476	136	5699
04:00 PM	53	436	38	73	173	32	59	267	41	61	145	29	1407
04:15 PM	30	530	39	48	121	36	50	345	32	52	132	24	1439
04:30 PM	53	398	27	86	146	33	63	229	37	64	166	32	1334
04:45 PM	40	566	36	46	140	42	49	305	41	65	110	34	1474
Total	176	1930	140	253	580	143	221	1146	151	242	553	119	5654
05:00 PM	63	455	26	81	141	33	68	313	37	53	153	34	1457
05:15 PM	29	547	29	60	109	34	60	321	51	62	124	21	1447
05:30 PM	39	467	30	88	129	31	53	275	32	53	141	44	1382
05:45 PM	23	572	10	82	129	33	61	286	33	46	113	46	1434
Total	154	2041	95	311	508	131	242	1195	153	214	531	145	5720
06:00 PM	36	464	10	90	152	23	62	227	24	52	146	44	1330
06:15 PM	32	583	35	70	98	34	37	341	37	39	98	46	1450
06:30 PM	38	466	23	100	124	21	47	245	39	59	108	42	1312
06:45 PM	26	526	33	76	121	39	58	246	38	35	103	26	1327
Total	132	2039	101	336	495	117	204	1059	138	185	455	158	5419
Grand Total	654	7651	591	1182	2599	737	910	8845	603	962	2380	667	27781
Apprch %	7.4	86	6.6	26.2	57.5	16.3	8.8	85.4	5.8	24	59.4	16.6	
Total %	2.4	27.5	2.1	4.3	9.4	2.7	3.3	31.8	2.2	3.5	8.6	2.4	

CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Sepulveda_ManhattanBeach
Site Code : 00000000
Start Date : 3/8/2016
Page No : 2

	Sepulveda Blvd Southbound				Manhattan Beach Blvd Westbound				Sepulveda Blvd Northbound				Manhattan Beach Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**38**	**246**	35	**319**	33	**159**	33	225	**37**	672	15	724	40	153	32	225	**1493**
08:00 AM	27	214	**42**	283	37	134	47	218	27	**693**	30	**750**	52	120	**35**	207	1458
08:15 AM	21	194	27	242	35	158	**53**	**246**	34	655	20	709	**54**	**155**	34	**243**	1440
08:30 AM	32	238	34	304	**44**	112	40	196	29	671	**31**	731	47	92	35	174	1405
Total Volume	118	892	138	1148	149	563	173	885	127	2691	96	2914	193	520	136	849	5796
% App. Total	10.3	77.7	12		16.8	63.6	19.5		4.4	92.3	3.3		22.7	61.2	16		
PHF	.776	.907	.821	.900	.847	.885	.816	.899	.858	.971	.774	.971	.894	.839	.971	.873	.971

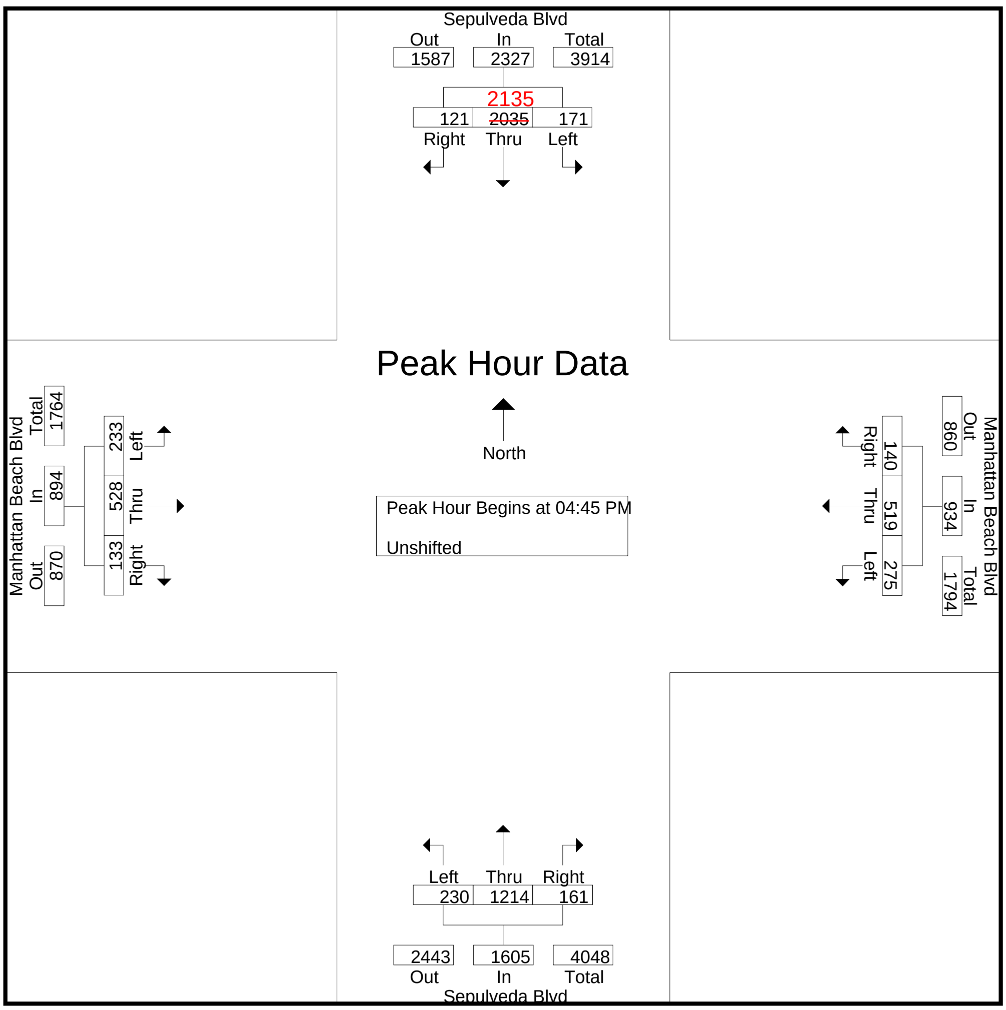


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Sepulveda_ManhattanBeach
Site Code : 00000000
Start Date : 3/8/2016
Page No : 3

	Sepulveda Blvd Southbound				Manhattan Beach Blvd Westbound				Sepulveda Blvd Northbound				Manhattan Beach Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	40	**566**	**36**	**642**	46	140	**42**	228	49	305	41	395	**65**	110	34	209	**1474**
05:00 PM	**63**	455	26	544	81	**141**	33	**255**	**68**	313	37	418	53	**153**	34	**240**	1457
05:15 PM	29	547	29	605	60	109	34	203	60	**321**	**51**	**432**	62	124	21	207	1447
05:30 PM	39	467	30	536	**88**	129	31	248	53	275	32	360	53	141	**44**	238	1382
Total Volume	171	2035	121	2327	275	519	140	934	230	1214	161	1605	233	528	133	894	5760
% App. Total	7.3	87.5	5.2		29.4	55.6	15		14.3	75.6	10		26.1	59.1	14.9		
PHF	.679	.899	.840	.906	.781	.920	.833	.916	.846	.945	.789	.929	.896	.863	.756	.931	.977



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_ManhattanBeach_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 1

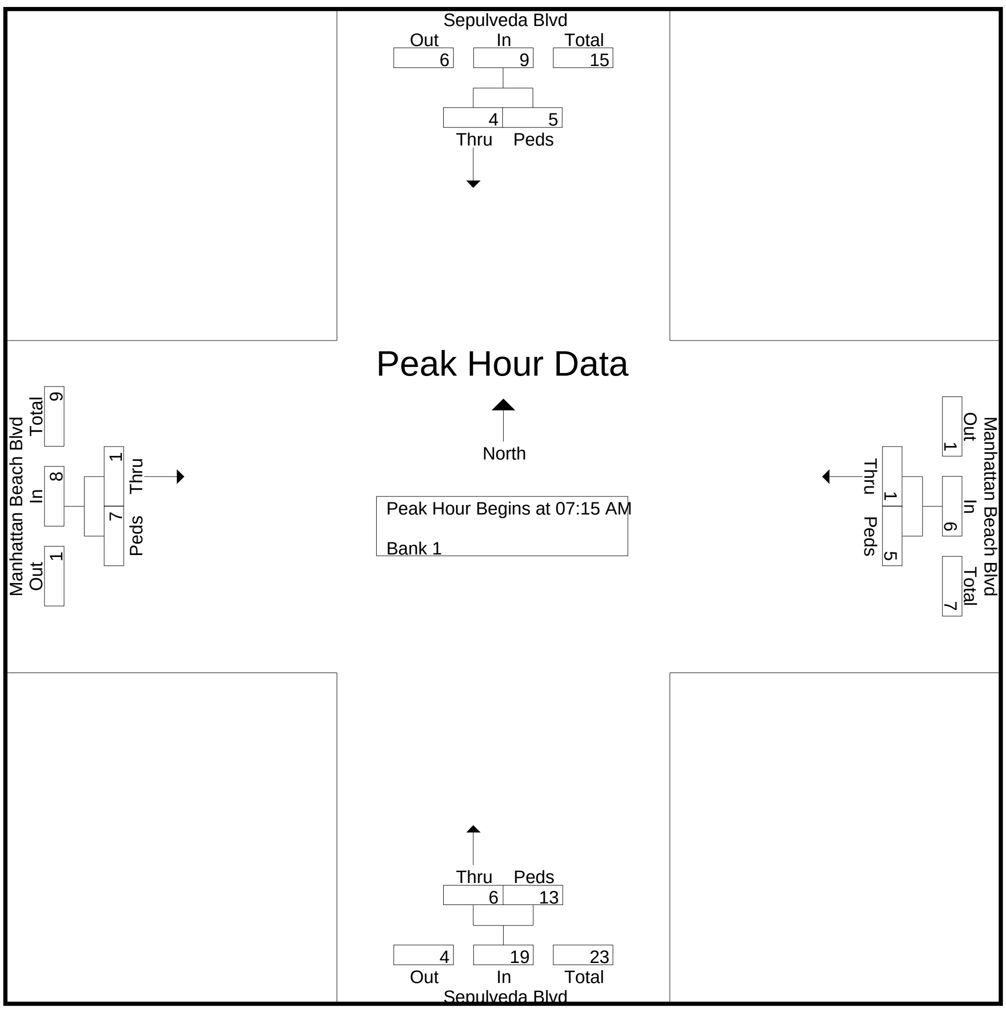
Groups Printed- Bank 1

	Sepulveda Blvd Southbound		**Manhattan Beach Blvd Westbound**		**Sepulveda Blvd Northbound**		**Manhattan Beach Blvd Eastbound**		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	4	0	2	0	1	0	0	7
07:15 AM	0	3	0	4	2	6	0	1	16
07:30 AM	0	2	1	0	1	3	0	4	11
07:45 AM	0	0	0	0	3	2	0	2	7
Total	0	9	1	6	6	12	0	7	41
08:00 AM	4	0	0	1	0	2	1	0	8
08:15 AM	0	1	1	2	1	2	0	3	10
08:30 AM	0	1	0	3	0	0	0	2	6
08:45 AM	0	1	0	0	1	4	0	3	9
Total	4	3	1	6	2	8	1	8	33
04:00 PM	0	3	0	0	0	2	1	4	10
04:15 PM	2	6	1	6	2	9	1	9	36
04:30 PM	0	0	0	2	0	3	0	0	5
04:45 PM	0	1	0	0	1	5	0	1	8
Total	2	10	1	8	3	19	2	14	59
05:00 PM	0	3	0	1	0	4	0	5	13
05:15 PM	0	2	0	0	0	2	0	6	10
05:30 PM	0	4	0	4	0	4	0	0	12
05:45 PM	0	0	0	1	1	2	0	1	5
Total	0	9	0	6	1	12	0	12	40
06:00 PM	0	4	1	0	0	0	0	4	9
06:15 PM	0	0	0	0	1	5	0	0	6
06:30 PM	0	4	0	0	1	1	0	0	6
06:45 PM	0	3	0	0	1	6	0	2	12
Total	0	11	1	0	3	12	0	6	33
Grand Total	6	42	4	26	15	63	3	47	206
Apprch %	12.5	87.5	13.3	86.7	19.2	80.8	6	94	
Total %	2.9	20.4	1.9	12.6	7.3	30.6	1.5	22.8	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_ManhattanBeach_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 2

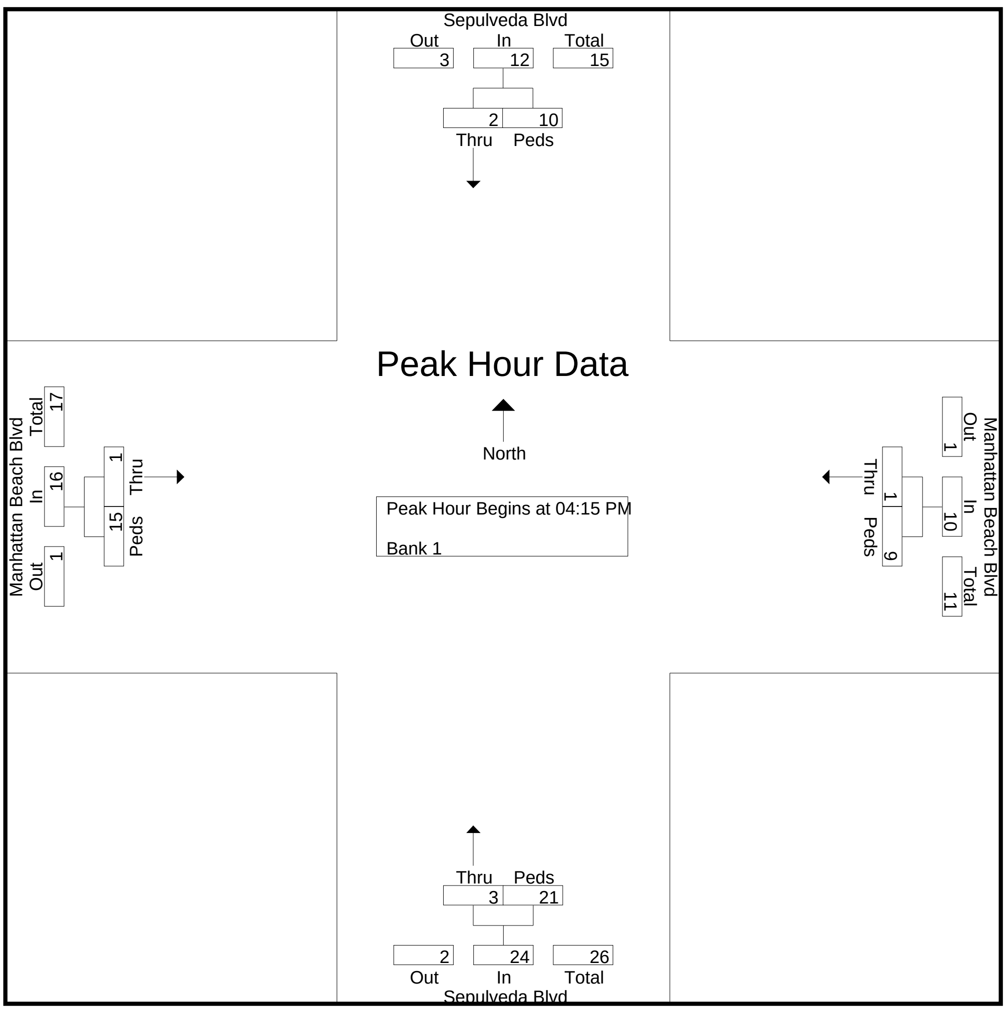
	Sepulveda Blvd Southbound			Manhattan Beach Blvd Westbound			Sepulveda Blvd Northbound			Manhattan Beach Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	**3**	3	0	**4**	**4**	2	**6**	**8**	0	1	1	**16**
07:30 AM	0	2	2	**1**	0	1	1	3	4	0	**4**	**4**	11
07:45 AM	0	0	0	0	0	0	**3**	2	5	0	2	2	7
08:00 AM	**4**	0	**4**	0	1	1	0	2	2	**1**	0	1	8
Total Volume	4	5	9	1	5	6	6	13	19	1	7	8	42
% App. Total	44.4	55.6		16.7	83.3		31.6	68.4		12.5	87.5		
PHF	.250	.417	.563	.250	.313	.375	.500	.542	.594	.250	.438	.500	.656



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_ManhattanBeach_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 3

	Sepulveda Blvd Southbound			Manhattan Beach Blvd Westbound			Sepulveda Blvd Northbound			Manhattan Beach Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**2**	**6**	**8**	**1**	**6**	**7**	**2**	**9**	**11**	**1**	**9**	**10**	**36**
04:30 PM	0	0	0	0	2	2	0	3	3	0	0	0	5
04:45 PM	0	1	1	0	0	0	1	5	6	0	1	1	8
05:00 PM	0	3	3	0	1	1	0	4	4	0	5	5	13
Total Volume	2	10	12	1	9	10	3	21	24	1	15	16	62
% App. Total	16.7	83.3		10	90		12.5	87.5		6.2	93.8		
PHF	.250	.417	.375	.250	.375	.357	.375	.583	.545	.250	.417	.400	.431



CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Sepulveda_8th
Site Code : 00000000
Start Date : 3/8/2016
Page No : 1

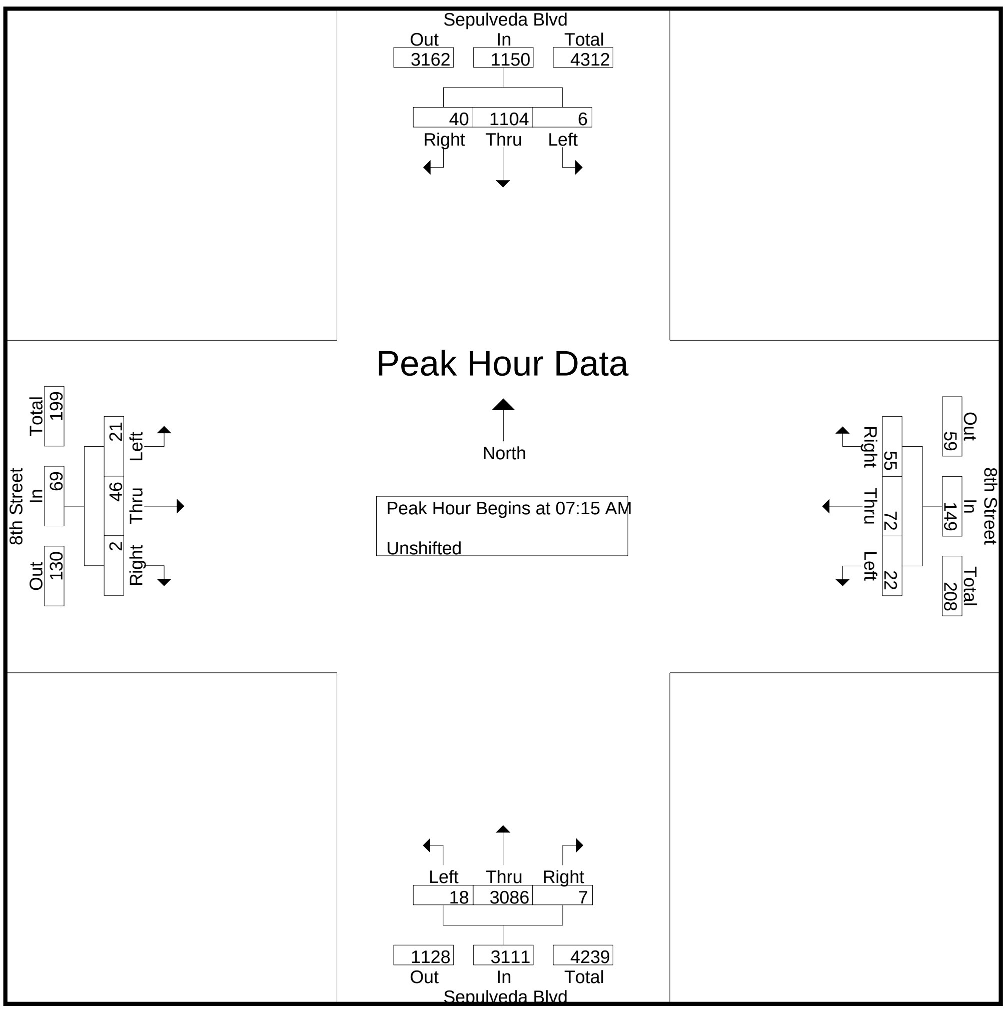
Groups Printed- Unshifted

	Sepulveda Blvd Southbound			8th Street Westbound			Sepulveda Blvd Northbound			8th Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	2	168	3	4	0	11	7	725	3	4	2	1	930
07:15 AM	1	241	8	2	6	9	4	805	1	1	4	0	1082
07:30 AM	1	300	9	5	4	11	5	779	2	6	13	0	1135
07:45 AM	3	304	6	6	41	14	6	756	3	9	16	0	1164
Total	7	1013	26	17	51	45	22	3065	9	20	35	1	4311
08:00 AM	1	259	17	9	21	21	3	746	1	5	13	2	1098
08:15 AM	0	264	6	7	4	14	4	683	2	2	8	4	998
08:30 AM	0	283	6	4	12	14	3	738	2	10	6	0	1078
08:45 AM	2	262	3	8	13	18	4	652	3	4	5	1	975
Total	3	1068	32	28	50	67	14	2819	8	21	32	7	4149
04:00 PM	15	522	5	11	5	8	4	366	6	12	9	11	974
04:15 PM	14	563	4	2	6	3	1	363	3	11	13	9	992
04:30 PM	12	500	1	5	9	10	0	328	2	17	13	5	902
04:45 PM	5	639	9	4	9	4	0	315	3	6	9	6	1009
Total	46	2224	19	22	29	25	5	1372	14	46	44	31	3877
05:00 PM	15	546	7	3	5	6	0	382	4	22	14	6	1010
05:15 PM	13	619	7	4	3	3	0	350	5	12	8	5	1029
05:30 PM	14	591	0	5	6	6	1	369	5	12	8	4	1021
05:45 PM	11	662	3	8	4	2	1	328	5	12	5	6	1047
Total	53	2418	17	20	18	17	2	1429	19	58	35	21	4107
06:00 PM	11	607	2	3	4	6	0	327	3	5	9	7	984
06:15 PM	12	686	4	5	4	5	0	349	3	5	6	3	1082
06:30 PM	14	593	2	6	11	6	0	320	5	5	6	4	972
06:45 PM	15	609	5	11	7	12	3	259	4	8	7	2	942
Total	52	2495	13	25	26	29	3	1255	15	23	28	16	3980
Grand Total	161	9218	107	112	174	183	46	9940	65	168	174	76	20424
Apprch %	1.7	97.2	1.1	23.9	37.1	39	0.5	98.9	0.6	40.2	41.6	18.2	
Total %	0.8	45.1	0.5	0.5	0.9	0.9	0.2	48.7	0.3	0.8	0.9	0.4	

CITY TRAFFIC COUNTERS
www.ctcounters.com

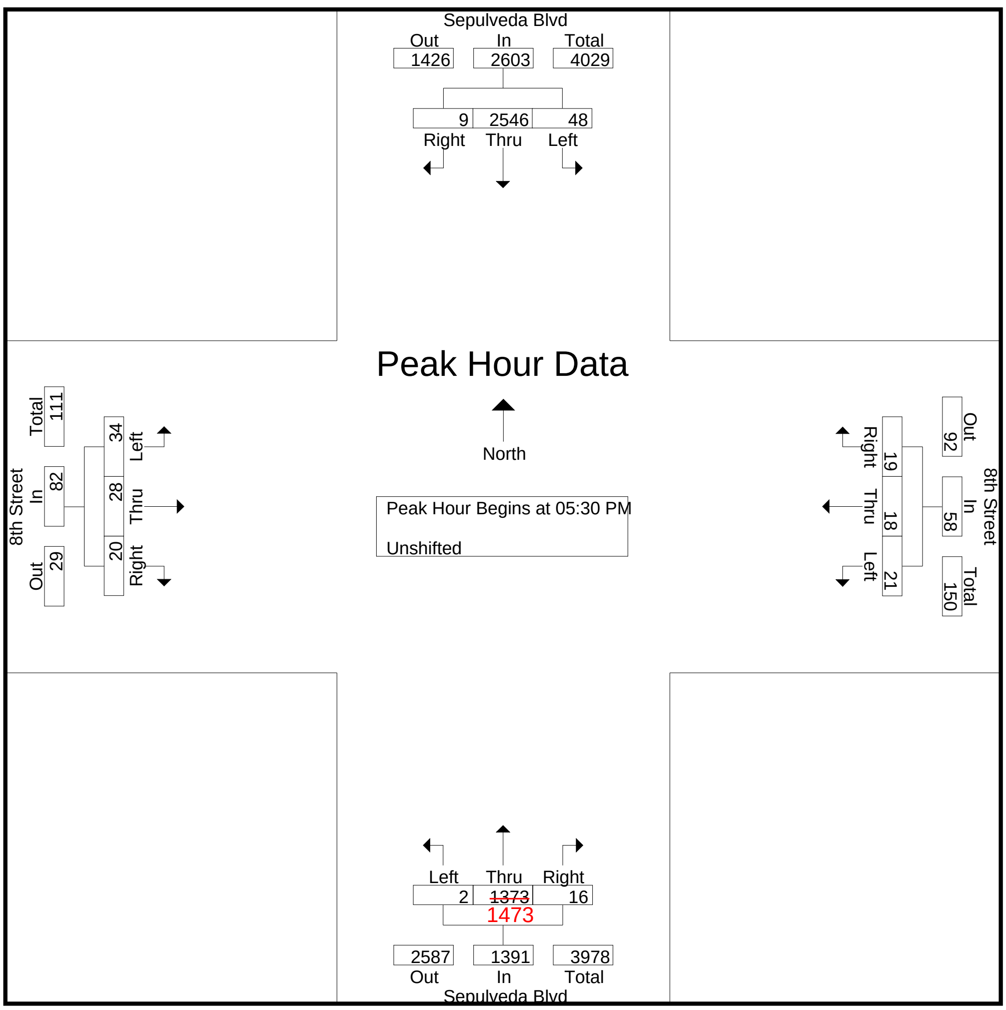
File Name : Sepulveda_8th
Site Code : 00000000
Start Date : 3/8/2016
Page No : 2

	Sepulveda Blvd Southbound				8th Street Westbound				Sepulveda Blvd Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	241	8	250	2	6	9	17	4	**805**	1	**810**	1	4	0	5	1082
07:30 AM	1	300	9	310	5	4	11	20	5	779	2	786	6	13	0	19	1135
07:45 AM	**3**	**304**	6	**313**	6	**41**	14	**61**	**6**	756	**3**	765	**9**	**16**	0	**25**	**1164**
08:00 AM	1	259	**17**	277	**9**	21	**21**	51	3	746	1	750	5	13	**2**	20	1098
Total Volume	6	1104	40	1150	22	72	55	149	18	3086	7	3111	21	46	2	69	4479
% App. Total	0.5	96	3.5		14.8	48.3	36.9		0.6	99.2	0.2		30.4	66.7	2.9		
PHF	.500	.908	.588	.919	.611	.439	.655	.611	.750	.958	.583	.960	.583	.719	.250	.690	.962



File Name : Sepulveda_8th
Site Code : 00000000
Start Date : 3/8/2016
Page No : 3

	Sepulveda Blvd Southbound				8th Street Westbound				Sepulveda Blvd Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:30 PM																	
05:30 PM	**14**	591	0	605	5	**6**	**6**	**17**	**1**	**369**	**5**	**375**	**12**	8	4	**24**	1021
05:45 PM	11	662	3	676	**8**	4	2	14	1	328	5	334	12	5	6	23	1047
06:00 PM	11	607	2	620	3	4	6	13	0	327	3	330	5	**9**	**7**	21	984
06:15 PM	12	**686**	**4**	**702**	5	4	5	14	0	349	3	352	5	6	3	14	**1082**
Total Volume	48	2546	9	2603	21	18	19	58	2	1373	16	1391	34	28	20	82	4134
% App. Total	1.8	97.8	0.3		36.2	31	32.8		0.1	98.7	1.2		41.5	34.1	24.4		
PHF	.857	.928	.563	.927	.656	.750	.792	.853	.500	.930	.800	.927	.708	.778	.714	.854	.955



CITY TRAFFIC COUNTERS

www.ctcounters.com

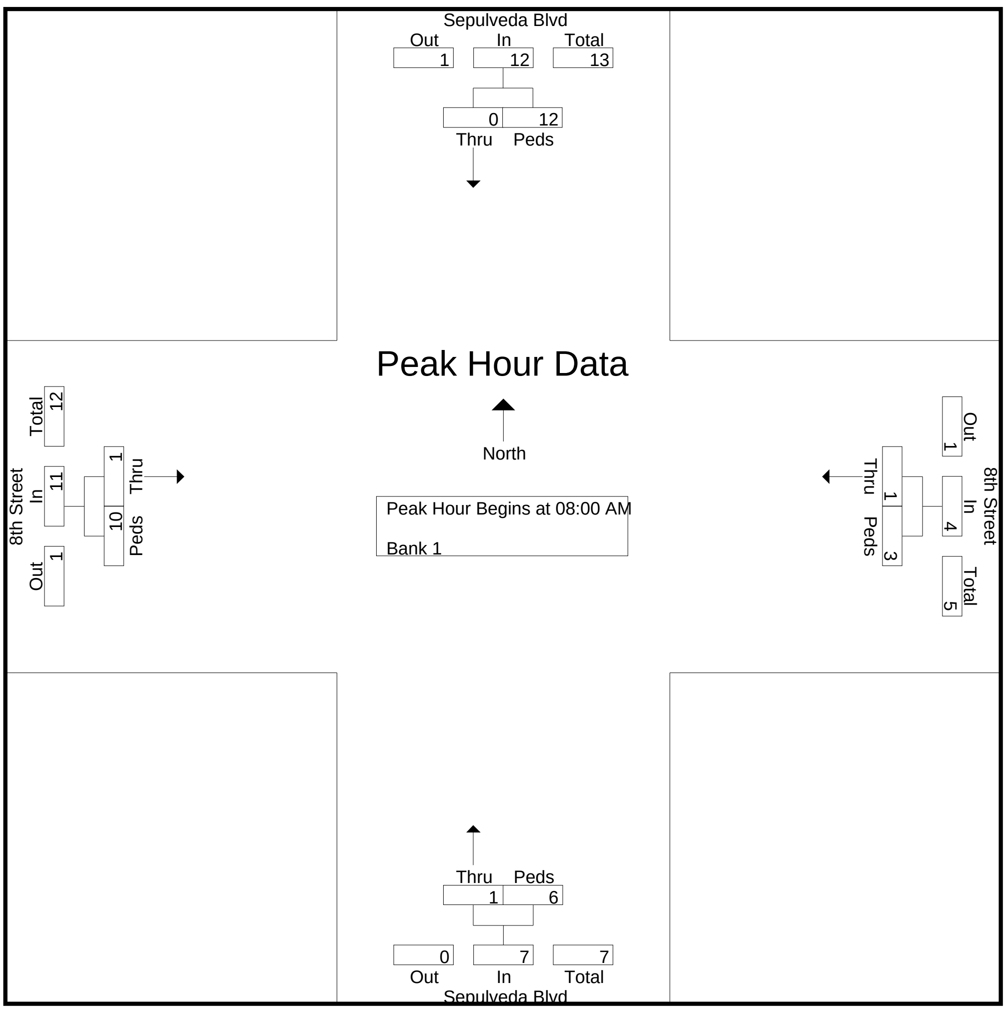
File Name : Sepulveda_8th_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 1

Groups Printed- Bank 1

	Sepulveda Blvd Southbound		8th Street Westbound		Sepulveda Blvd Northbound		8th Street Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	0	0	1	0	3	0	1	5
07:15 AM	0	2	0	1	0	4	0	1	8
07:30 AM	0	1	0	0	1	0	0	1	3
07:45 AM	0	2	0	1	0	0	0	0	3
Total	0	5	0	3	1	7	0	3	19
08:00 AM	0	3	0	0	0	0	1	3	7
08:15 AM	0	3	0	0	0	3	0	4	10
08:30 AM	0	4	0	2	0	0	0	2	8
08:45 AM	0	2	1	1	1	3	0	1	9
Total	0	12	1	3	1	6	1	10	34
04:00 PM	0	2	0	3	0	0	0	1	6
04:15 PM	0	1	0	2	0	0	0	1	4
04:30 PM	0	0	0	1	0	0	0	1	2
04:45 PM	0	1	0	0	0	0	0	0	1
Total	0	4	0	6	0	0	0	3	13
05:00 PM	0	3	0	0	0	0	0	1	4
05:15 PM	0	1	0	1	0	0	0	0	2
05:30 PM	0	0	0	1	0	0	1	0	2
05:45 PM	0	0	0	0	0	0	0	2	2
Total	0	4	0	2	0	0	1	3	10
06:00 PM	0	1	0	0	0	4	0	0	5
06:15 PM	2	2	0	0	0	1	0	0	5
06:30 PM	1	0	1	0	0	0	0	0	2
06:45 PM	0	0	0	0	0	1	0	2	3
Total	3	3	1	0	0	6	0	2	15
Grand Total	3	28	2	14	2	19	2	21	91
Apprch %	9.7	90.3	12.5	87.5	9.5	90.5	8.7	91.3	
Total %	3.3	30.8	2.2	15.4	2.2	20.9	2.2	23.1	

File Name : Sepulveda_8th_BP
Site Code : 00000000
Start Date : 3/8/2016

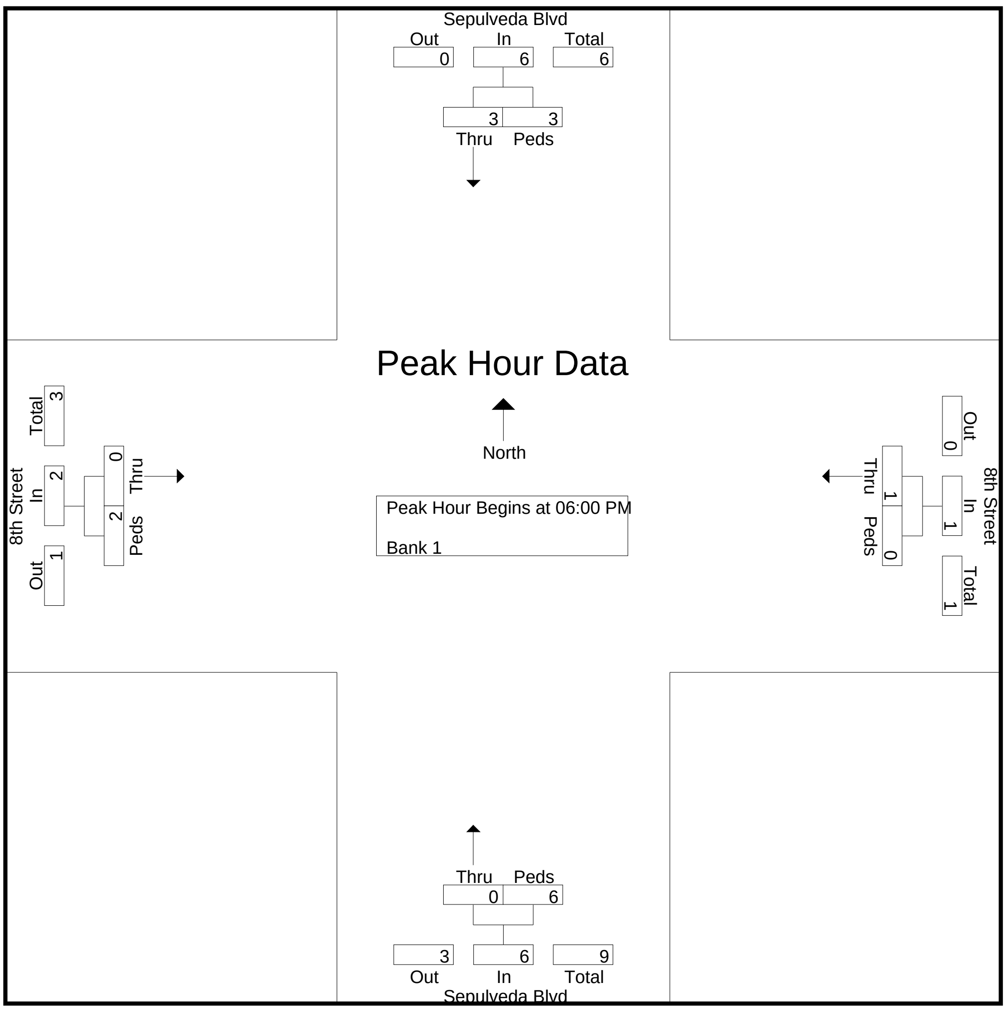
	Sepulveda Blvd Southbound			8th Street Westbound			Sepulveda Blvd Northbound			8th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	3	3	0	0	0	0	0	0	**1**	3	**4**	7
08:15 AM	0	3	3	0	0	0	0	**3**	3	0	**4**	4	**10**
08:30 AM	0	**4**	**4**	0	**2**	**2**	0	0	0	0	2	2	8
08:45 AM	0	2	2	**1**	1	2	**1**	3	**4**	0	1	1	9
Total Volume	0	12	12	1	3	4	1	6	7	1	10	11	34
% App. Total	0	100		25	75		14.3	85.7		9.1	90.9		
PHF	.000	.750	.750	.250	.375	.500	.250	.500	.438	.250	.625	.688	.850



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_8th_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 3

	Sepulveda Blvd Southbound			8th Street Westbound			Sepulveda Blvd Northbound			8th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 06:00 PM													
06:00 PM	0	1	1	0	0	0	0	**4**	**4**	0	0	0	**5**
06:15 PM	**2**	**2**	**4**	0	0	0	0	1	1	0	0	0	5
06:30 PM	1	0	1	**1**	0	**1**	0	0	0	0	0	0	2
06:45 PM	0	0	0	0	0	0	0	1	1	0	**2**	**2**	3
Total Volume	3	3	6	1	0	1	0	6	6	0	2	2	15
% App. Total	50	50		100	0		0	100		0	100		
PHF	.375	.375	.375	.250	.000	.250	.000	.375	.375	.000	.250	.250	.750



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_2nd
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

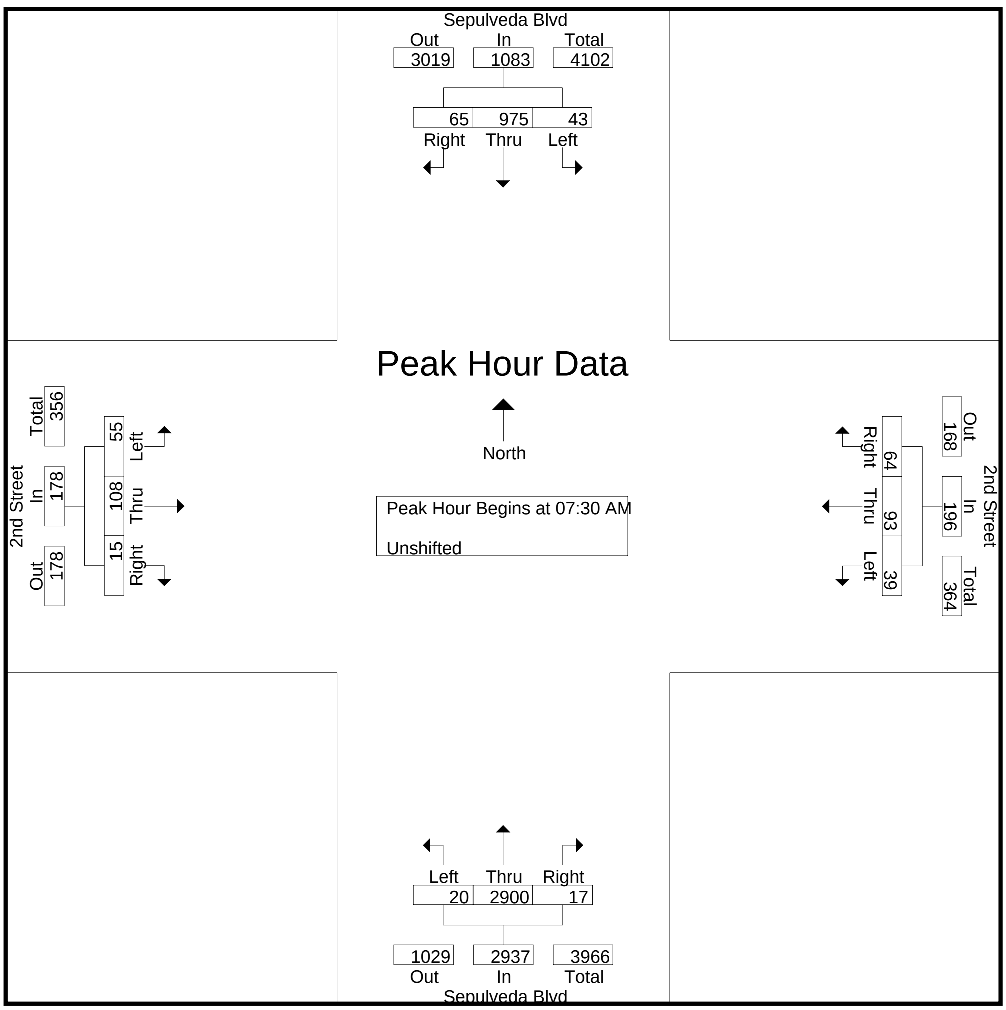
Groups Printed- Unshifted

	Sepulveda Blvd Southbound			**2nd Street Westbound**			**Sepulveda Blvd Northbound**			**2nd Street Eastbound**			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	3	176	10	3	5	16	2	738	2	8	4	3	970
07:15 AM	3	179	16	4	6	13	5	658	0	13	12	4	913
07:30 AM	12	267	13	3	14	6	1	724	5	14	35	1	1095
07:45 AM	16	240	8	12	24	31	4	809	3	11	37	5	1200
Total	34	862	47	22	49	66	12	2929	10	46	88	13	4178
08:00 AM	9	246	25	9	38	14	7	721	4	15	17	5	1110
08:15 AM	6	222	19	15	17	13	8	646	5	15	19	4	989
08:30 AM	6	249	9	10	17	14	8	651	8	15	21	10	1018
08:45 AM	5	221	19	12	30	14	3	626	2	21	28	9	990
Total	26	938	72	46	102	55	26	2644	19	66	85	28	4107
04:00 PM	10	537	13	5	11	11	6	362	5	17	15	13	1005
04:15 PM	9	507	4	11	25	14	7	317	7	24	26	13	964
04:30 PM	8	529	13	10	11	13	4	346	5	15	9	16	979
04:45 PM	6	524	5	10	15	8	6	284	8	23	30	16	935
Total	33	2097	35	36	62	46	23	1309	25	79	80	58	3883
05:00 PM	3	564	8	9	10	11	8	352	6	25	25	17	1038
05:15 PM	13	583	6	12	10	9	3	314	8	19	18	19	1014
05:30 PM	6	567	8	9	13	10	7	362	7	16	22	18	1045
05:45 PM	12	550	4	11	14	7	9	324	4	13	23	13	984
Total	34	2264	26	41	47	37	27	1352	25	73	88	67	4081
06:00 PM	4	584	9	7	15	7	3	360	7	21	14	18	1049
06:15 PM	4	598	10	11	14	8	7	272	1	16	17	14	972
06:30 PM	5	635	7	9	6	9	4	336	6	12	11	10	1050
06:45 PM	1	564	6	8	13	11	4	289	5	14	13	12	940
Total	14	2381	32	35	48	35	18	1257	19	63	55	54	4011
Grand Total	141	8542	212	180	308	239	106	9491	98	327	396	220	20260
Apprch %	1.6	96	2.4	24.8	42.4	32.9	1.1	97.9	1	34.7	42	23.3	
Total %	0.7	42.2	1	0.9	1.5	1.2	0.5	46.8	0.5	1.6	2	1.1	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_2nd
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Sepulveda Blvd Southbound				2nd Street Westbound				Sepulveda Blvd Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	**267**	13	**292**	3	14	6	23	1	724	**5**	730	14	35	1	50	1095
07:45 AM	**16**	240	8	264	12	24	**31**	**67**	4	**809**	3	**816**	11	**37**	**5**	**53**	**1200**
08:00 AM	9	246	**25**	280	9	**38**	14	61	7	721	4	732	**15**	17	5	37	1110
08:15 AM	6	222	19	247	**15**	17	13	45	**8**	646	5	659	15	19	4	38	989
Total Volume	43	975	65	1083	39	93	64	196	20	2900	17	2937	55	108	15	178	4394
% App. Total	4	90	6		19.9	47.4	32.7		0.7	98.7	0.6		30.9	60.7	8.4		
PHF	.672	.913	.650	.927	.650	.612	.516	.731	.625	.896	.850	.900	.917	.730	.750	.840	.915

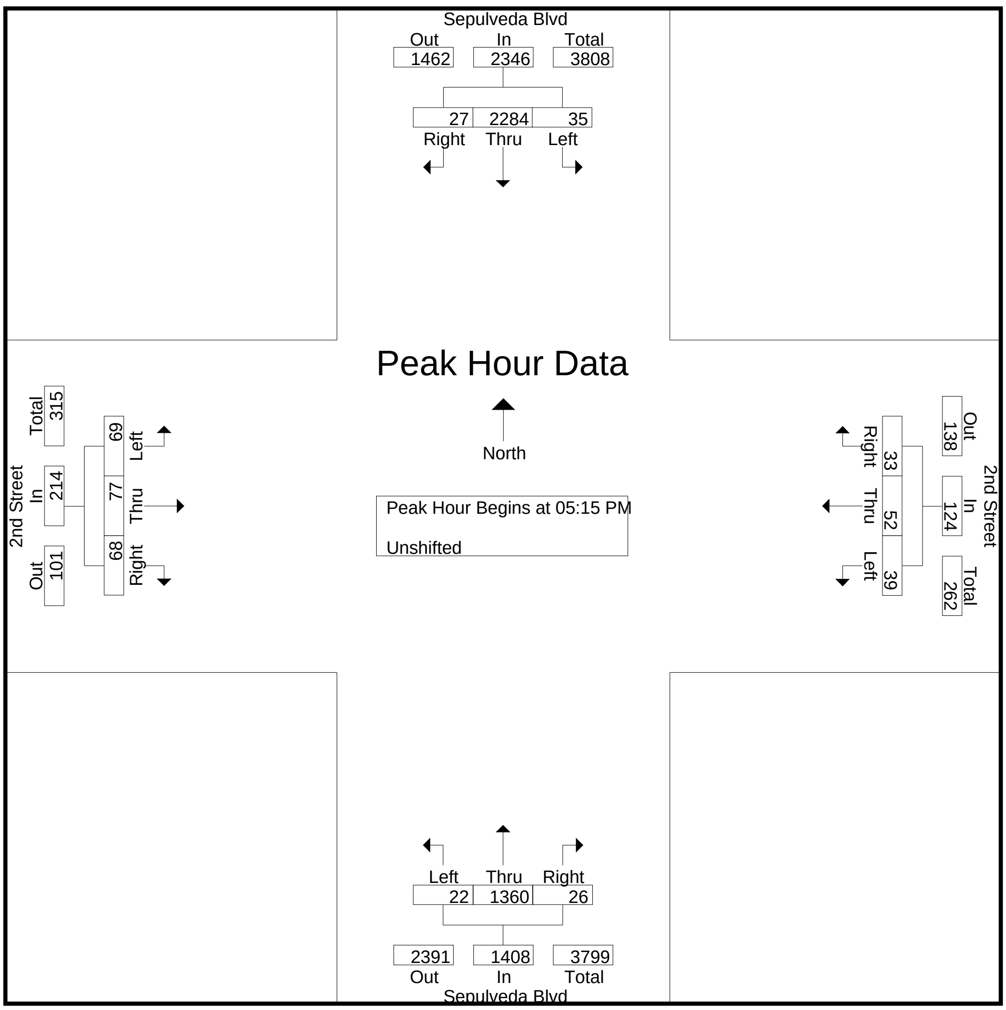


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Sepulveda_2nd
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Sepulveda Blvd Southbound				2nd Street Westbound				Sepulveda Blvd Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	**13**	583	6	**602**	**12**	10	9	31	3	314	**8**	325	19	18	**19**	**56**	1014
05:30 PM	6	567	8	581	9	13	**10**	**32**	7	**362**	7	**376**	16	22	18	56	1045
05:45 PM	12	550	4	566	11	14	7	32	**9**	324	4	337	13	**23**	13	49	984
06:00 PM	4	**584**	**9**	597	7	**15**	7	29	3	360	7	370	**21**	14	18	53	**1049**
Total Volume	35	2284	27	2346	39	52	33	124	22	1360	26	1408	69	77	68	214	4092
% App. Total	1.5	97.4	1.2		31.5	41.9	26.6		1.6	96.6	1.8		32.2	36	31.8		
PHF	.673	.978	.750	.974	.813	.867	.825	.969	.611	.939	.813	.936	.821	.837	.895	.955	.975



File Name : Sepulveda_2nd_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Bank 1

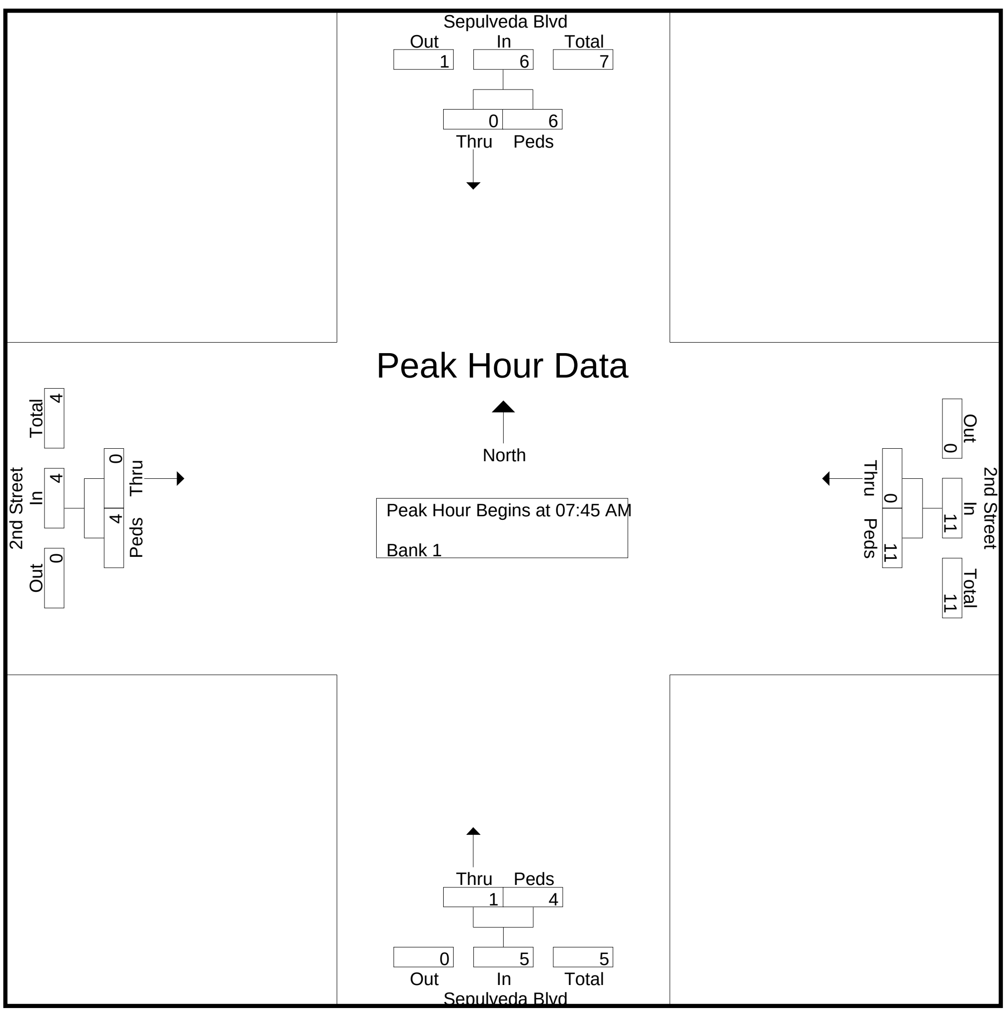
	Sepulveda Blvd Southbound		**2nd Street Westbound**		**Sepulveda Blvd Northbound**		**2nd Street Eastbound**		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	1
07:15 AM	0	1	0	0	0	0	0	2	3
07:30 AM	0	1	0	3	0	0	0	0	4
07:45 AM	0	1	0	3	0	3	0	2	9
Total	0	4	0	6	0	3	0	4	17
08:00 AM	0	3	0	4	0	0	0	0	7
08:15 AM	0	1	0	2	1	0	0	0	4
08:30 AM	0	1	0	2	0	1	0	2	6
08:45 AM	0	0	0	2	1	0	0	1	4
Total	0	5	0	10	2	1	0	3	21
04:00 PM	0	3	0	1	0	0	0	0	4
04:15 PM	0	0	0	0	0	1	0	0	1
04:30 PM	0	0	0	2	0	0	1	0	3
04:45 PM	0	2	0	0	0	1	0	1	4
Total	0	5	0	3	0	2	1	1	12
05:00 PM	0	0	0	3	0	2	0	4	9
05:30 PM	0	1	0	1	0	1	0	1	4
05:45 PM	0	0	0	1	0	0	1	2	4
Total	0	1	0	5	0	3	1	7	17
06:00 PM	0	1	1	1	0	1	0	2	6
06:15 PM	0	0	0	5	0	0	0	1	6
06:30 PM	0	0	0	0	0	1	0	1	2
06:45 PM	0	0	0	2	0	0	0	2	4
Total	0	1	1	8	0	2	0	6	18
Grand Total	0	16	1	32	2	11	2	21	85
Apprch %	0	100	3	97	15.4	84.6	8.7	91.3	
Total %	0	18.8	1.2	37.6	2.4	12.9	2.4	24.7	

CITY TRAFFIC COUNTERS

www.ctcounters.com

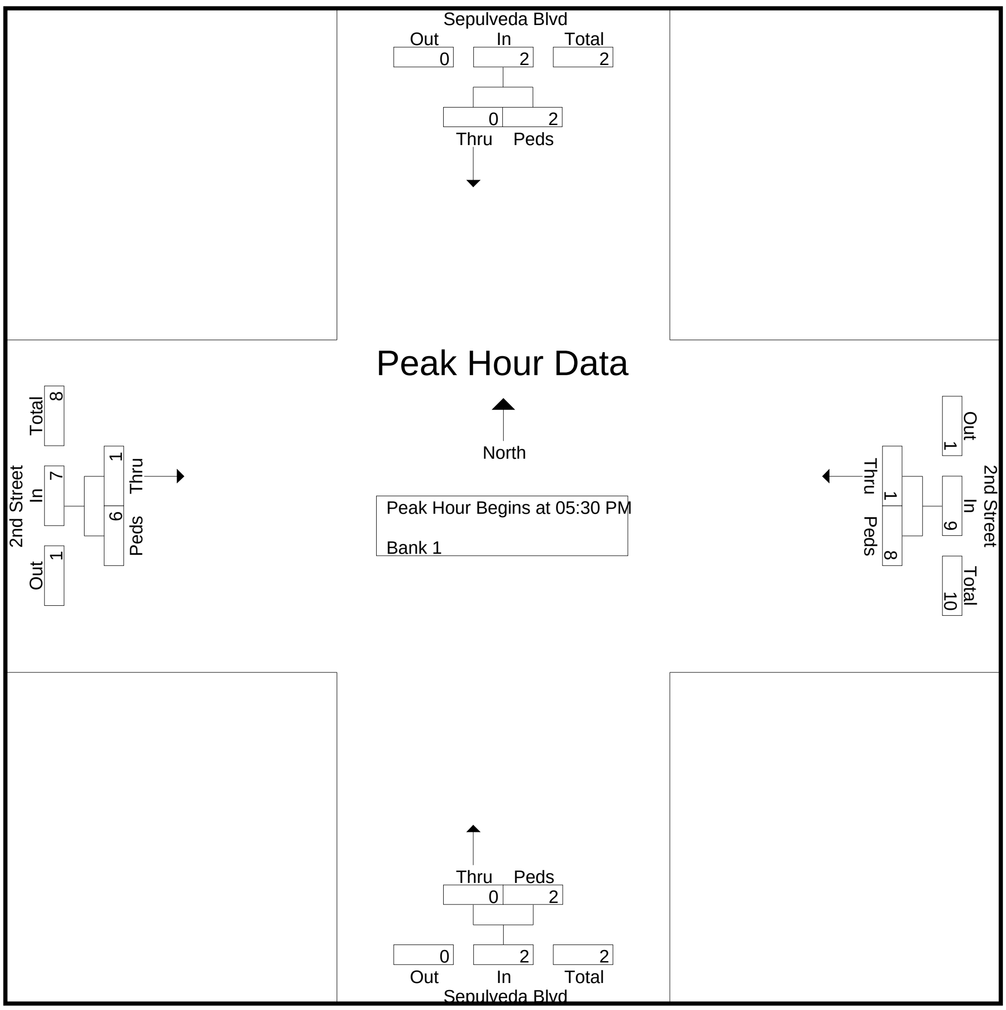
File Name : Sepulveda_2nd_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Sepulveda Blvd Southbound			2nd Street Westbound			Sepulveda Blvd Northbound			2nd Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	1	1	0	3	3	0	**3**	**3**	0	**2**	**2**	**9**
08:00 AM	0	**3**	**3**	0	**4**	**4**	0	0	0	0	0	0	7
08:15 AM	0	1	1	0	2	2	**1**	0	1	0	0	0	4
08:30 AM	0	1	1	0	2	2	0	1	1	0	2	2	6
Total Volume	0	6	6	0	11	11	1	4	5	0	4	4	26
% App. Total	0	100		0	100		20	80		0	100		
PHF	.000	.500	.500	.000	.688	.688	.250	.333	.417	.000	.500	.500	.722



File Name : Sepulveda_2nd_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Sepulveda Blvd Southbound			2nd Street Westbound			Sepulveda Blvd Northbound			2nd Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	0	**1**	**1**	0	1	1	0	**1**	**1**	0	1	1	4
05:45 PM	0	0	0	0	1	1	0	0	0	**1**	**2**	**3**	4
06:00 PM	0	1	1	**1**	1	2	0	1	1	0	2	2	**6**
06:15 PM	0	0	0	0	**5**	**5**	0	0	0	0	1	1	6
Total Volume	0	2	2	1	8	9	0	2	2	1	6	7	20
% App. Total	0	100		11.1	88.9		0	100		14.3	85.7		
PHF	.000	.500	.500	.250	.400	.450	.000	.500	.500	.250	.750	.583	.833



CITY TRAFFIC COUNTERS
www.ctcounters.com

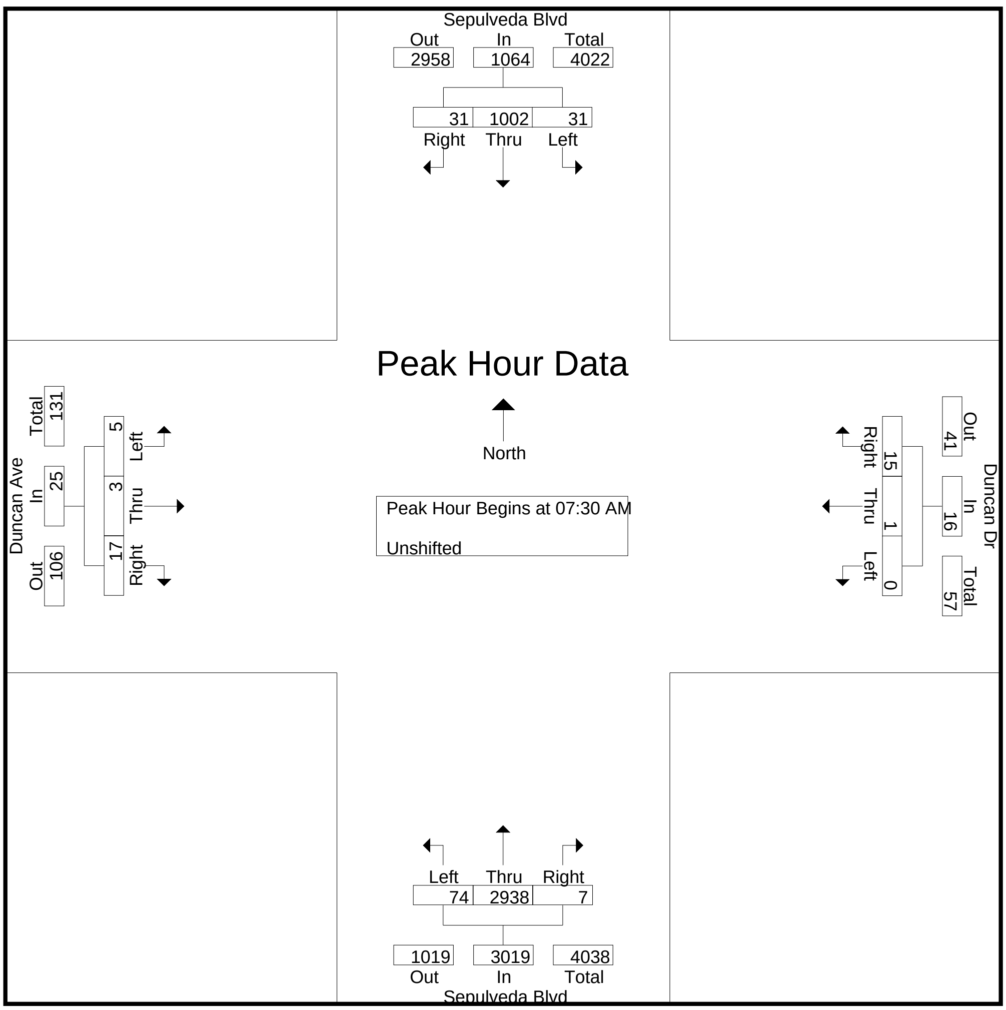
File Name : Sepulveda_Duncan-Duncan
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Unshifted

	Sepulveda Blvd Southbound			Duncan Dr Westbound			Sepulveda Blvd Northbound			Duncan Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	4	151	4	0	0	2	20	726	1	0	0	2	910
07:15 AM	3	195	9	0	0	2	21	688	1	1	0	4	924
07:30 AM	8	248	7	0	1	1	22	761	2	2	1	7	1060
07:45 AM	10	265	5	0	0	5	17	775	1	1	2	3	1084
Total	25	859	25	0	1	10	80	2950	5	4	3	16	3978
08:00 AM	7	231	12	0	0	5	19	712	2	0	0	4	992
08:15 AM	6	258	7	0	0	4	16	690	2	2	0	3	988
08:30 AM	7	260	7	0	0	2	20	688	1	2	0	7	994
08:45 AM	6	289	8	0	0	1	18	653	1	3	0	5	984
Total	26	1038	34	0	0	12	73	2743	6	7	0	19	3958
04:00 PM	7	535	3	0	0	3	6	354	1	0	0	14	923
04:15 PM	7	540	4	0	0	1	7	325	1	0	0	10	895
04:30 PM	6	555	5	1	0	4	8	326	1	4	0	6	916
04:45 PM	8	579	2	0	0	4	9	286	2	0	0	12	902
Total	28	2209	14	1	0	12	30	1291	5	4	0	42	3636
05:00 PM	10	522	4	0	0	2	7	342	1	1	0	19	908
05:15 PM	5	610	4	0	0	4	7	324	1	0	0	8	963
05:30 PM	3	544	3	0	0	6	11	355	0	0	0	11	933
05:45 PM	5	571	4	0	0	3	10	329	1	3	0	10	936
Total	23	2247	15	0	0	15	35	1350	3	4	0	48	3740
06:00 PM	4	565	6	0	0	7	9	348	1	1	0	16	957
06:15 PM	11	558	5	0	0	4	9	276	1	1	0	4	869
06:30 PM	7	618	5	1	0	6	4	332	2	0	0	9	984
06:45 PM	7	560	3	0	0	4	7	280	3	1	0	14	879
Total	29	2301	19	1	0	21	29	1236	7	3	0	43	3689
Grand Total	131	8654	107	2	1	70	247	9570	26	22	3	168	19001
Apprch %	1.5	97.3	1.2	2.7	1.4	95.9	2.5	97.2	0.3	11.4	1.6	87	
Total %	0.7	45.5	0.6	0	0	0.4	1.3	50.4	0.1	0.1	0	0.9	

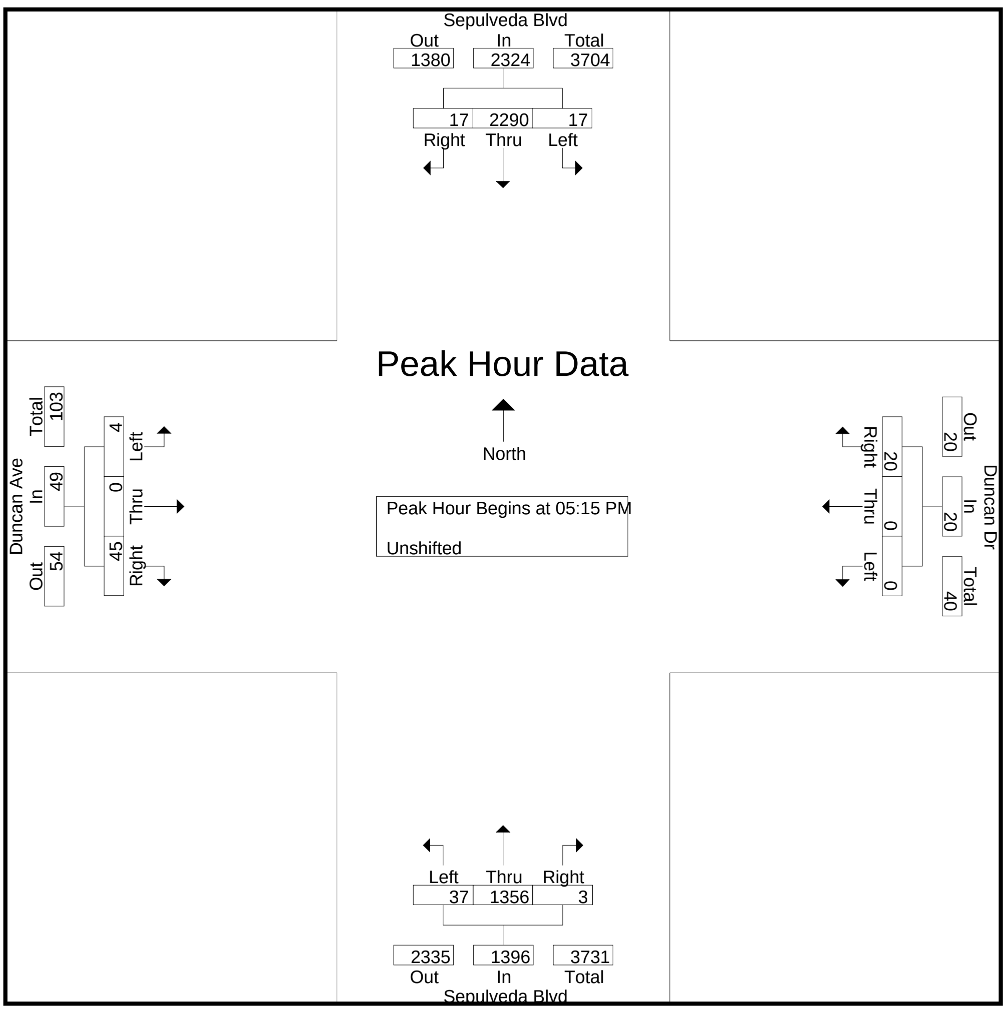
File Name : Sepulveda_Duncan-Duncan
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Sepulveda Blvd Southbound				Duncan Dr Westbound				Sepulveda Blvd Northbound				Duncan Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	248	7	263	0	**1**	1	2	**22**	761	**2**	785	**2**	1	**7**	**10**	1060
07:45 AM	**10**	**265**	5	**280**	0	0	**5**	**5**	17	**775**	1	**793**	1	**2**	3	6	**1084**
08:00 AM	7	231	**12**	250	0	0	5	5	19	712	2	733	0	0	4	4	992
08:15 AM	6	258	7	271	0	0	4	4	16	690	2	708	2	0	3	5	988
Total Volume	31	1002	31	1064	0	1	15	16	74	2938	7	3019	5	3	17	25	4124
% App. Total	2.9	94.2	2.9		0	6.2	93.8		2.5	97.3	0.2		20	12	68		
PHF	.775	.945	.646	.950	.000	.250	.750	.800	.841	.948	.875	.952	.625	.375	.607	.625	.951



File Name : Sepulveda_Duncan-Duncan
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Sepulveda Blvd Southbound				Duncan Dr Westbound				Sepulveda Blvd Northbound				Duncan Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	**5**	**610**	4	**619**	0	0	4	4	7	324	**1**	332	0	0	8	8	**963**
05:30 PM	3	544	3	550	0	0	6	6	**11**	**355**	0	**366**	0	0	11	11	933
05:45 PM	5	571	4	580	0	0	3	3	10	329	1	340	**3**	0	10	13	936
06:00 PM	4	565	**6**	575	0	0	**7**	**7**	9	348	1	358	1	0	**16**	**17**	957
Total Volume	17	2290	17	2324	0	0	20	20	37	1356	3	1396	4	0	45	49	3789
% App. Total	0.7	98.5	0.7		0	0	100		2.7	97.1	0.2		8.2	0	91.8		
PHF	.850	.939	.708	.939	.000	.000	.714	.714	.841	.955	.750	.954	.333	.000	.703	.721	.984



CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Sepulveda_Duncan-Duncan_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

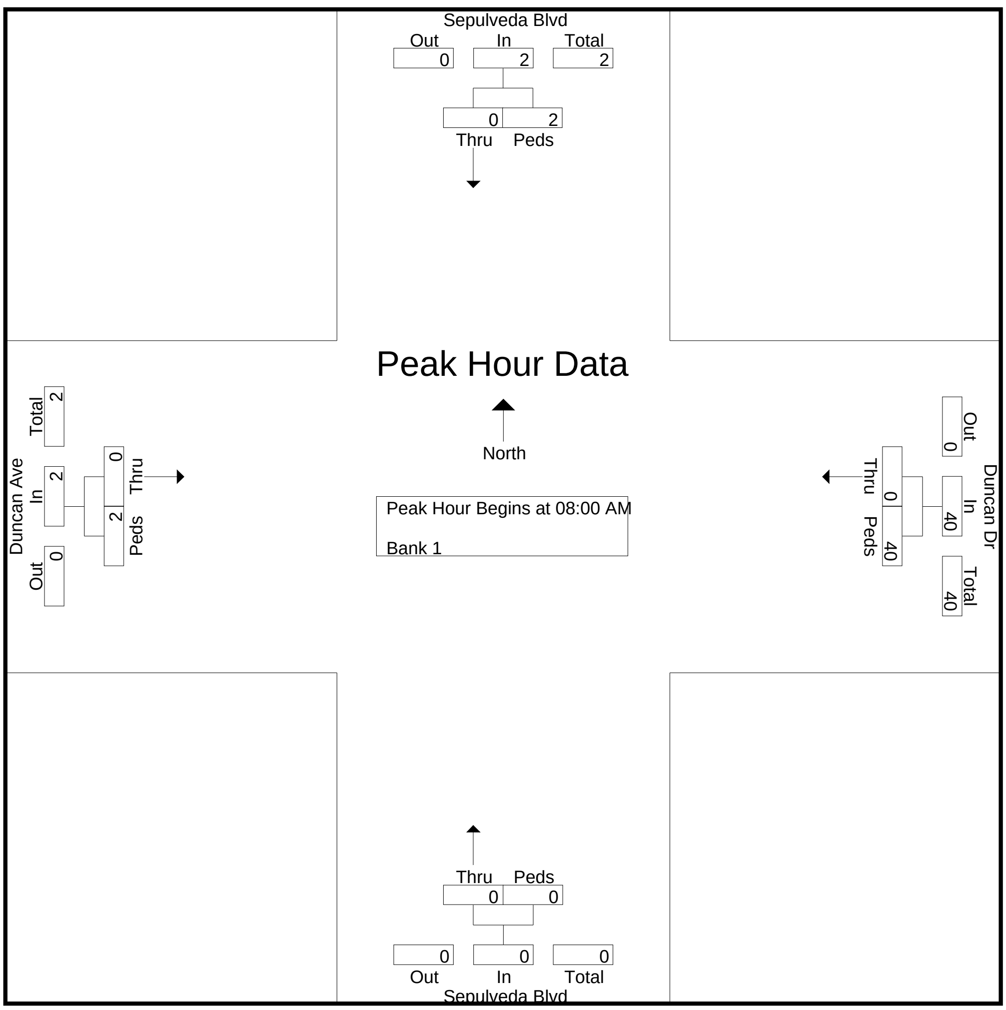
Groups Printed- Bank 1

	Sepulveda Blvd Southbound		Duncan Dr Westbound		Sepulveda Blvd Northbound		Duncan Ave Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	0	0	3	0	0	0	0	3
07:15 AM	0	0	0	3	0	0	0	0	3
07:30 AM	0	0	0	4	0	0	0	0	4
07:45 AM	0	0	0	10	0	0	0	1	11
Total	0	0	0	20	0	0	0	1	21
08:00 AM	0	0	0	7	0	0	0	0	7
08:15 AM	0	0	0	9	0	0	0	0	9
08:30 AM	0	2	0	12	0	0	0	2	16
08:45 AM	0	0	0	12	0	0	0	0	12
Total	0	2	0	40	0	0	0	2	44
04:00 PM	0	0	0	4	0	0	0	0	4
04:15 PM	0	2	0	1	0	0	0	0	3
04:30 PM	0	0	0	4	0	0	0	1	5
04:45 PM	0	0	0	5	0	0	1	1	7
Total	0	2	0	14	0	0	1	2	19
05:00 PM	0	0	0	6	0	0	0	0	6
05:15 PM	0	0	0	6	0	0	0	0	6
05:30 PM	0	1	0	6	0	0	0	0	7
05:45 PM	0	0	0	9	0	0	0	1	10
Total	0	1	0	27	0	0	0	1	29
06:00 PM	0	0	1	5	0	0	0	0	6
06:15 PM	0	0	0	3	0	0	0	0	3
06:30 PM	0	0	0	1	0	0	0	0	1
Total	0	0	1	9	0	0	0	0	10
Grand Total	0	5	1	110	0	0	1	6	123
Apprch %	0	100	0.9	99.1	0	0	14.3	85.7	
Total %	0	4.1	0.8	89.4	0	0	0.8	4.9	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_Duncan-Duncan_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

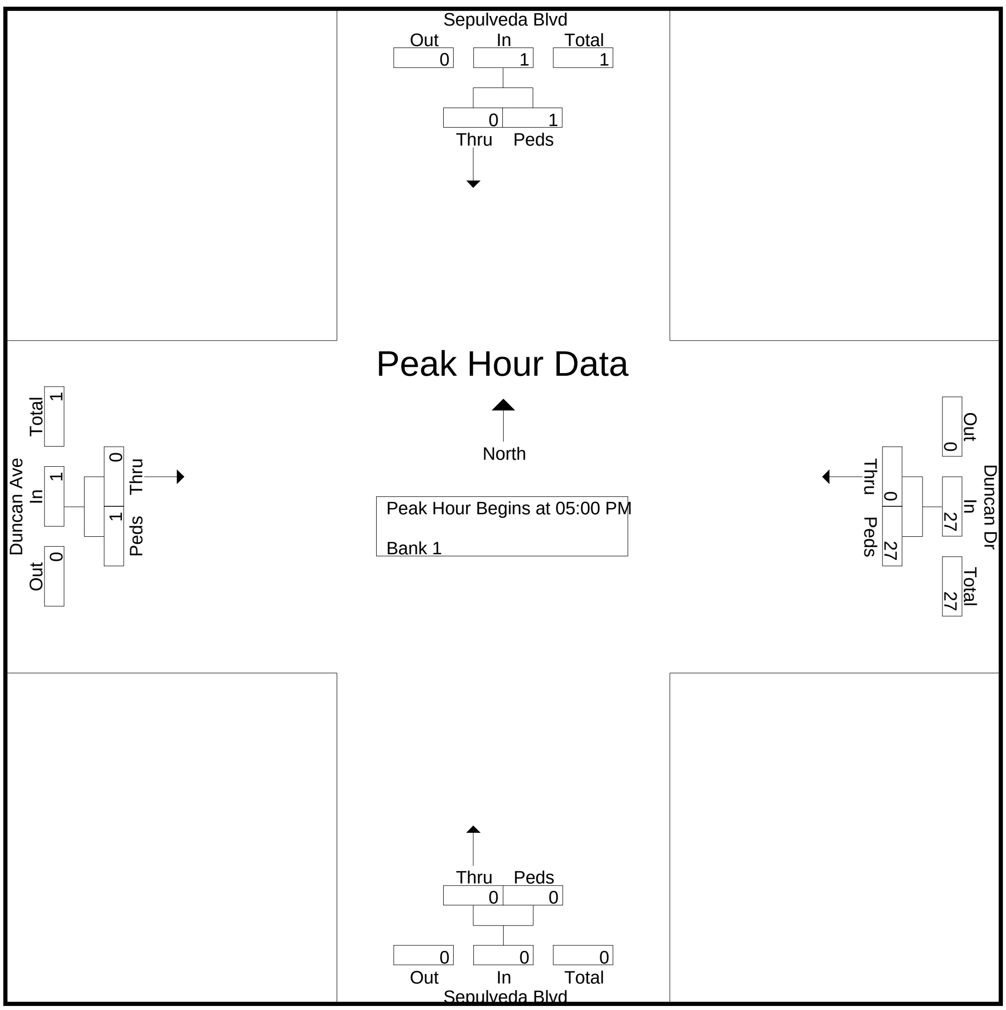
	Sepulveda Blvd Southbound			Duncan Dr Westbound			Sepulveda Blvd Northbound			Duncan Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	7	7	0	0	0	0	0	0	7
08:15 AM	0	0	0	0	9	9	0	0	0	0	0	0	9
08:30 AM	0	**2**	**2**	0	**12**	**12**	0	0	0	0	**2**	**2**	**16**
08:45 AM	0	0	0	0	12	12	0	0	0	0	0	0	12
Total Volume	0	2	2	0	40	40	0	0	0	0	2	2	44
% App. Total	0	100		0	100		0	0		0	100		
PHF	.000	.250	.250	.000	.833	.833	.000	.000	.000	.000	.250	.250	.688



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Sepulveda_Duncan-Duncan_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Sepulveda Blvd Southbound			Duncan Dr Westbound			Sepulveda Blvd Northbound			Duncan Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	6	6	0	0	0	0	0	0	6
05:15 PM	0	0	0	0	6	6	0	0	0	0	0	0	6
05:30 PM	0	**1**	**1**	0	6	6	0	0	0	0	0	0	7
05:45 PM	0	0	0	0	**9**	**9**	0	0	0	0	**1**	**1**	**10**
Total Volume	0	1	1	0	27	27	0	0	0	0	1	1	29
% App. Total	0	100		0	100		0	0		0	100		
PHF	.000	.250	.250	.000	.750	.750	.000	.000	.000	.000	.250	.250	.725



CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : PacificCoastHwy_Longfellow
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Unshifted

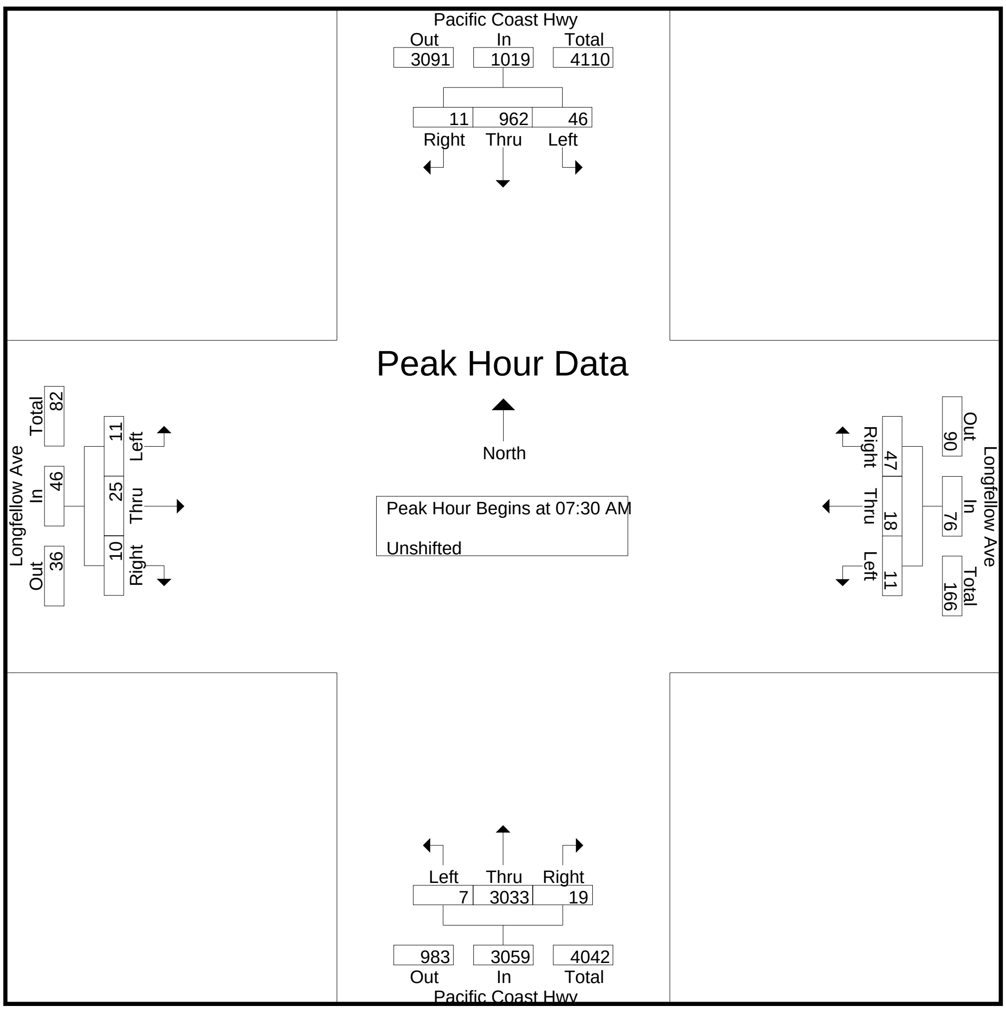
	Pacific Coast Hwy Southbound			Longfellow Ave Westbound			Pacific Coast Hwy Northbound			Longfellow Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	2	152	2	1	2	8	2	759	1	1	2	1	933
07:15 AM	2	197	3	3	0	4	2	711	3	2	4	0	931
07:30 AM	11	244	3	1	1	15	0	790	1	1	11	4	1082
07:45 AM	15	249	1	5	12	18	0	792	4	6	10	1	1113
Total	30	842	9	10	15	45	4	3052	9	10	27	6	4059
08:00 AM	8	220	2	0	5	10	3	731	6	2	2	2	991
08:15 AM	12	249	5	5	0	4	4	720	8	2	2	3	1014
08:30 AM	5	250	3	3	2	9	2	720	7	3	4	4	1012
08:45 AM	9	278	4	3	2	7	2	649	9	7	6	4	980
Total	34	997	14	11	9	30	11	2820	30	14	14	13	3997
04:00 PM	9	523	3	12	2	12	5	336	8	2	6	7	925
04:15 PM	12	551	3	8	6	11	5	328	8	3	5	10	950
04:30 PM	6	559	4	11	5	9	14	327	7	4	4	6	956
04:45 PM	14	583	2	8	6	10	8	295	8	1	3	3	941
Total	41	2216	12	39	19	42	32	1286	31	10	18	26	3772
05:00 PM	5	538	4	10	7	6	13	334	4	3	1	7	932
05:15 PM	6	624	3	6	5	6	5	312	8	6	4	4	989
05:30 PM	5	593	4	7	6	7	10	363	1	4	5	2	1007
05:45 PM	3	612	4	6	3	6	5	325	3	1	3	6	977
Total	19	2367	15	29	21	25	33	1334	16	14	13	19	3905
06:00 PM	4	565	2	10	3	7	4	330	4	2	2	3	936
06:15 PM	4	642	2	8	2	5	3	266	4	4	0	1	941
06:30 PM	1	620	4	5	3	7	7	315	2	3	5	4	976
06:45 PM	1	584	5	5	0	3	5	293	1	0	0	5	902
Total	10	2411	13	28	8	22	19	1204	11	9	7	13	3755
Grand Total	134	8833	63	117	72	164	99	9696	97	57	79	77	19488
Apprch %	1.5	97.8	0.7	33.1	20.4	46.5	1	98	1	26.8	37.1	36.2	
Total %	0.7	45.3	0.3	0.6	0.4	0.8	0.5	49.8	0.5	0.3	0.4	0.4	

CITY TRAFFIC COUNTERS

www.ctcounters.com

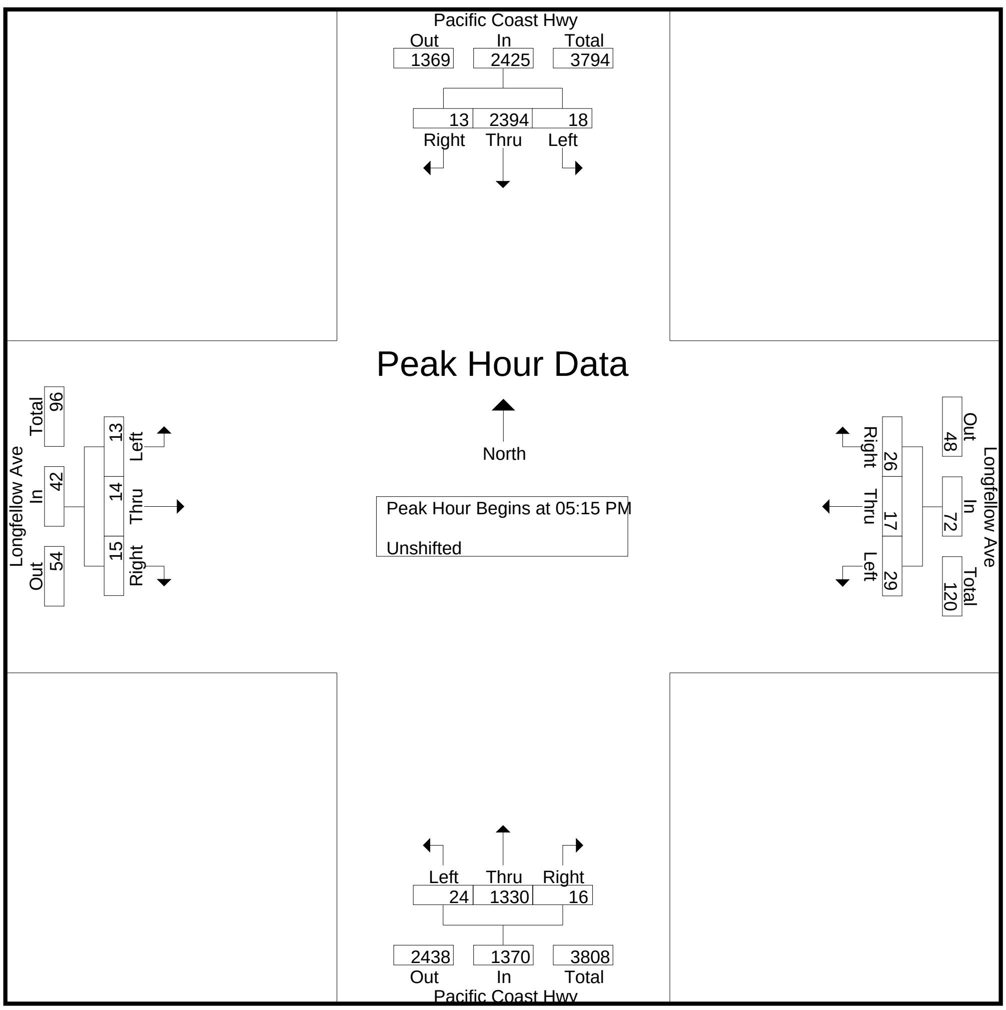
File Name : PacificCoastHwy_Longfellow
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound				Longfellow Ave Westbound				Pacific Coast Hwy Northbound				Longfellow Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	11	244	3	258	1	1	15	17	0	790	1	791	1	**11**	**4**	16	1082
07:45 AM	**15**	**249**	1	265	**5**	**12**	**18**	**35**	0	**792**	4	**796**	**6**	10	1	**17**	**1113**
08:00 AM	8	220	2	230	0	5	10	15	3	731	6	740	2	2	2	6	991
08:15 AM	12	249	**5**	**266**	5	0	4	9	**4**	720	**8**	732	2	2	3	7	1014
Total Volume	46	962	11	1019	11	18	47	76	7	3033	19	3059	11	25	10	46	4200
% App. Total	4.5	94.4	1.1		14.5	23.7	61.8		0.2	99.2	0.6		23.9	54.3	21.7		
PHF	.767	.966	.550	.958	.550	.375	.653	.543	.438	.957	.594	.961	.458	.568	.625	.676	.943



File Name : PacificCoastHwy_Longfellow
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Longfellow Ave Westbound				Pacific Coast Hwy Northbound				Longfellow Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	**6**	**624**	3	**633**	6	5	6	17	5	312	**8**	325	**6**	4	4	**14**	989
05:30 PM	5	593	**4**	602	7	**6**	**7**	**20**	**10**	**363**	1	**374**	4	**5**	2	11	**1007**
05:45 PM	3	612	4	619	6	3	6	15	5	325	3	333	1	3	**6**	10	977
06:00 PM	4	565	2	571	**10**	3	7	20	4	330	4	338	2	2	3	7	936
Total Volume	18	2394	13	2425	29	17	26	72	24	1330	16	1370	13	14	15	42	3909
% App. Total	0.7	98.7	0.5		40.3	23.6	36.1		1.8	97.1	1.2		31	33.3	35.7		
PHF	.750	.959	.813	.958	.725	.708	.929	.900	.600	.916	.500	.916	.542	.700	.625	.750	.970



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Longfellow_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Bank 1

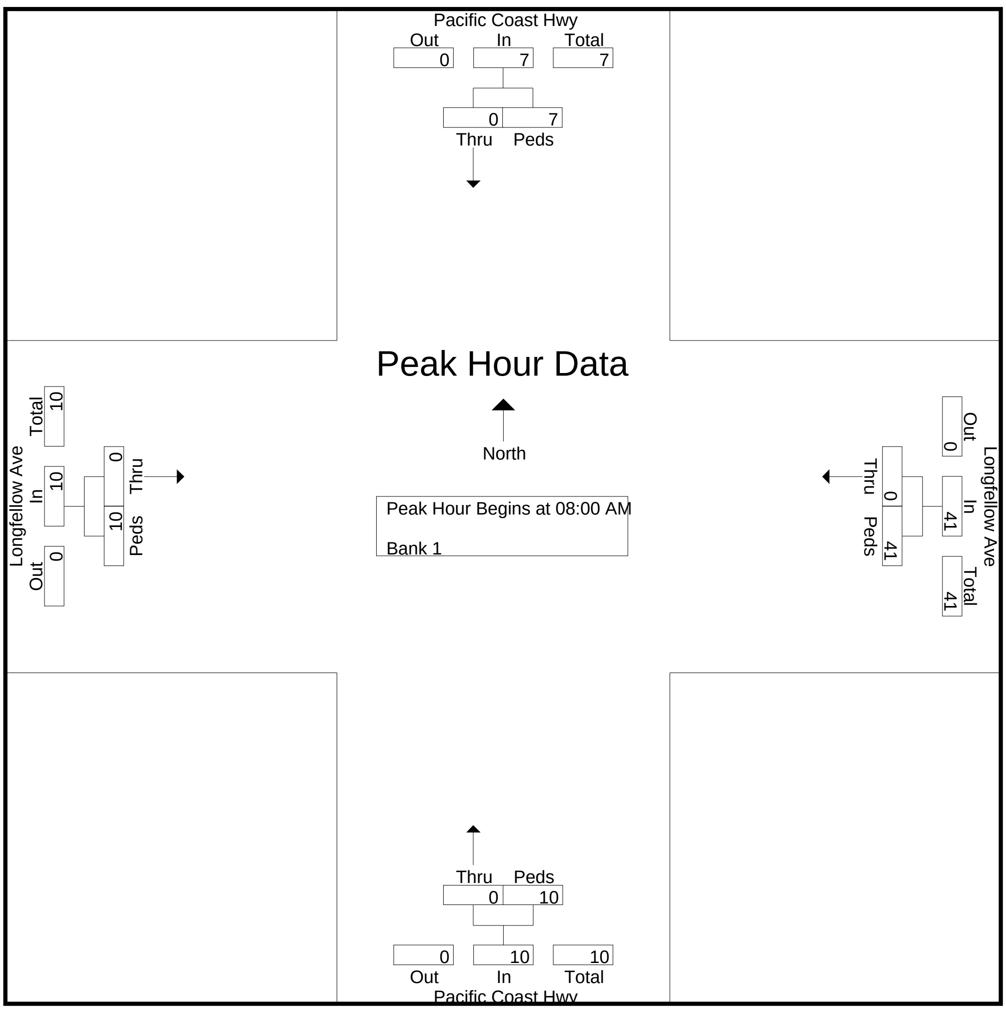
	Pacific Coast Hwy Southbound		Longfellow Ave Westbound		Pacific Coast Hwy Northbound		Longfellow Ave Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	0	0	6	0	1	0	0	7
07:15 AM	0	2	0	7	0	1	0	1	11
07:30 AM	0	4	0	6	0	4	0	2	16
07:45 AM	0	0	0	13	0	0	1	1	15
Total	0	6	0	32	0	6	1	4	49
08:00 AM	0	3	0	6	0	1	0	1	11
08:15 AM	0	2	0	12	0	4	0	3	21
08:30 AM	0	1	0	9	0	3	0	4	17
08:45 AM	0	1	0	14	0	2	0	2	19
Total	0	7	0	41	0	10	0	10	68
04:00 PM	0	4	0	4	0	3	0	1	12
04:15 PM	0	1	0	3	0	2	0	0	6
04:30 PM	0	0	0	15	0	0	1	1	17
04:45 PM	0	6	0	5	1	2	0	0	14
Total	0	11	0	27	1	7	1	2	49
05:00 PM	0	1	0	17	0	4	0	2	24
05:15 PM	0	1	0	5	0	0	0	2	8
05:30 PM	0	4	0	14	0	4	0	0	22
05:45 PM	0	0	0	12	0	3	0	3	18
Total	0	6	0	48	0	11	0	7	72
06:00 PM	0	1	1	10	0	4	0	3	19
06:15 PM	0	1	0	7	0	0	0	0	8
06:30 PM	0	0	0	1	0	0	0	0	1
06:45 PM	0	0	0	2	0	0	0	1	3
Total	0	2	1	20	0	4	0	4	31
Grand Total	0	32	1	168	1	38	2	27	269
Apprch %	0	100	0.6	99.4	2.6	97.4	6.9	93.1	
Total %	0	11.9	0.4	62.5	0.4	14.1	0.7	10	

CITY TRAFFIC COUNTERS

www.ctcounters.com

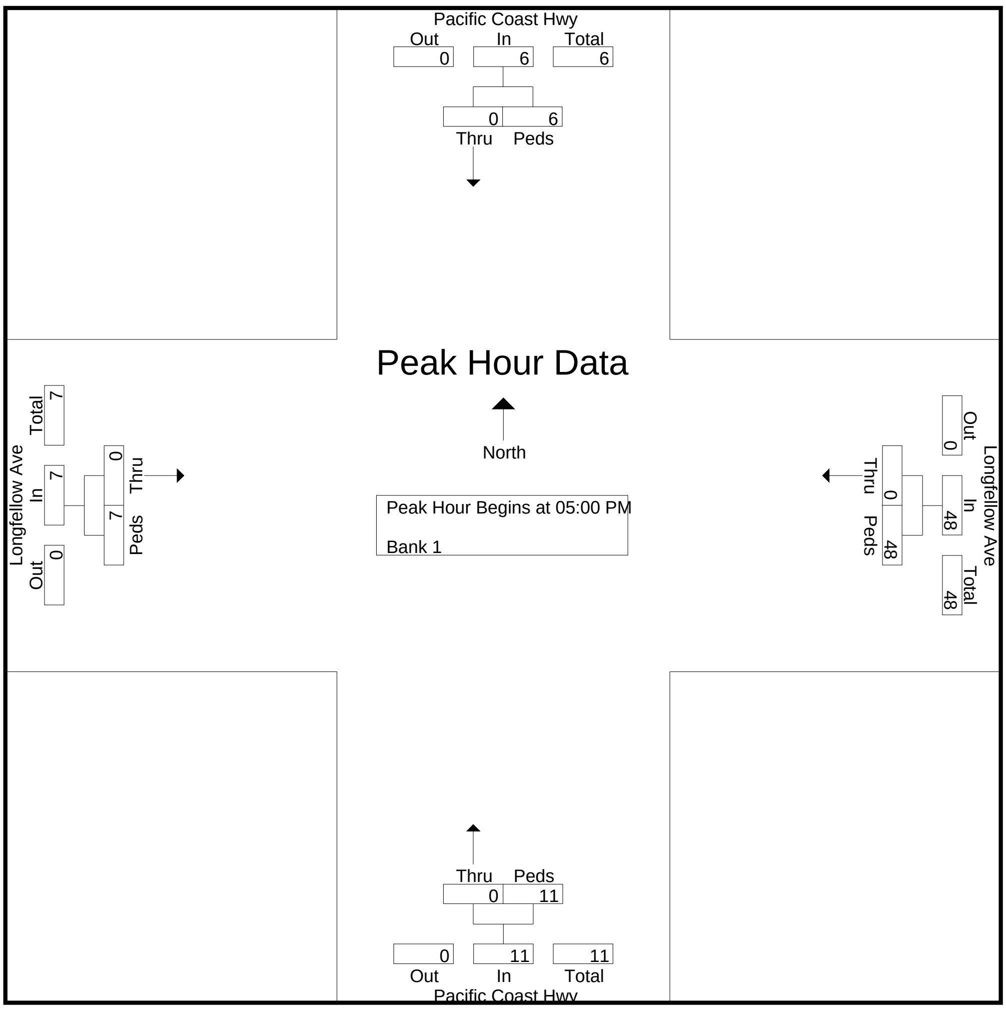
File Name : PacificCoastHwy_Longfellow_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound			Longfellow Ave Westbound			Pacific Coast Hwy Northbound			Longfellow Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	**3**	**3**	0	6	6	0	1	1	0	1	1	11
08:15 AM	0	2	2	0	12	12	0	**4**	**4**	0	3	3	**21**
08:30 AM	0	1	1	0	9	9	0	3	3	0	**4**	**4**	17
08:45 AM	0	1	1	0	**14**	**14**	0	2	2	0	2	2	19
Total Volume	0	7	7	0	41	41	0	10	10	0	10	10	68
% App. Total	0	100		0	100		0	100		0	100		
PHF	.000	.583	.583	.000	.732	.732	.000	.625	.625	.000	.625	.625	.810



File Name : PacificCoastHwy_Longfellow_BP
Site Code : 00000000
Start Date : 3/2/2016

	Pacific Coast Hwy Southbound			Longfellow Ave Westbound			Pacific Coast Hwy Northbound			Longfellow Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	1	1	0	**17**	**17**	0	**4**	**4**	0	2	2	**24**
05:15 PM	0	1	1	0	5	5	0	0	0	0	2	2	8
05:30 PM	0	**4**	**4**	0	14	14	0	4	4	0	0	0	22
05:45 PM	0	0	0	0	12	12	0	3	3	0	**3**	**3**	18
Total Volume	0	6	6	0	48	48	0	11	11	0	7	7	72
% App. Total	0	100		0	100		0	100		0	100		
PHF	.000	.375	.375	.000	.706	.706	.000	.688	.688	.000	.583	.583	.750



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_30th
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Unshifted

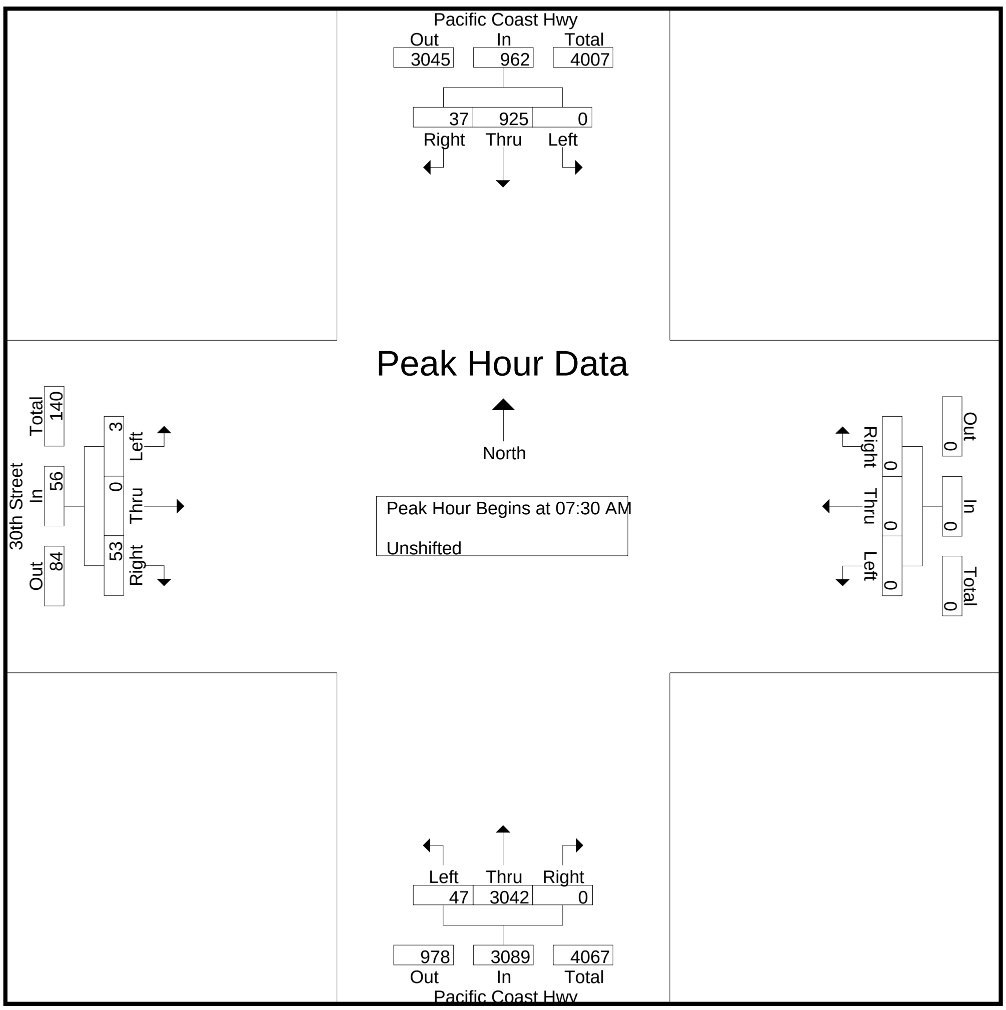
	Pacific Coast Hwy Southbound			Westbound			Pacific Coast Hwy Northbound			30th Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	157	4	0	0	0	9	757	0	1	0	7	935
07:15 AM	0	180	2	0	0	0	9	720	0	0	0	8	919
07:30 AM	0	244	9	0	0	0	9	794	0	1	0	9	1066
07:45 AM	0	224	11	0	0	0	18	790	0	2	0	16	1061
Total	0	805	26	0	0	0	45	3061	0	4	0	40	3981
08:00 AM	0	220	9	0	0	0	13	737	0	0	0	11	990
08:15 AM	0	237	8	0	0	0	7	721	0	0	0	17	990
08:30 AM	0	257	6	0	0	0	15	730	0	1	0	15	1024
08:45 AM	0	257	5	0	0	0	13	655	0	1	0	18	949
Total	0	971	28	0	0	0	48	2843	0	2	0	61	3953
04:00 PM	0	527	1	0	0	0	2	347	0	3	0	15	895
04:15 PM	0	598	1	0	0	0	2	343	0	0	0	7	951
04:30 PM	0	589	4	0	0	0	1	344	0	2	0	10	950
04:45 PM	0	605	0	0	0	0	2	313	0	1	0	10	931
Total	0	2319	6	0	0	0	7	1347	0	6	0	42	3727
05:00 PM	0	569	2	0	0	0	0	355	0	0	0	14	940
05:15 PM	0	631	3	0	0	0	1	322	0	1	0	15	973
05:30 PM	0	599	3	0	0	0	3	370	0	2	0	20	997
05:45 PM	0	628	2	0	0	0	1	332	0	1	0	13	977
Total	0	2427	10	0	0	0	5	1379	0	4	0	62	3887
06:00 PM	0	585	1	0	0	0	0	332	0	3	0	9	930
06:15 PM	0	659	1	0	0	0	5	269	0	3	0	11	948
06:30 PM	0	618	3	0	0	0	3	329	0	0	0	8	961
06:45 PM	0	602	7	0	0	0	2	301	0	0	0	7	919
Total	0	2464	12	0	0	0	10	1231	0	6	0	35	3758
Grand Total	0	8986	82	0	0	0	115	9861	0	22	0	240	19306
Apprch %	0	99.1	0.9	0	0	0	1.2	98.8	0	8.4	0	91.6	
Total %	0	46.5	0.4	0	0	0	0.6	51.1	0	0.1	0	1.2	

CITY TRAFFIC COUNTERS

www.ctcounters.com

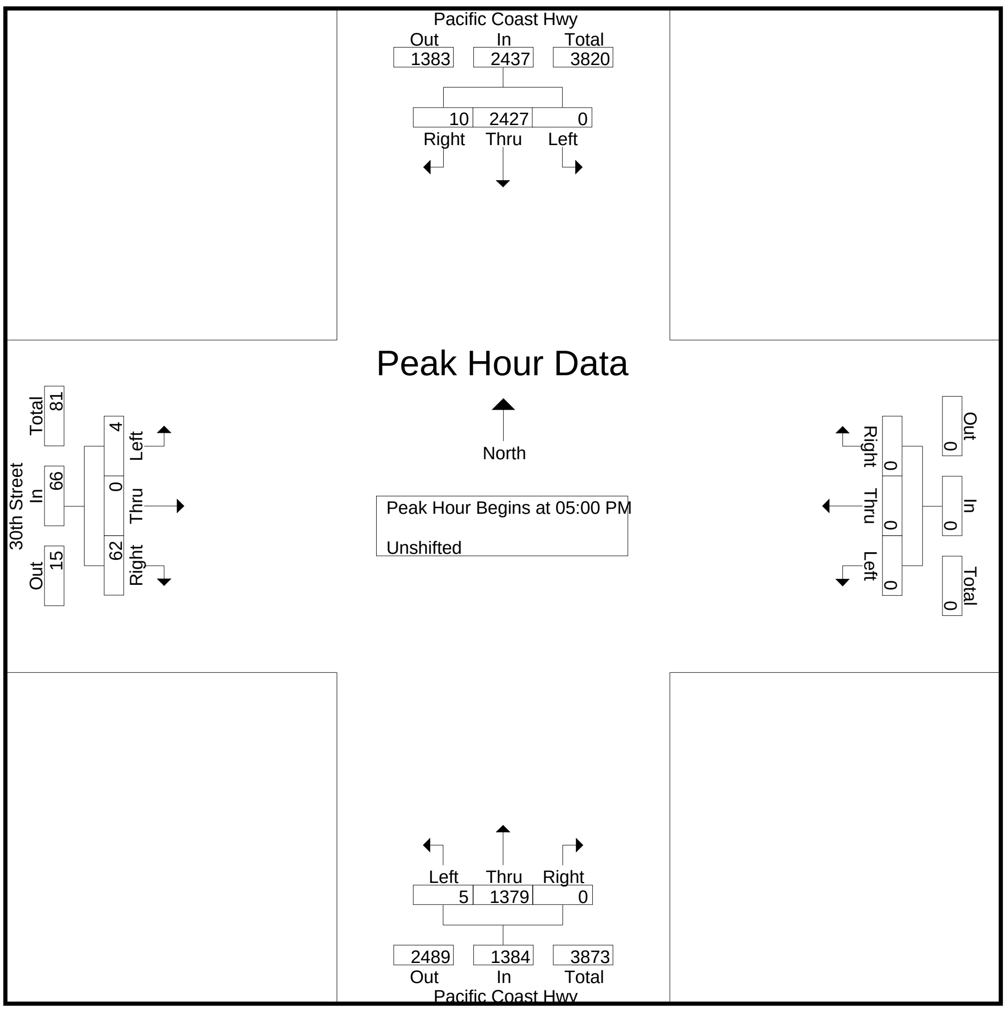
File Name : PacificCoastHwy_30th
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound				Westbound				Pacific Coast Hwy Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**244**	9	**253**	0	0	0	0	9	**794**	0	803	1	0	9	10	**1066**
07:45 AM	0	224	**11**	235	0	0	0	0	**18**	790	0	**808**	**2**	0	16	**18**	1061
08:00 AM	0	220	9	229	0	0	0	0	13	737	0	750	0	0	11	11	990
08:15 AM	0	237	8	245	0	0	0	0	7	721	0	728	0	0	**17**	17	990
Total Volume	0	925	37	962	0	0	0	0	47	3042	0	3089	3	0	53	56	4107
% App. Total	0	96.2	3.8		0	0	0		1.5	98.5	0		5.4	0	94.6		
PHF	.000	.948	.841	.951	.000	.000	.000	.000	.653	.958	.000	.956	.375	.000	.779	.778	.963



File Name : PacificCoastHwy_30th
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Westbound				Pacific Coast Hwy Northbound				30th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	569	2	571	0	0	0	0	0	355	0	355	0	0	14	14	940
05:15 PM	0	**631**	**3**	**634**	0	0	0	0	1	322	0	323	1	0	15	16	973
05:30 PM	0	599	3	602	0	0	0	0	**3**	**370**	0	**373**	**2**	0	**20**	**22**	**997**
05:45 PM	0	628	2	630	0	0	0	0	1	332	0	333	1	0	13	14	977
Total Volume	0	2427	10	2437	0	0	0	0	5	1379	0	1384	4	0	62	66	3887
% App. Total	0	99.6	0.4		0	0	0		0.4	99.6	0		6.1	0	93.9		
PHF	.000	.962	.833	.961	.000	.000	.000	.000	.417	.932	.000	.928	.500	.000	.775	.750	.975



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_30th_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

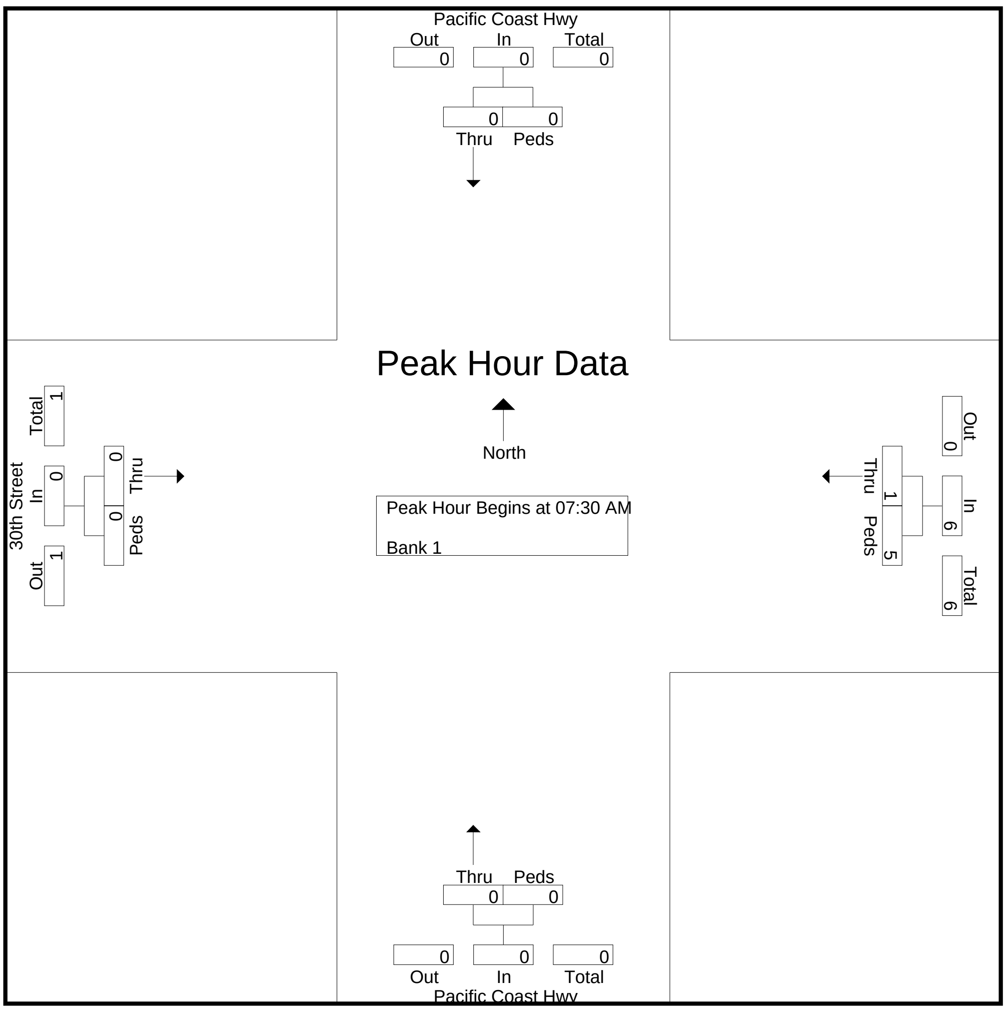
Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		Westbound		Pacific Coast Hwy Northbound		30th Street Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:30 AM	0	0	1	1	0	0	0	0	2
07:45 AM	0	0	0	2	0	0	0	0	2
Total	0	0	1	3	0	0	0	0	4
08:00 AM	0	0	0	1	0	0	0	0	1
08:15 AM	0	0	0	1	0	0	0	0	1
08:30 AM	0	0	0	1	0	0	0	0	1
08:45 AM	0	0	0	2	0	0	0	0	2
Total	0	0	0	5	0	0	0	0	5
04:15 PM	0	0	0	1	0	0	0	0	1
04:30 PM	0	0	0	3	0	0	0	0	3
04:45 PM	0	0	0	1	0	0	0	0	1
Total	0	0	0	5	0	0	0	0	5
05:15 PM	0	0	0	3	0	0	0	0	3
05:30 PM	0	0	0	3	0	0	0	0	3
05:45 PM	0	0	0	2	0	0	0	0	2
Total	0	0	0	8	0	0	0	0	8
06:00 PM	0	0	1	4	0	0	0	0	5
Total	0	0	1	4	0	0	0	0	5
Grand Total	0	0	2	25	0	0	0	0	27
Apprch %	0	0	7.4	92.6	0	0	0	0	
Total %	0	0	7.4	92.6	0	0	0	0	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_30th_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

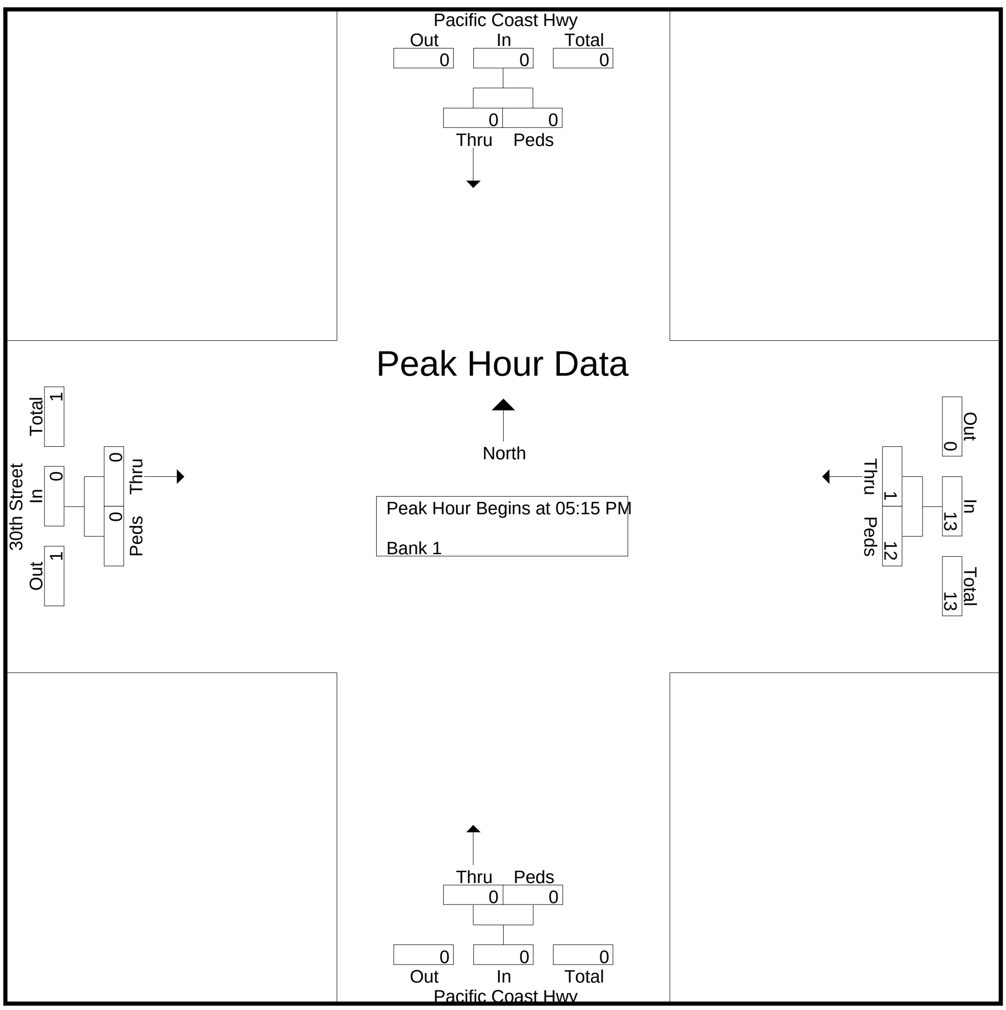
	Pacific Coast Hwy Southbound			Westbound			Pacific Coast Hwy Northbound			30th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	0	0	**1**	1	**2**	0	0	0	0	0	0	**2**
07:45 AM	0	0	0	0	**2**	2	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total Volume	0	0	0	1	5	6	0	0	0	0	0	0	6
% App. Total	0	0		16.7	83.3		0	0		0	0		
PHF	.000	.000	.000	.250	.625	.750	.000	.000	.000	.000	.000	.000	.750



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_30th_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound			Westbound			Pacific Coast Hwy Northbound			30th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:15 PM													
05:15 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	2	2	0	0	0	0	0	0	2
06:00 PM	0	0	0	**1**	**4**	**5**	0	0	0	0	0	0	**5**
Total Volume	0	0	0	1	12	13	0	0	0	0	0	0	13
% App. Total	0	0		7.7	92.3		0	0		0	0		
PHF	.000	.000	.000	.250	.750	.650	.000	.000	.000	.000	.000	.000	.650



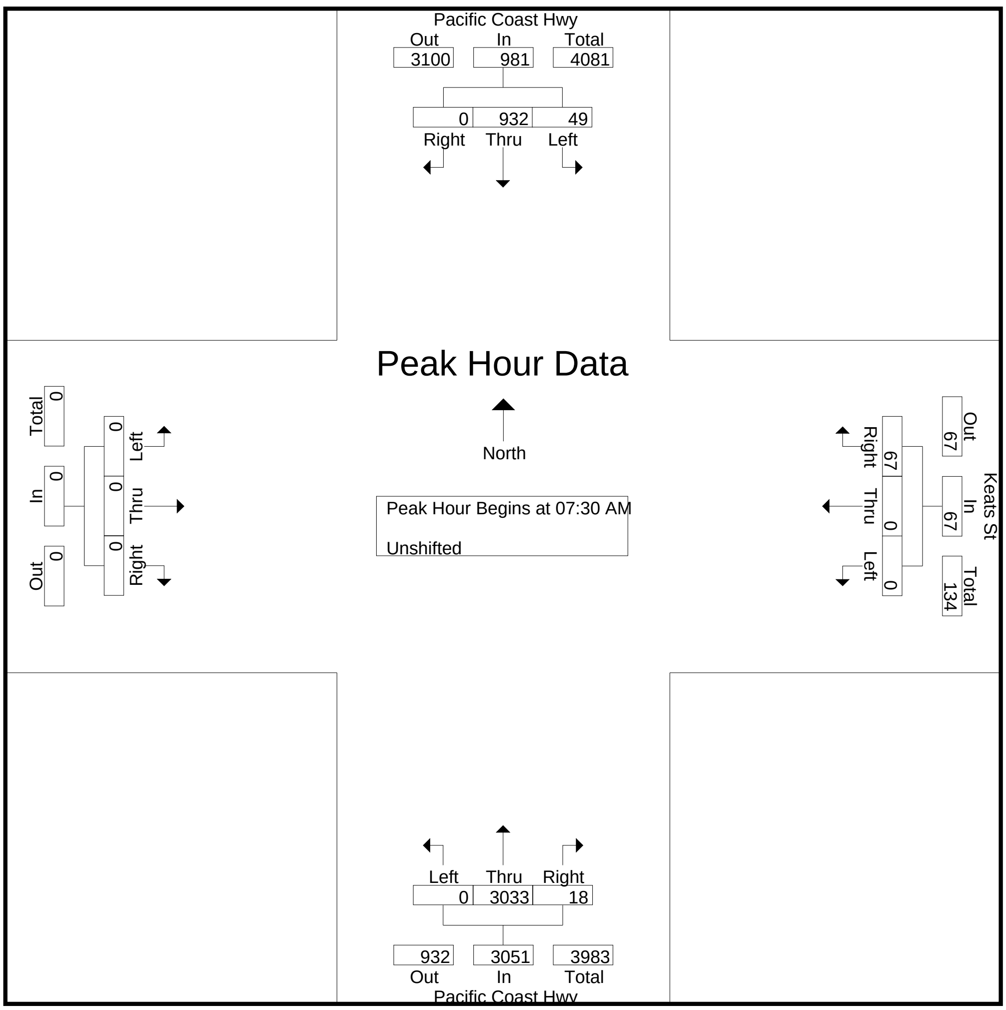
File Name : PacificCoastHwy_Keats
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Unshifted

	Pacific Coast Hwy Southbound			Keats St Westbound			Pacific Coast Hwy Northbound			Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	8	155	0	0	0	6	0	767	1	0	0	0	937
07:15 AM	4	187	0	0	0	7	0	715	3	0	0	0	916
07:30 AM	15	231	0	0	0	13	0	791	3	0	0	0	1053
07:45 AM	21	225	0	0	0	30	0	782	9	0	0	0	1067
Total	48	798	0	0	0	56	0	3055	16	0	0	0	3973
08:00 AM	7	229	0	0	0	14	0	740	3	0	0	0	993
08:15 AM	6	247	0	0	0	10	0	720	3	0	0	0	986
08:30 AM	4	274	0	0	0	10	0	739	1	0	0	0	1028
08:45 AM	5	276	0	0	0	8	0	665	6	0	0	0	960
Total	22	1026	0	0	0	42	0	2864	13	0	0	0	3967
04:00 PM	0	537	0	1	0	12	0	344	7	0	0	0	901
04:15 PM	2	600	0	0	0	16	0	335	8	0	0	0	961
04:30 PM	3	587	0	0	0	12	0	330	13	0	0	0	945
04:45 PM	1	618	0	0	0	11	0	310	8	0	0	0	948
Total	6	2342	0	1	0	51	0	1319	36	0	0	0	3755
05:00 PM	0	592	0	0	0	14	0	339	8	0	0	0	953
05:15 PM	1	640	0	0	0	16	0	313	7	0	0	0	977
05:30 PM	1	620	0	0	0	15	0	363	3	0	0	0	1002
05:45 PM	1	648	0	0	0	7	0	329	6	0	0	0	991
Total	3	2500	0	0	0	52	0	1344	24	0	0	0	3923
06:00 PM	0	590	0	1	0	11	0	322	6	0	0	0	930
06:15 PM	3	661	0	0	0	18	0	253	4	0	0	0	939
06:30 PM	2	618	0	0	0	15	0	313	7	0	0	0	955
06:45 PM	5	616	0	0	0	13	0	286	5	0	0	0	925
Total	10	2485	0	1	0	57	0	1174	22	0	0	0	3749
Grand Total	89	9151	0	2	0	258	0	9756	111	0	0	0	19367
Apprch %	1	99	0	0.8	0	99.2	0	98.9	1.1	0	0	0	
Total %	0.5	47.3	0	0	0	1.3	0	50.4	0.6	0	0	0	

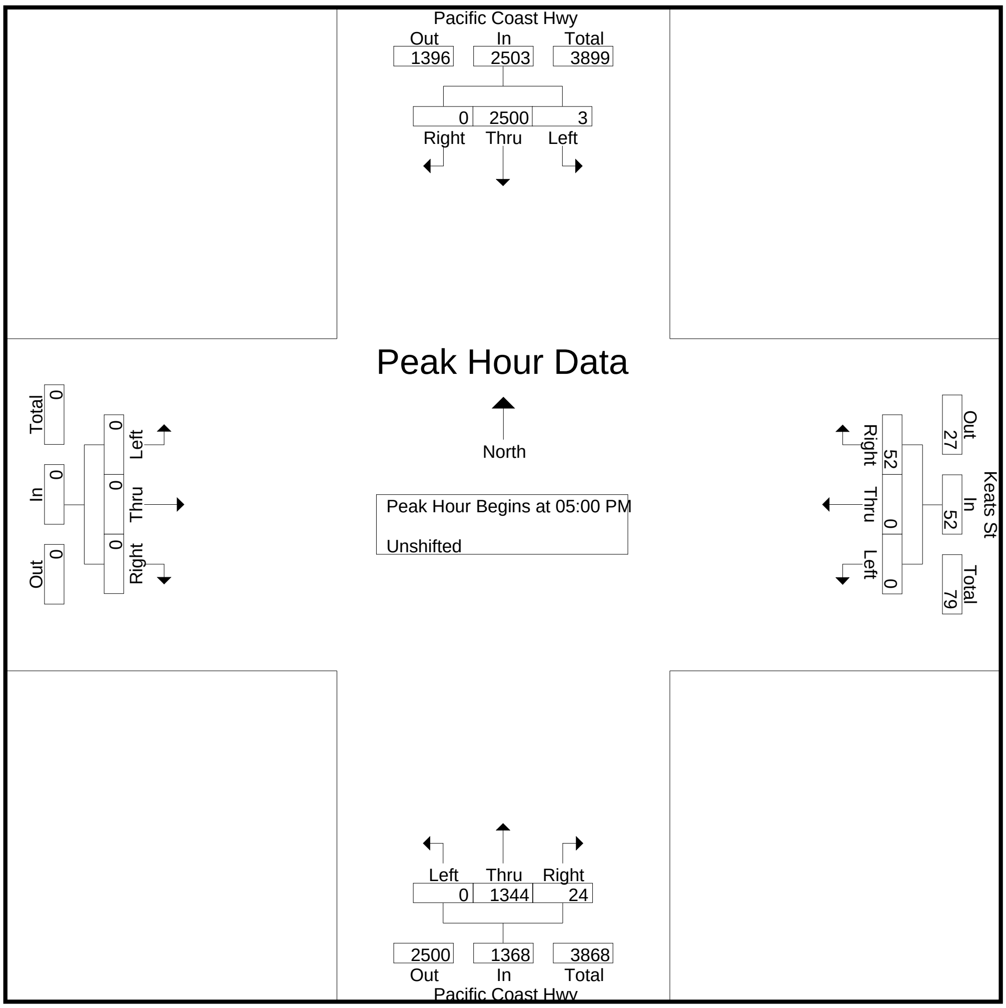
File Name : PacificCoastHwy_Keats
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound				Keats St Westbound				Pacific Coast Hwy Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	231	0	246	0	0	13	13	0	**791**	3	**794**	0	0	0	0	1053
07:45 AM	**21**	225	0	246	0	0	**30**	**30**	0	782	**9**	791	0	0	0	0	**1067**
08:00 AM	7	229	0	236	0	0	14	14	0	740	3	743	0	0	0	0	993
08:15 AM	6	**247**	0	**253**	0	0	10	10	0	720	3	723	0	0	0	0	986
Total Volume	49	932	0	981	0	0	67	67	0	3033	18	3051	0	0	0	0	4099
% App. Total	5	95	0		0	0	100		0	99.4	0.6		0	0	0		
PHF	.583	.943	.000	.969	.000	.000	.558	.558	.000	.959	.500	.961	.000	.000	.000	.000	.960



File Name : PacificCoastHwy_Keats
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Keats St Westbound				Pacific Coast Hwy Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	592	0	592	0	0	14	14	0	339	**8**	347	0	0	0	0	953
05:15 PM	**1**	640	0	641	0	0	**16**	**16**	0	313	7	320	0	0	0	0	977
05:30 PM	1	620	0	621	0	0	15	15	0	**363**	3	**366**	0	0	0	0	**1002**
05:45 PM	1	**648**	0	**649**	0	0	7	7	0	329	6	335	0	0	0	0	991
Total Volume	3	2500	0	2503	0	0	52	52	0	1344	24	1368	0	0	0	0	3923
% App. Total	0.1	99.9	0		0	0	100		0	98.2	1.8		0	0	0		
PHF	.750	.965	.000	.964	.000	.000	.813	.813	.000	.926	.750	.934	.000	.000	.000	.000	.979



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Keats_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

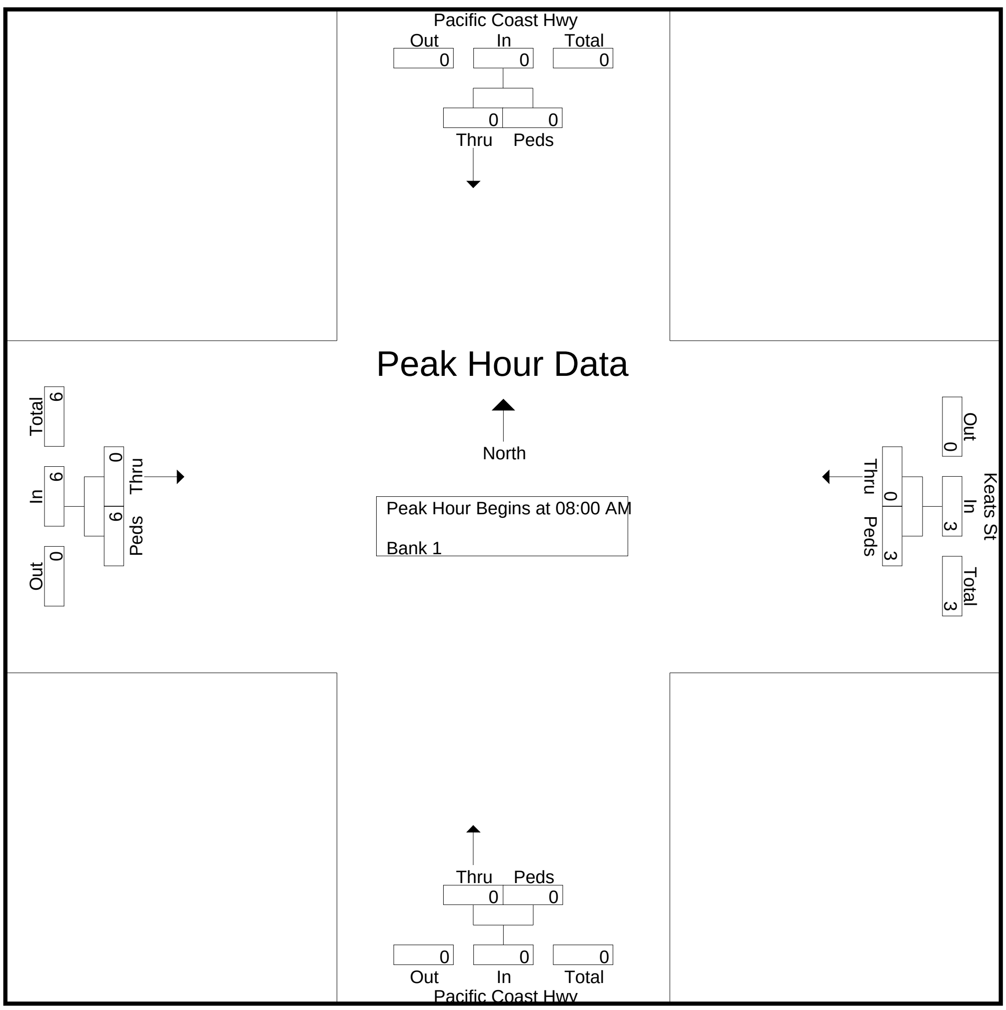
Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		Keats St Westbound		Pacific Coast Hwy Northbound		Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:15 AM	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	1	0	0	0	0	1	2
07:45 AM	0	0	0	0	0	0	0	1	1
Total	0	0	1	0	0	0	0	3	4
08:00 AM	0	0	0	1	0	0	0	1	2
08:30 AM	0	0	0	1	0	0	0	2	3
08:45 AM	0	0	0	1	0	0	0	3	4
Total	0	0	0	3	0	0	0	6	9
04:00 PM	1	0	1	1	0	0	0	0	3
04:15 PM	0	0	0	1	0	0	0	3	4
04:30 PM	0	0	0	3	0	0	1	2	6
04:45 PM	0	0	2	1	0	0	0	2	5
Total	1	0	3	6	0	0	1	7	18
05:00 PM	0	0	0	0	0	0	0	22	22
05:15 PM	0	0	0	3	0	0	0	1	4
05:30 PM	0	0	0	3	0	0	0	0	3
05:45 PM	0	0	0	6	0	0	0	21	27
Total	0	0	0	12	0	0	0	44	56
06:00 PM	0	0	1	3	0	0	0	1	5
06:15 PM	0	0	0	1	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	0	1	1
Total	0	0	1	4	0	0	0	2	7
Grand Total	1	0	5	25	0	0	1	62	94
Apprch %	100	0	16.7	83.3	0	0	1.6	98.4	
Total %	1.1	0	5.3	26.6	0	0	1.1	66	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Keats_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

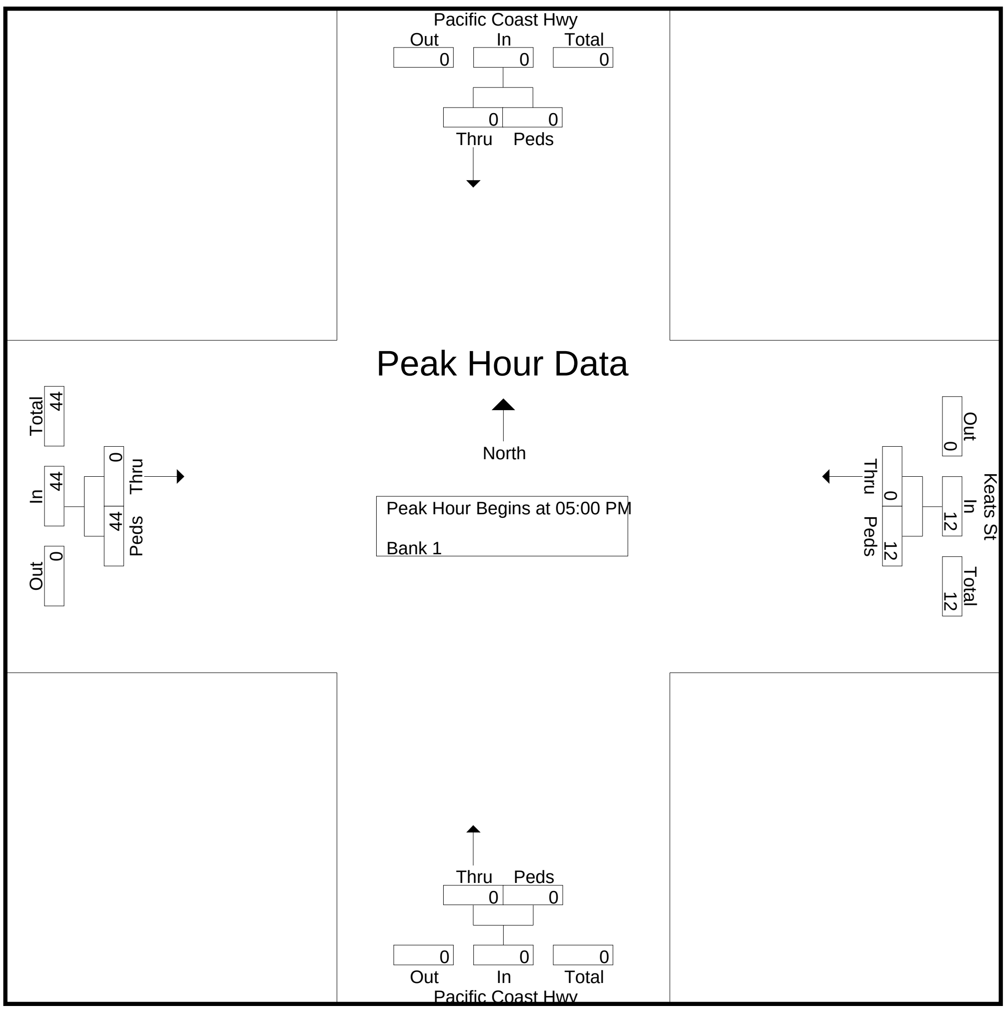
	Pacific Coast Hwy Southbound			Keats St Westbound			Pacific Coast Hwy Northbound			Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	**1**	**1**	0	0	0	0	1	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	1	1	0	0	0	0	2	2	3
08:45 AM	0	0	0	0	1	1	0	0	0	0	**3**	**3**	**4**
Total Volume	0	0	0	0	3	3	0	0	0	0	6	6	9
% App. Total	0	0		0	100		0	0		0	100		
PHF	.000	.000	.000	.000	.750	.750	.000	.000	.000	.000	.500	.500	.563



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Keats_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound			Keats St Westbound			Pacific Coast Hwy Northbound			Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	0	0	**22**	**22**	22
05:15 PM	0	0	0	0	3	3	0	0	0	0	1	1	4
05:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	**6**	**6**	0	0	0	0	21	21	**27**
Total Volume	0	0	0	0	12	12	0	0	0	0	44	44	56
% App. Total	0	0		0	100		0	0		0	100		
PHF	.000	.000	.000	.000	.500	.500	.000	.000	.000	.000	.500	.500	.519



CITY TRAFFIC COUNTERS
www.ctcounters.com

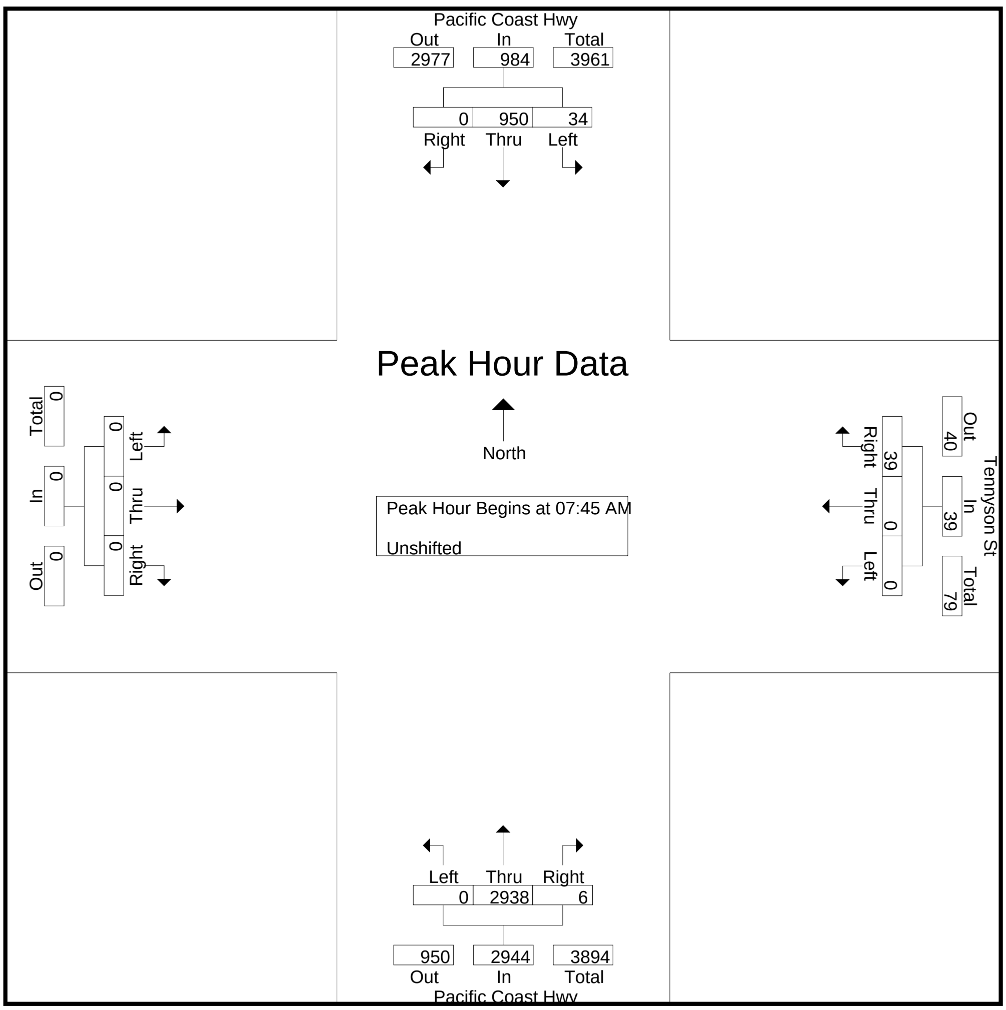
File Name : PacificCoastHwy_Tennyson
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Unshifted

	Pacific Coast Hwy Southbound			**Tennyson St Westbound**			**Pacific Coast Hwy Northbound**			**Eastbound**			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	4	156	0	1	0	14	0	771	1	0	0	0	947
07:15 AM	3	186	0	0	0	6	0	698	1	0	0	0	894
07:30 AM	4	223	0	0	0	8	0	776	1	0	0	0	1012
07:45 AM	12	218	0	0	0	15	0	771	3	0	0	0	1019
Total	23	783	0	1	0	43	0	3016	6	0	0	0	3872
08:00 AM	8	212	0	0	0	11	0	726	2	0	0	0	959
08:15 AM	8	245	0	0	0	8	0	710	1	0	0	0	972
08:30 AM	6	275	0	0	0	5	0	731	0	0	0	0	1017
08:45 AM	9	266	0	0	0	10	0	644	6	0	0	0	935
Total	31	998	0	0	0	34	0	2811	9	0	0	0	3883
04:00 PM	9	526	0	0	0	11	0	335	8	0	0	0	889
04:15 PM	11	584	0	1	0	7	0	324	5	0	0	0	932
04:30 PM	24	564	0	0	0	17	0	318	6	0	0	0	929
04:45 PM	24	598	0	2	0	16	0	292	9	0	0	0	941
Total	68	2272	0	3	0	51	0	1269	28	0	0	0	3691
05:00 PM	10	591	0	2	0	13	0	325	3	0	0	0	944
05:15 PM	12	630	0	2	0	9	0	301	2	0	0	0	956
05:30 PM	20	589	0	2	0	15	0	349	3	0	0	0	978
05:45 PM	16	626	0	1	0	13	0	312	9	0	0	0	977
Total	58	2436	0	7	0	50	0	1287	17	0	0	0	3855
06:00 PM	13	582	0	0	0	10	0	324	9	0	0	0	938
06:15 PM	19	639	0	2	0	9	0	243	9	0	0	0	921
06:30 PM	21	589	0	0	0	12	0	311	5	0	0	0	938
06:45 PM	12	607	0	1	0	10	0	279	2	0	0	0	911
Total	65	2417	0	3	0	41	0	1157	25	0	0	0	3708
Grand Total	245	8906	0	14	0	219	0	9540	85	0	0	0	19009
Apprch %	2.7	97.3	0	6	0	94	0	99.1	0.9	0	0	0	
Total %	1.3	46.9	0	0.1	0	1.2	0	50.2	0.4	0	0	0	

File Name : PacificCoastHwy_Tennyson
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

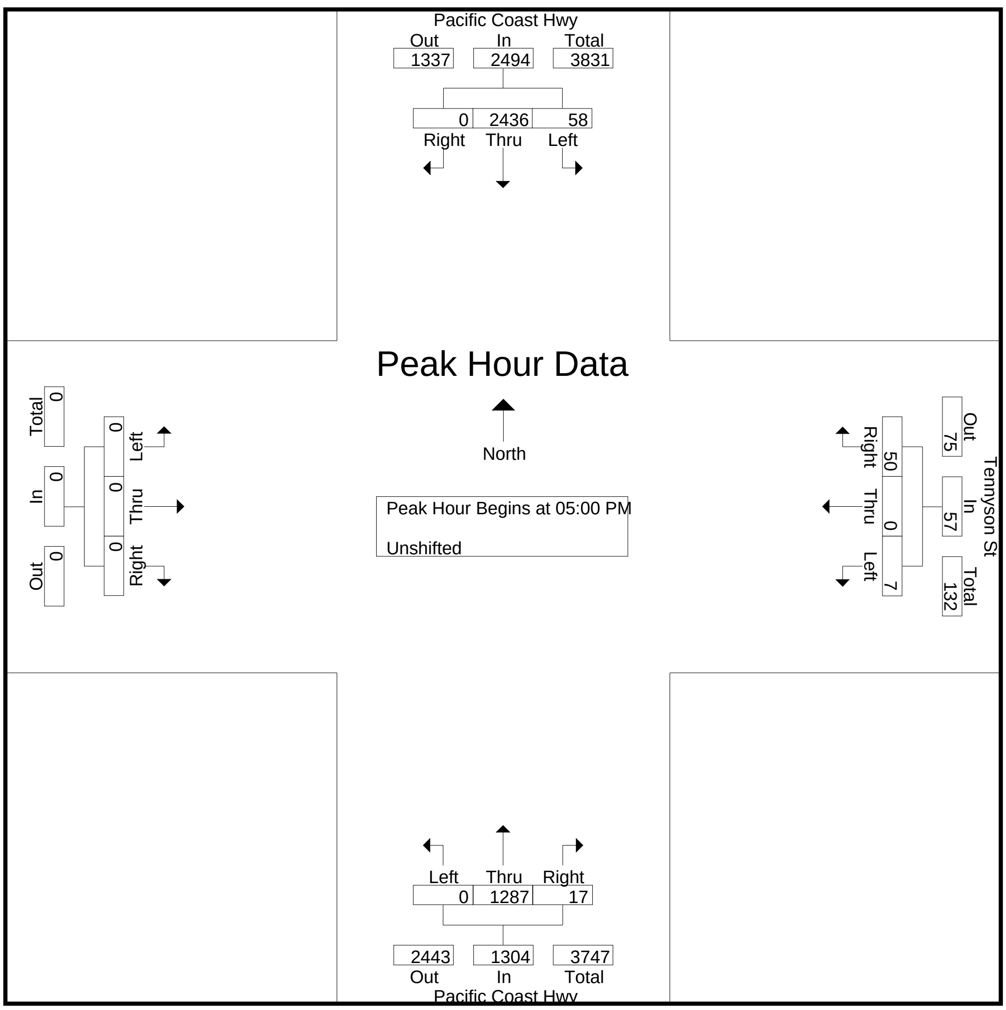
	Pacific Coast Hwy Southbound				Tennyson St Westbound				Pacific Coast Hwy Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**12**	218	0	230	0	0	**15**	**15**	0	**771**	**3**	**774**	0	0	0	0	**1019**
08:00 AM	8	212	0	220	0	0	11	11	0	726	2	728	0	0	0	0	959
08:15 AM	8	245	0	253	0	0	8	8	0	710	1	711	0	0	0	0	972
08:30 AM	6	**275**	0	**281**	0	0	5	5	0	731	0	731	0	0	0	0	1017
Total Volume	34	950	0	984	0	0	39	39	0	2938	6	2944	0	0	0	0	3967
% App. Total	3.5	96.5	0		0	0	100		0	99.8	0.2		0	0	0		
PHF	.708	.864	.000	.875	.000	.000	.650	.650	.000	.953	.500	.951	.000	.000	.000	.000	.973



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Tennyson
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Tennyson St Westbound				Pacific Coast Hwy Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	10	591	0	601	**2**	0	13	15	0	325	3	328	0	0	0	0	944
05:15 PM	12	**630**	0	**642**	2	0	9	11	0	301	2	303	0	0	0	0	956
05:30 PM	**20**	589	0	609	2	0	**15**	**17**	0	**349**	3	**352**	0	0	0	0	**978**
05:45 PM	16	626	0	642	1	0	13	14	0	312	**9**	321	0	0	0	0	977
Total Volume	58	2436	0	2494	7	0	50	57	0	1287	17	1304	0	0	0	0	3855
% App. Total	2.3	97.7	0		12.3	0	87.7		0	98.7	1.3		0	0	0		
PHF	.725	.967	.000	.971	.875	.000	.833	.838	.000	.922	.472	.926	.000	.000	.000	.000	.985



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Tennyson_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

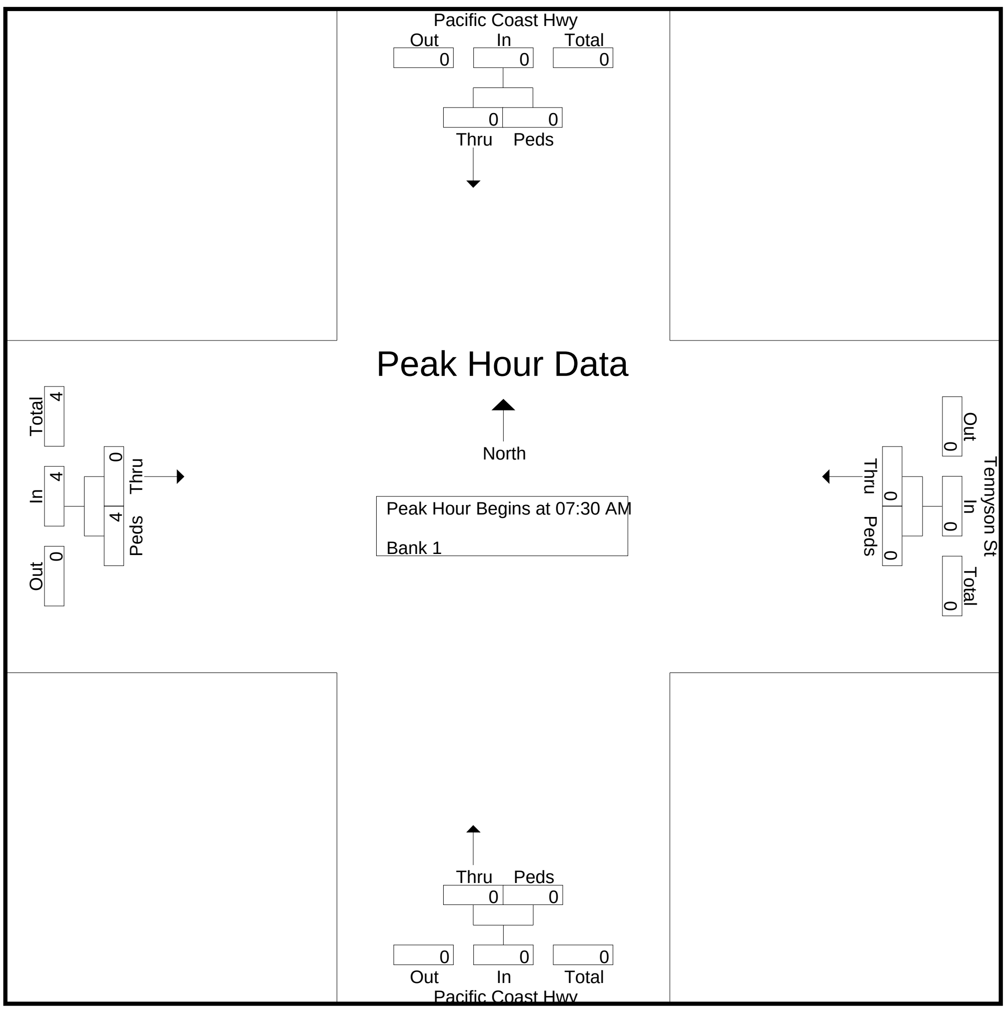
Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		Tennyson St Westbound		Pacific Coast Hwy Northbound		Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:15 AM	0	0	0	0	0	0	0	2	2
07:30 AM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	3	3
08:15 AM	0	0	0	0	0	0	0	3	3
08:45 AM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	4	4
04:15 PM	0	0	0	0	0	0	1	7	8
04:30 PM	0	0	0	0	0	0	0	4	4
04:45 PM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	12	13
05:00 PM	0	0	0	0	0	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	3	3
05:45 PM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	6	6
06:00 PM	0	0	0	0	0	0	0	2	2
06:30 PM	0	0	0	0	0	1	0	0	1
06:45 PM	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	1	0	4	5
Grand Total	0	0	0	0	0	1	1	29	31
Apprch %	0	0	0	0	0	100	3.3	96.7	
Total %	0	0	0	0	0	3.2	3.2	93.5	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Tennyson_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound			**Tennyson St Westbound**			**Pacific Coast Hwy Northbound**			**Eastbound**			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	**3**	**3**	**3**
Total Volume	0	0	0	0	0	0	0	0	0	0	4	4	4
% App. Total	0	0		0	0		0	0		0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.333	.333	.333

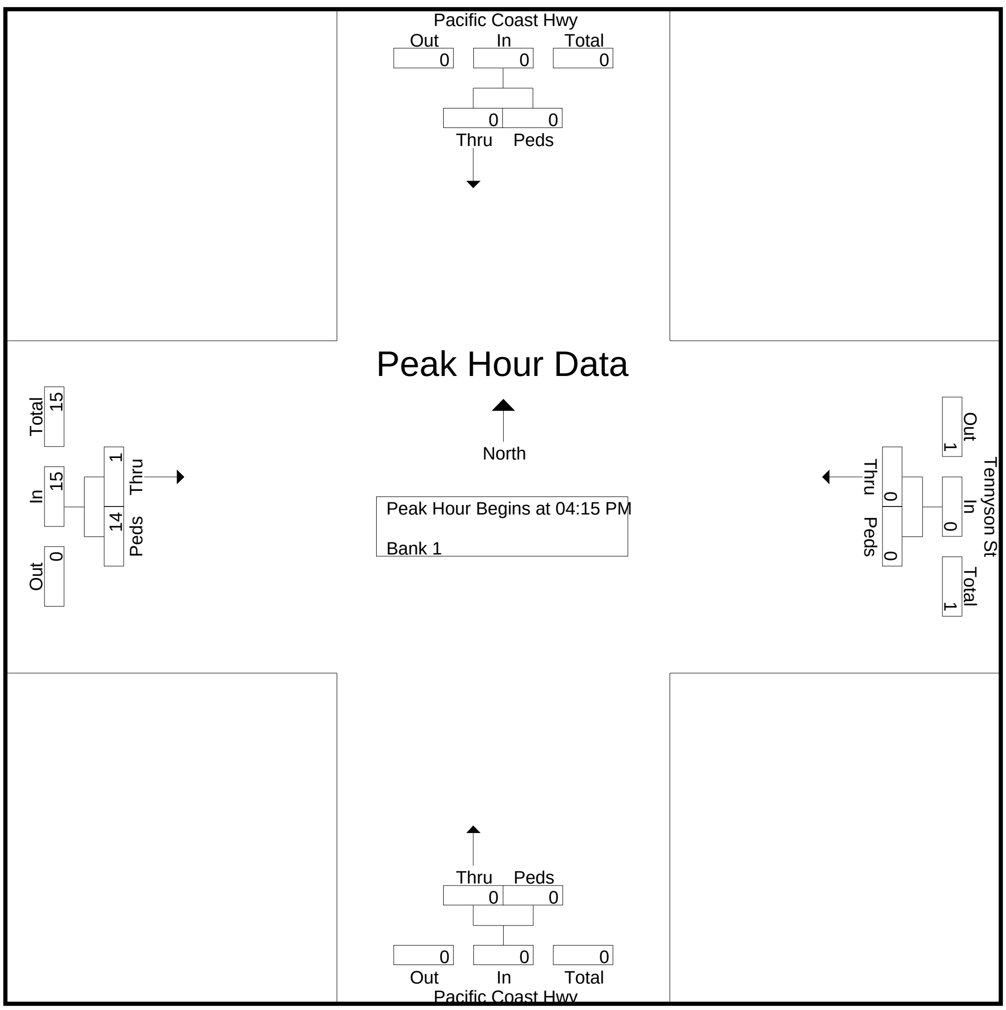


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : PacificCoastHwy_Tennyson_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound			Tennyson St Westbound			Pacific Coast Hwy Northbound			Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	0	0	0	0	0	0	0	0	**1**	**7**	**8**	**8**
04:30 PM	0	0	0	0	0	0	0	0	0	0	4	4	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
Total Volume	0	0	0	0	0	0	0	0	0	1	14	15	15
% App. Total	0	0		0	0		0	0		6.7	93.3		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.500	.469	.469



CITY TRAFFIC COUNTERS

www.ctcounters.com

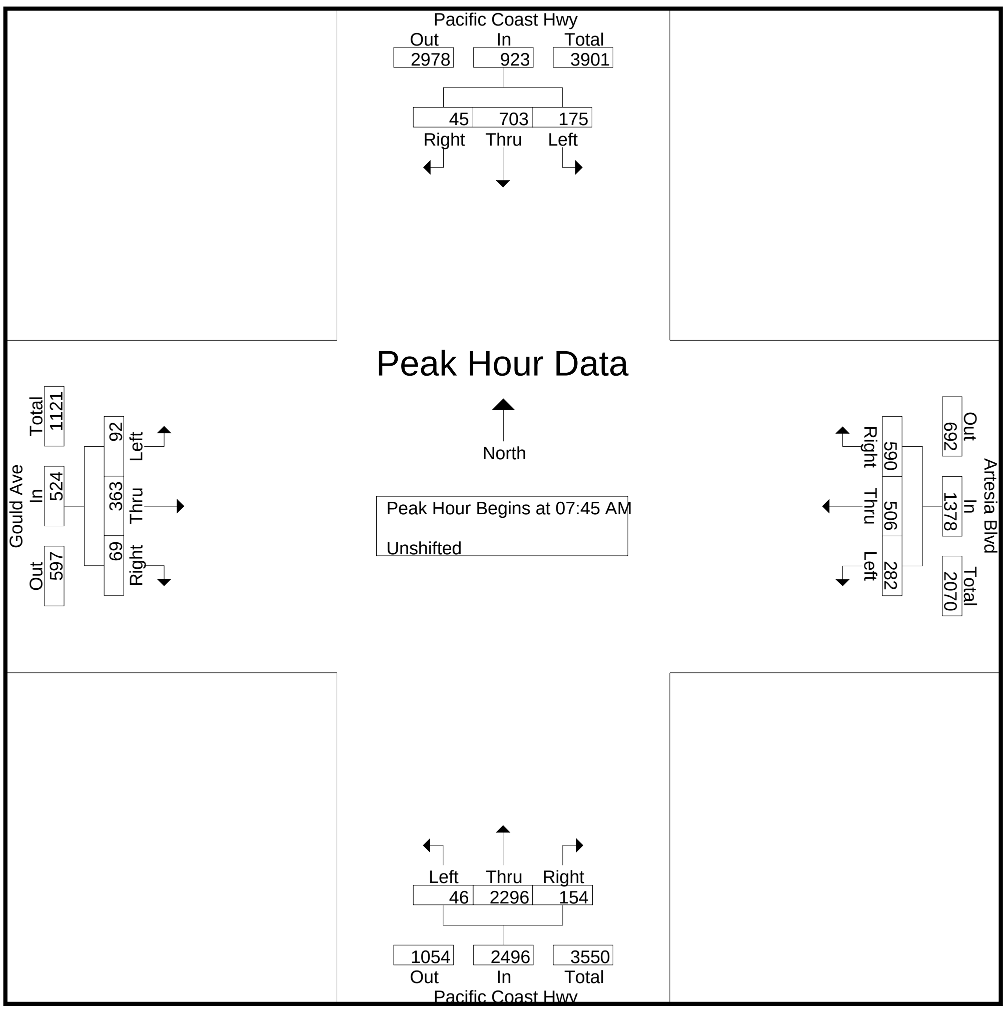
File Name : PacificCoastHwy_Gould-Artesia
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

Groups Printed- Unshifted

	Pacific Coast Hwy Southbound			Artesia Blvd Westbound			Pacific Coast Hwy Northbound			Gould Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	24	126	5	46	81	107	2	670	28	10	65	6	1170
07:15 AM	38	141	6	45	103	130	0	555	32	7	57	10	1124
07:30 AM	44	156	8	34	78	115	2	643	40	10	74	8	1212
07:45 AM	60	147	8	60	139	181	8	579	45	28	122	15	1392
Total	166	570	27	185	401	533	12	2447	145	55	318	39	4898
08:00 AM	42	168	9	54	118	127	19	589	34	22	75	12	1269
08:15 AM	50	179	17	64	136	144	11	556	20	27	92	22	1318
08:30 AM	23	209	11	104	113	138	8	572	55	15	74	20	1342
08:45 AM	54	203	7	94	105	111	8	519	39	9	62	18	1229
Total	169	759	44	316	472	520	46	2236	148	73	303	72	5158
04:00 PM	107	414	19	53	78	66	18	269	32	20	89	17	1182
04:15 PM	129	430	17	72	78	75	6	218	46	22	119	13	1225
04:30 PM	92	455	20	57	75	81	12	229	43	18	72	6	1160
04:45 PM	132	452	17	97	96	59	12	222	63	27	117	20	1314
Total	460	1751	73	279	327	281	48	938	184	87	397	56	4881
05:00 PM	112	476	18	61	78	68	14	247	73	24	87	4	1262
05:15 PM	122	475	22	81	94	62	6	215	64	19	97	21	1278
05:30 PM	117	464	17	53	75	73	15	267	85	22	75	8	1271
05:45 PM	123	480	16	70	106	73	10	241	56	11	117	14	1317
Total	474	1895	73	265	353	276	45	970	278	76	376	47	5128
06:00 PM	115	468	10	64	71	62	9	264	60	15	115	10	1263
06:15 PM	127	503	12	67	66	66	4	178	67	23	102	8	1223
06:30 PM	101	467	8	55	57	64	11	256	54	8	80	7	1168
06:45 PM	112	495	13	75	94	66	9	207	53	19	77	13	1233
Total	455	1933	43	261	288	258	33	905	234	65	374	38	4887
Grand Total	1724	6908	260	1306	1841	1868	184	7496	989	356	1768	252	24952
Apprch %	19.4	77.7	2.9	26	36.7	37.2	2.1	86.5	11.4	15	74.4	10.6	
Total %	6.9	27.7	1	5.2	7.4	7.5	0.7	30	4	1.4	7.1	1	

File Name : PacificCoastHwy_Gould-Artesia
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound				Artesia Blvd Westbound				Pacific Coast Hwy Northbound				Gould Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**60**	147	8	215	60	**139**	**181**	**380**	8	579	45	632	**28**	**122**	15	**165**	**1392**
08:00 AM	42	168	9	219	54	118	127	299	**19**	**589**	34	**642**	22	75	12	109	1269
08:15 AM	50	179	**17**	**246**	64	136	144	344	11	556	20	587	27	92	**22**	141	1318
08:30 AM	23	**209**	11	243	**104**	113	138	355	8	572	**55**	635	15	74	20	109	1342
Total Volume	175	703	45	923	282	506	590	1378	46	2296	154	2496	92	363	69	524	5321
% App. Total	19	76.2	4.9		20.5	36.7	42.8		1.8	92	6.2		17.6	69.3	13.2		
PHF	.729	.841	.662	.938	.678	.910	.815	.907	.605	.975	.700	.972	.821	.744	.784	.794	.956

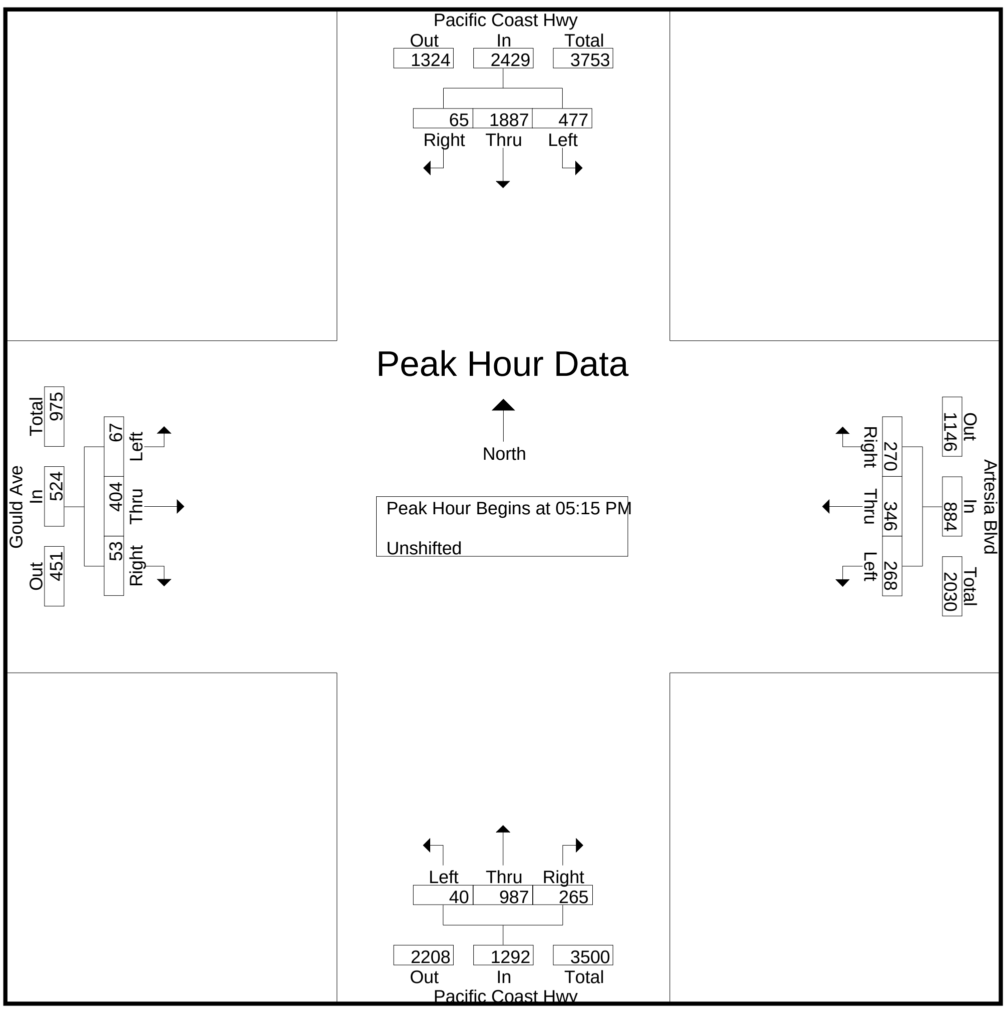


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : PacificCoastHwy_Gould-Artesia
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound				Artesia Blvd Westbound				Pacific Coast Hwy Northbound				Gould Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	122	475	**22**	**619**	**81**	94	62	237	6	215	64	285	19	97	**21**	137	1278
05:30 PM	117	464	17	598	53	75	**73**	201	**15**	**267**	**85**	**367**	**22**	75	8	105	1271
05:45 PM	**123**	**480**	16	619	70	**106**	73	**249**	10	241	56	307	11	**117**	14	**142**	**1317**
06:00 PM	115	468	10	593	64	71	62	197	9	264	60	333	15	115	10	140	1263
Total Volume	477	1887	65	2429	268	346	270	884	40	987	265	1292	67	404	53	524	5129
% App. Total	19.6	77.7	2.7		30.3	39.1	30.5		3.1	76.4	20.5		12.8	77.1	10.1		
PHF	.970	.983	.739	.981	.827	.816	.925	.888	.667	.924	.779	.880	.761	.863	.631	.923	.974



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Gould-Artesia_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 1

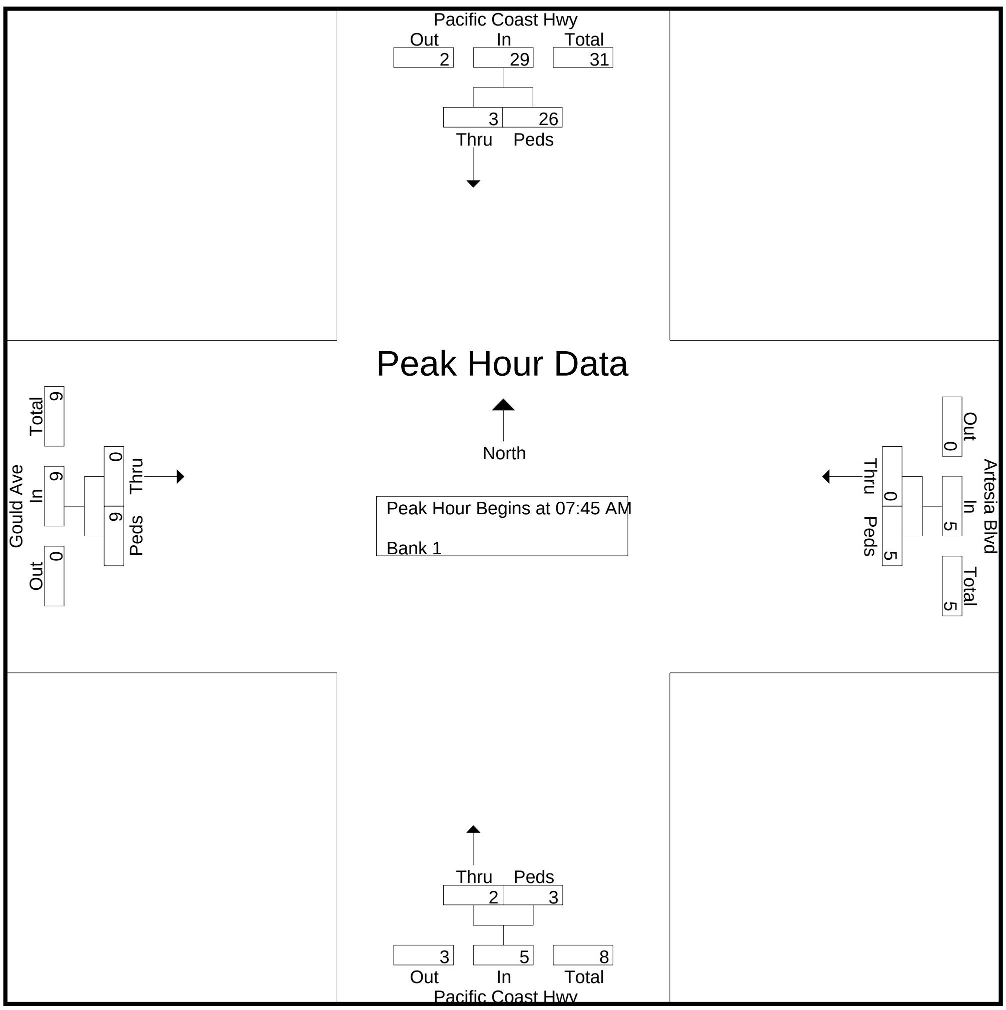
Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		Artesia Blvd Westbound		Pacific Coast Hwy Northbound		Gould Ave Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	2	2	0	0	0	1	1	2	8
07:15 AM	1	7	0	2	0	0	0	4	14
07:30 AM	0	3	0	0	0	0	0	2	5
07:45 AM	0	6	0	1	0	1	0	3	11
Total	3	18	0	3	0	2	1	11	38
08:00 AM	0	8	0	1	0	0	0	2	11
08:15 AM	3	1	0	0	0	0	0	2	6
08:30 AM	0	11	0	3	2	2	0	2	20
08:45 AM	0	3	0	0	0	0	0	4	7
Total	3	23	0	4	2	2	0	10	44
04:00 PM	0	2	0	0	0	0	1	3	6
04:15 PM	0	8	0	0	0	0	0	3	11
04:30 PM	0	2	0	0	0	0	0	11	13
04:45 PM	0	11	0	0	0	0	0	5	16
Total	0	23	0	0	0	0	1	22	46
05:00 PM	0	3	0	2	1	0	0	3	9
05:15 PM	1	6	0	0	0	2	1	3	13
05:30 PM	1	0	0	0	0	0	0	7	8
05:45 PM	0	6	0	1	0	0	0	7	14
Total	2	15	0	3	1	2	1	20	44
06:00 PM	0	4	0	2	0	3	0	4	13
06:15 PM	1	1	0	0	0	0	0	1	3
06:30 PM	0	3	0	1	0	0	0	0	4
06:45 PM	0	4	0	0	0	0	0	0	4
Total	1	12	0	3	0	3	0	5	24
Grand Total	9	91	0	13	3	9	3	68	196
Apprch %	9	91	0	100	25	75	4.2	95.8	
Total %	4.6	46.4	0	6.6	1.5	4.6	1.5	34.7	

CITY TRAFFIC COUNTERS
www.ctcounters.com

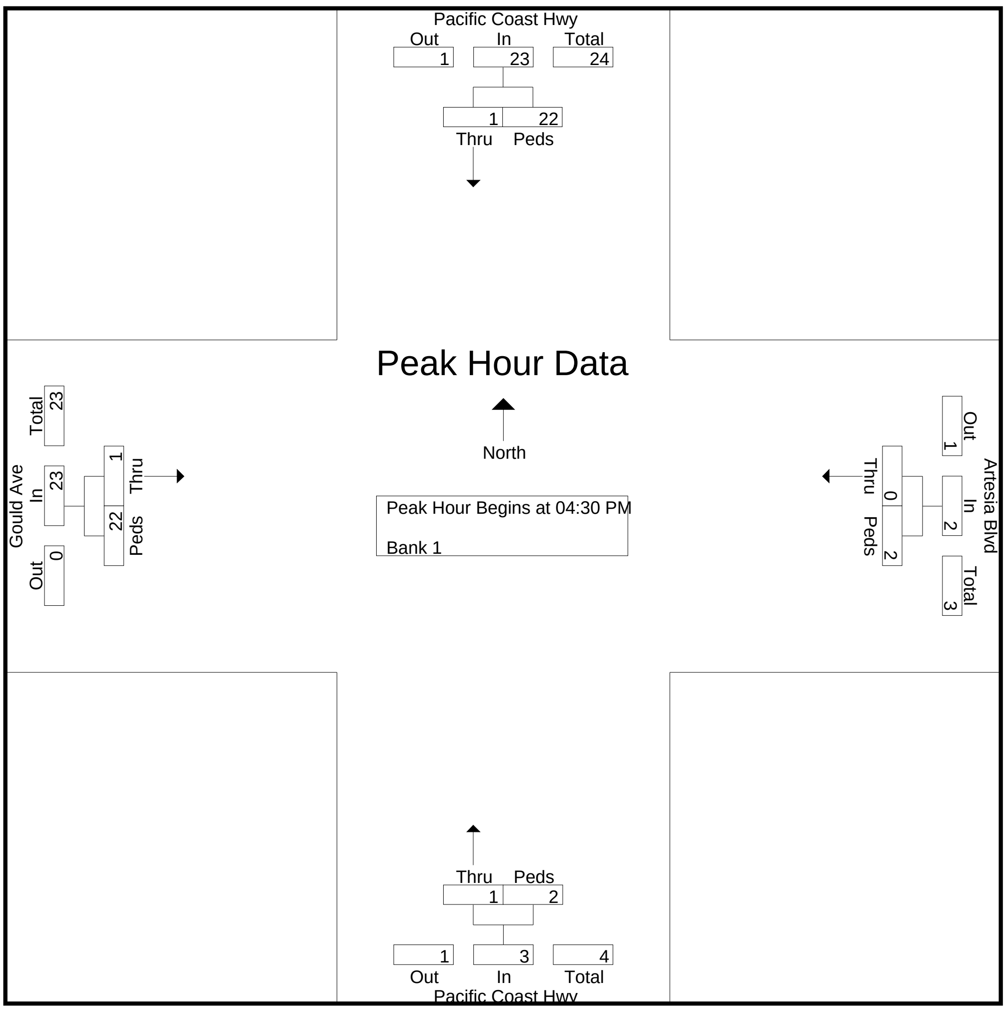
File Name : PacificCoastHwy_Gould-Artesia_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 2

	Pacific Coast Hwy Southbound			Artesia Blvd Westbound			Pacific Coast Hwy Northbound			Gould Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	6	6	0	1	1	0	1	1	0	**3**	**3**	11
08:00 AM	0	8	8	0	1	1	0	0	0	0	2	2	11
08:15 AM	**3**	1	4	0	0	0	0	0	0	0	2	2	6
08:30 AM	0	**11**	**11**	0	**3**	**3**	**2**	**2**	**4**	0	2	2	**20**
Total Volume	3	26	29	0	5	5	2	3	5	0	9	9	48
% App. Total	10.3	89.7		0	100		40	60		0	100		
PHF	.250	.591	.659	.000	.417	.417	.250	.375	.313	.000	.750	.750	.600



File Name : PacificCoastHwy_Gould-Artesia_BP
Site Code : 00000000
Start Date : 3/2/2016
Page No : 3

	Pacific Coast Hwy Southbound			Artesia Blvd Westbound			Pacific Coast Hwy Northbound			Gould Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	2	2	0	0	0	0	0	0	0	**11**	**11**	13
04:45 PM	0	**11**	**11**	0	0	0	0	0	0	0	5	5	**16**
05:00 PM	0	3	3	0	**2**	**2**	**1**	0	1	0	3	3	9
05:15 PM	**1**	6	7	0	0	0	0	**2**	**2**	**1**	3	4	13
Total Volume	1	22	23	0	2	2	1	2	3	1	22	23	51
% App. Total	4.3	95.7		0	100		33.3	66.7		4.3	95.7		
PHF	.250	.500	.523	.000	.250	.250	.250	.250	.375	.250	.500	.523	.797



CITY TRAFFIC COUNTERS
www.ctcounters.com

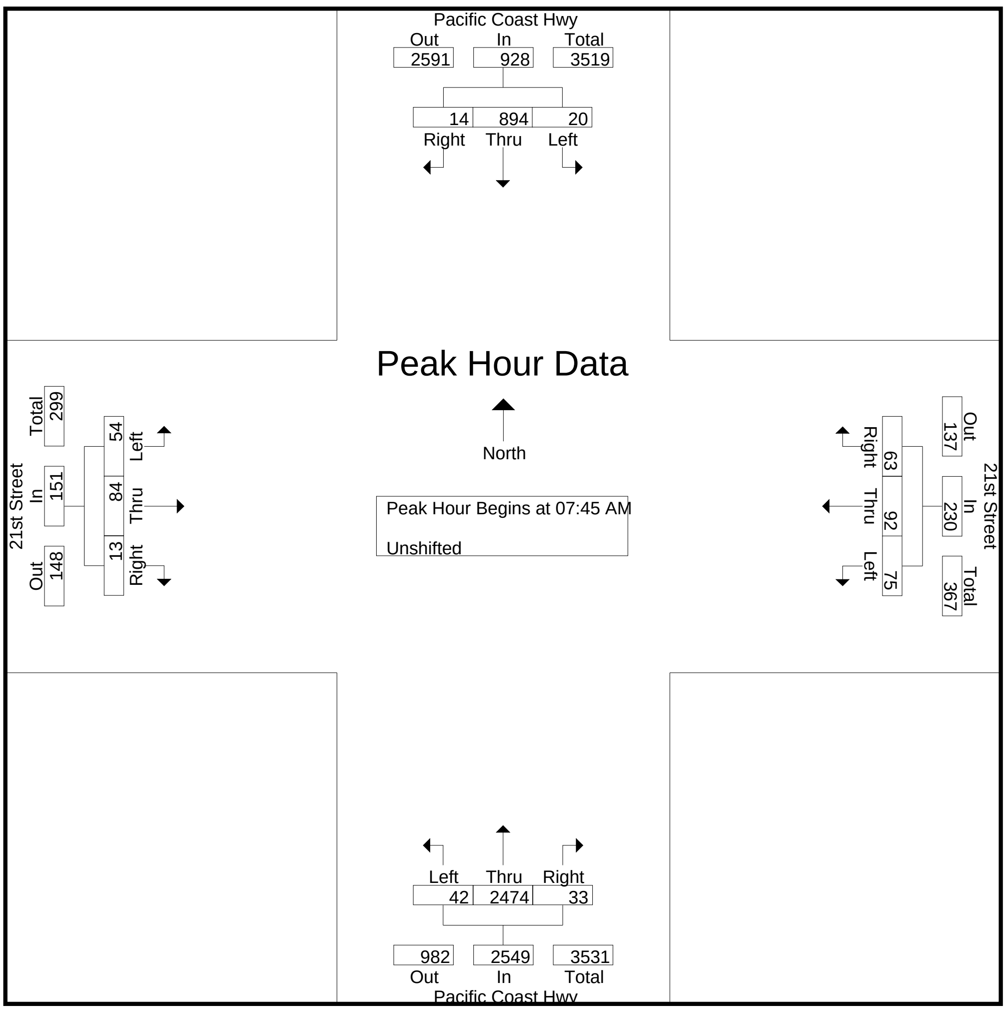
File Name : PacificCoastHwy_21st
Site Code : 00000000
Start Date : 3/8/2016
Page No : 1

Groups Printed- Unshifted

	Pacific Coast Hwy Southbound			**21st Street Westbound**			**Pacific Coast Hwy Northbound**			**21st Street Eastbound**			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	128	6	6	4	11	10	617	5	9	7	3	807
07:15 AM	2	195	5	3	7	8	14	686	5	12	28	1	966
07:30 AM	1	158	4	4	14	18	14	654	9	13	16	3	908
07:45 AM	6	201	1	9	19	19	13	646	8	16	30	4	972
Total	10	682	16	22	44	56	51	2603	27	50	81	11	3653
08:00 AM	1	230	5	27	32	14	8	598	6	15	15	3	954
08:15 AM	4	220	4	23	20	15	10	641	16	7	32	3	995
08:30 AM	9	243	4	16	21	15	11	589	3	16	7	3	937
08:45 AM	3	243	8	11	20	15	13	584	2	18	17	5	939
Total	17	936	21	77	93	59	42	2412	27	56	71	14	3825
04:00 PM	9	514	12	7	12	8	8	293	9	3	6	4	885
04:15 PM	17	514	16	7	17	6	4	292	5	7	16	4	905
04:30 PM	6	508	10	8	9	6	12	284	3	4	13	7	870
04:45 PM	22	496	24	7	15	10	9	260	9	4	8	3	867
Total	54	2032	62	29	53	30	33	1129	26	18	43	18	3527
05:00 PM	21	537	27	6	18	13	6	297	3	2	16	3	949
05:15 PM	17	457	14	12	14	4	9	300	4	9	12	4	856
05:30 PM	21	535	15	10	12	12	10	332	11	8	7	1	974
05:45 PM	15	539	20	5	12	12	6	310	7	2	12	5	945
Total	74	2068	76	33	56	41	31	1239	25	21	47	13	3724
06:00 PM	16	537	27	5	11	8	7	224	1	6	13	10	865
06:15 PM	14	493	28	6	9	6	9	303	6	3	15	7	899
06:30 PM	13	479	17	2	10	5	4	272	3	5	5	2	817
06:45 PM	22	392	28	5	8	10	7	259	2	6	8	3	750
Total	65	1901	100	18	38	29	27	1058	12	20	41	22	3331
Grand Total	220	7619	275	179	284	215	184	8441	117	165	283	78	18060
Apprch %	2.7	93.9	3.4	26.4	41.9	31.7	2.1	96.6	1.3	31.4	53.8	14.8	
Total %	1.2	42.2	1.5	1	1.6	1.2	1	46.7	0.6	0.9	1.6	0.4	

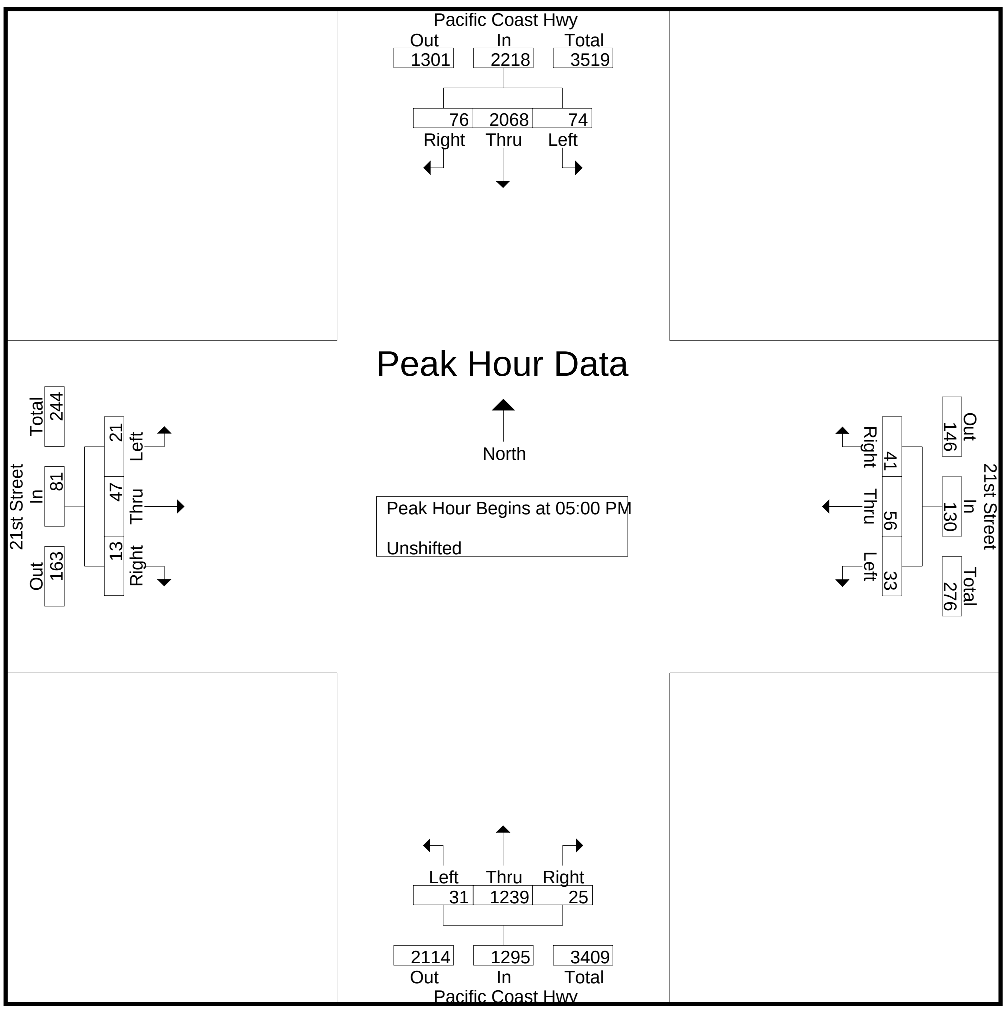
File Name : PacificCoastHwy_21st
Site Code : 00000000
Start Date : 3/8/2016
Page No : 2

	Pacific Coast Hwy Southbound				21st Street Westbound				Pacific Coast Hwy Northbound				21st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	6	201	1	208	9	19	**19**	47	**13**	**646**	8	**667**	**16**	30	**4**	**50**	972
08:00 AM	1	230	**5**	236	**27**	**32**	14	**73**	8	598	6	612	15	15	3	33	954
08:15 AM	4	220	4	228	23	20	15	58	10	641	**16**	667	7	**32**	3	42	**995**
08:30 AM	**9**	**243**	4	**256**	16	21	15	52	11	589	3	603	16	7	3	26	937
Total Volume	20	894	14	928	75	92	63	230	42	2474	33	2549	54	84	13	151	3858
% App. Total	2.2	96.3	1.5		32.6	40	27.4		1.6	97.1	1.3		35.8	55.6	8.6		
PHF	.556	.920	.700	.906	.694	.719	.829	.788	.808	.957	.516	.955	.844	.656	.813	.755	.969



File Name : PacificCoastHwy_21st
Site Code : 00000000
Start Date : 3/8/2016

	Pacific Coast Hwy Southbound				21st Street Westbound				Pacific Coast Hwy Northbound				21st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**21**	537	**27**	**585**	6	**18**	**13**	**37**	6	297	3	306	2	**16**	3	21	949
05:15 PM	17	457	14	488	**12**	14	4	30	9	300	4	313	**9**	12	4	**25**	856
05:30 PM	21	535	15	571	10	12	12	34	**10**	**332**	**11**	**353**	8	7	1	16	**974**
05:45 PM	15	**539**	20	574	5	12	12	29	6	310	7	323	2	12	**5**	19	945
Total Volume	74	2068	76	2218	33	56	41	130	31	1239	25	1295	21	47	13	81	3724
% App. Total	3.3	93.2	3.4		25.4	43.1	31.5		2.4	95.7	1.9		25.9	58	16		
PHF	.881	.959	.704	.948	.688	.778	.788	.878	.775	.933	.568	.917	.583	.734	.650	.810	.956



CITY TRAFFIC COUNTERS
www.ctcounters.com

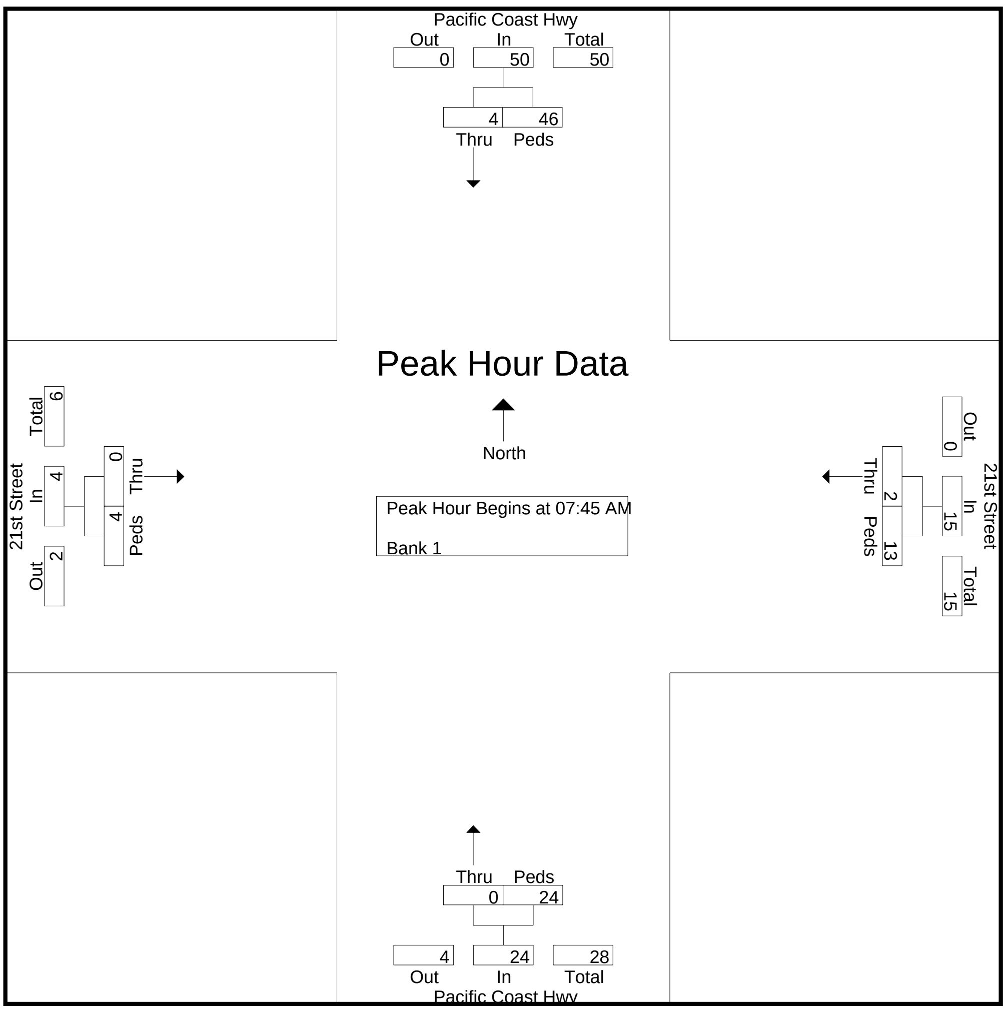
File Name : PacificCoastHwy_21st_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 1

Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		21st Street Westbound		Pacific Coast Hwy Northbound		21st Street Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	1	0	1	0	0	0	1	3
07:15 AM	0	3	0	2	0	0	0	0	5
07:30 AM	1	1	0	2	0	0	0	1	5
07:45 AM	0	9	1	4	0	7	0	0	21
Total	1	14	1	9	0	7	0	2	34
08:00 AM	1	24	0	4	0	11	0	2	42
08:15 AM	1	7	1	4	0	2	0	1	16
08:30 AM	2	6	0	1	0	4	0	1	14
08:45 AM	1	5	1	1	0	6	0	1	15
Total	5	42	2	10	0	23	0	5	87
04:00 PM	0	2	0	2	0	1	0	1	6
04:15 PM	0	1	0	1	0	3	1	1	7
04:30 PM	0	2	2	1	0	2	0	6	13
04:45 PM	0	4	0	5	0	2	0	2	13
Total	0	9	2	9	0	8	1	10	39
05:00 PM	0	4	0	0	1	1	1	4	11
05:15 PM	0	3	0	1	0	4	1	3	12
05:30 PM	0	0	0	1	1	0	1	0	3
05:45 PM	0	1	0	2	0	7	0	1	11
Total	0	8	0	4	2	12	3	8	37
06:00 PM	0	1	0	3	0	5	0	0	9
06:15 PM	0	3	0	4	0	1	0	0	8
06:30 PM	0	0	0	2	0	0	0	3	5
06:45 PM	0	2	0	2	0	1	0	0	5
Total	0	6	0	11	0	7	0	3	27
Grand Total	6	79	5	43	2	57	4	28	224
Apprch %	7.1	92.9	10.4	89.6	3.4	96.6	12.5	87.5	
Total %	2.7	35.3	2.2	19.2	0.9	25.4	1.8	12.5	

File Name : PacificCoastHwy_21st_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 2

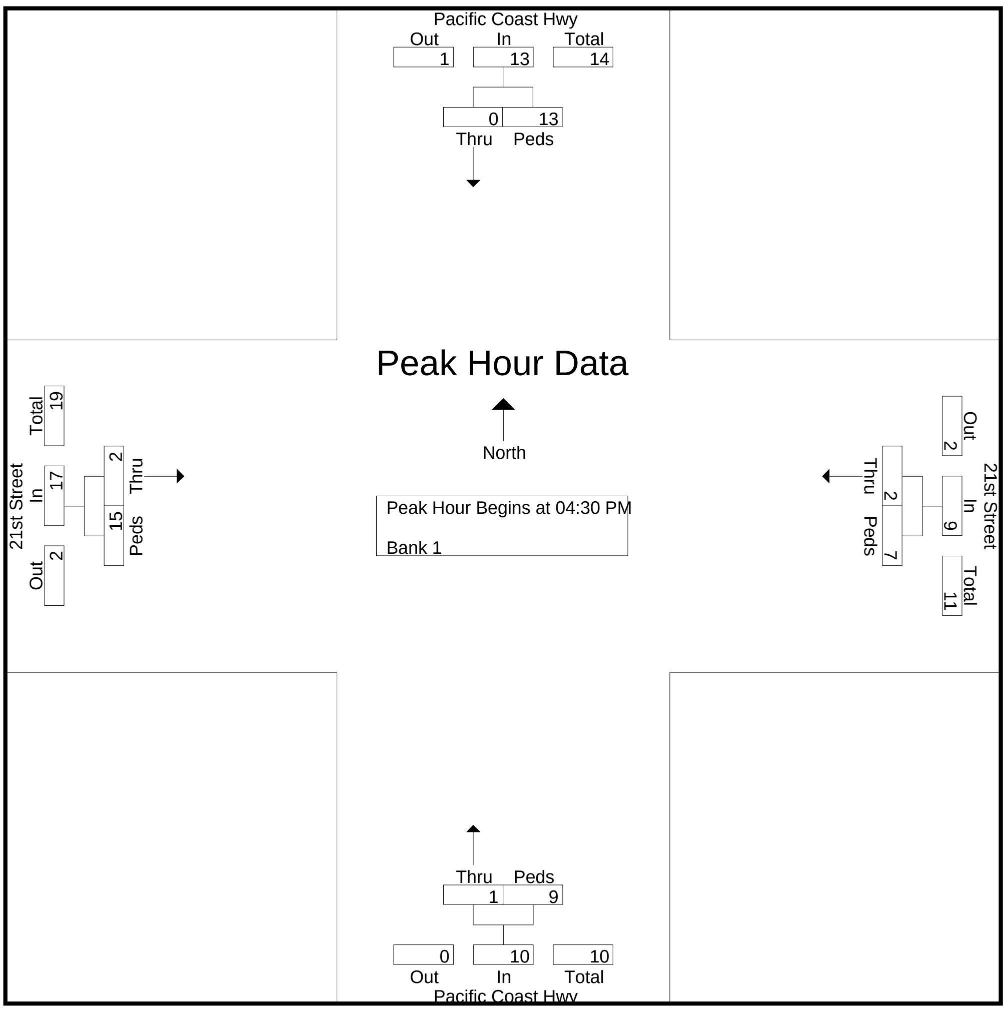
	Pacific Coast Hwy Southbound			21st Street Westbound			Pacific Coast Hwy Northbound			21st Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	9	9	**1**	**4**	**5**	0	7	7	0	0	0	21
08:00 AM	1	**24**	**25**	0	4	4	0	**11**	**11**	0	**2**	**2**	**42**
08:15 AM	1	7	8	1	4	5	0	2	2	0	1	1	16
08:30 AM	**2**	6	8	0	1	1	0	4	4	0	1	1	14
Total Volume	4	46	50	2	13	15	0	24	24	0	4	4	93
% App. Total	8	92		13.3	86.7		0	100		0	100		
PHF	.500	.479	.500	.500	.813	.750	.000	.545	.545	.000	.500	.500	.554



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_21st_BP
Site Code : 00000000
Start Date : 3/8/2016
Page No : 3

	Pacific Coast Hwy Southbound			21st Street Westbound			Pacific Coast Hwy Northbound			21st Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	2	2	**2**	1	3	0	2	2	0	**6**	**6**	**13**
04:45 PM	0	**4**	**4**	0	**5**	**5**	0	2	2	0	2	2	13
05:00 PM	0	4	4	0	0	0	**1**	1	2	**1**	4	5	11
05:15 PM	0	3	3	0	1	1	0	**4**	**4**	1	3	4	12
Total Volume	0	13	13	2	7	9	1	9	10	2	15	17	49
% App. Total	0	100		22.2	77.8		10	90		11.8	88.2		
PHF	.000	.813	.813	.250	.350	.450	.250	.563	.625	.500	.625	.708	.942



CITY TRAFFIC COUNTERS
www.ctcounters.com

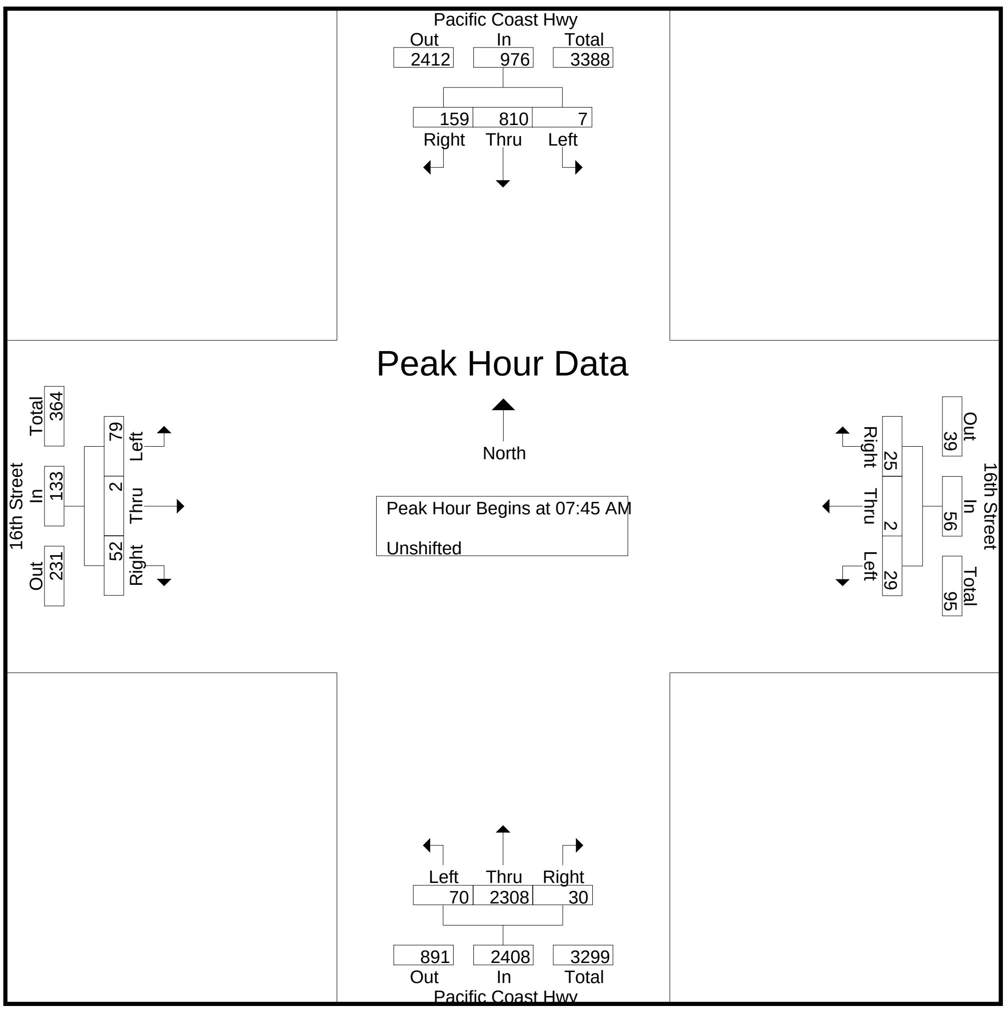
File Name : PacificCoastHwy_16th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

Groups Printed- Unshifted

	Pacific Coast Hwy Southbound			16th Street Westbound			Pacific Coast Hwy Northbound			16th Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	123	19	1	1	4	9	569	2	23	0	19	770
07:15 AM	0	172	26	2	0	2	6	636	1	15	1	16	877
07:30 AM	1	143	15	1	0	0	7	629	0	28	0	9	833
07:45 AM	4	180	32	1	1	4	14	611	4	17	0	7	875
Total	5	618	92	5	2	10	36	2445	7	83	1	51	3355
08:00 AM	1	199	36	6	0	6	19	577	14	24	0	9	891
08:15 AM	2	234	47	13	1	13	20	546	8	23	1	14	922
08:30 AM	0	197	44	9	0	2	17	574	4	15	1	22	885
08:45 AM	2	205	34	6	0	3	29	526	2	27	0	16	850
Total	5	835	161	34	1	24	85	2223	28	89	2	61	3548
04:00 PM	0	425	52	9	1	0	17	297	1	27	0	25	854
04:15 PM	3	465	41	6	1	1	23	251	10	16	1	21	839
04:30 PM	0	435	49	12	0	2	31	211	4	29	1	18	792
04:45 PM	4	428	58	6	2	2	26	245	7	43	1	31	853
Total	7	1753	200	33	4	5	97	1004	22	115	3	95	3338
05:00 PM	1	428	82	8	0	2	23	239	6	33	0	35	857
05:15 PM	1	473	62	9	0	1	21	280	10	47	0	25	929
05:30 PM	1	523	71	6	0	0	21	267	2	36	2	20	949
05:45 PM	1	454	56	4	0	1	24	234	3	51	2	32	862
Total	4	1878	271	27	0	4	89	1020	21	167	4	112	3597
06:00 PM	2	425	47	4	0	3	20	264	8	37	1	25	836
06:15 PM	1	482	52	9	0	2	16	257	4	47	0	23	893
06:30 PM	2	461	66	2	0	1	25	225	5	39	0	28	854
06:45 PM	2	463	62	5	0	2	14	218	1	41	0	27	835
Total	7	1831	227	20	0	8	75	964	18	164	1	103	3418
Grand Total	28	6915	951	119	7	51	382	7656	96	618	11	422	17256
Apprch %	0.4	87.6	12	67.2	4	28.8	4.7	94.1	1.2	58.8	1	40.2	
Total %	0.2	40.1	5.5	0.7	0	0.3	2.2	44.4	0.6	3.6	0.1	2.4	

File Name : PacificCoastHwy_16th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

	Pacific Coast Hwy Southbound				16th Street Westbound				Pacific Coast Hwy Northbound				16th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**4**	180	32	216	1	**1**	4	6	14	**611**	4	**629**	17	0	7	24	875
08:00 AM	1	199	36	236	6	0	6	12	19	577	**14**	610	**24**	0	9	33	891
08:15 AM	2	**234**	**47**	**283**	**13**	1	**13**	**27**	**20**	546	8	574	23	**1**	14	**38**	**922**
08:30 AM	0	197	44	241	9	0	2	11	17	574	4	595	15	1	**22**	38	885
Total Volume	7	810	159	976	29	2	25	56	70	2308	30	2408	79	2	52	133	3573
% App. Total	0.7	83	16.3		51.8	3.6	44.6		2.9	95.8	1.2		59.4	1.5	39.1		
PHF	.438	.865	.846	.862	.558	.500	.481	.519	.875	.944	.536	.957	.823	.500	.591	.875	.969

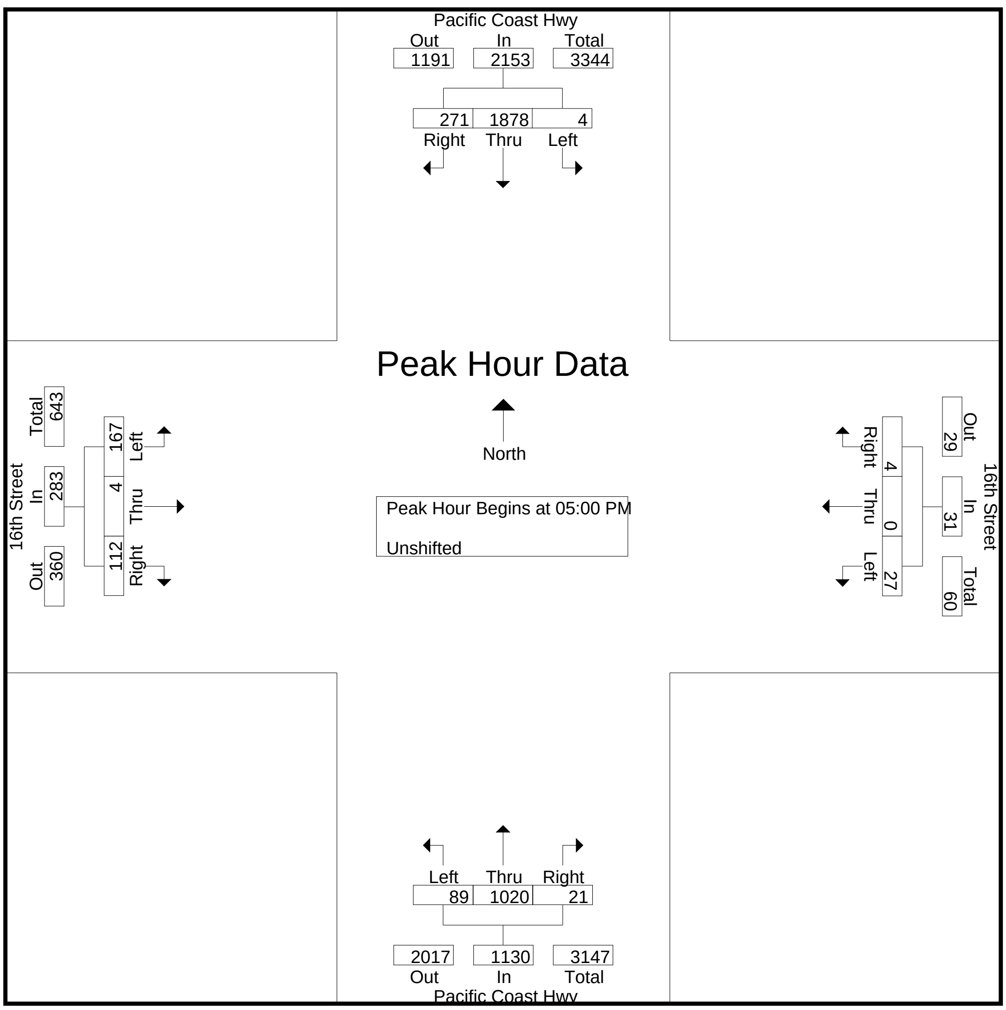


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : PacificCoastHwy_16th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 3

	Pacific Coast Hwy Southbound				16th Street Westbound				Pacific Coast Hwy Northbound				16th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	428	**82**	511	8	0	**2**	**10**	23	239	6	268	33	0	**35**	68	857
05:15 PM	1	473	62	536	**9**	0	1	10	21	**280**	**10**	**311**	47	0	25	72	929
05:30 PM	1	**523**	71	**595**	6	0	0	6	21	267	2	290	36	**2**	20	58	**949**
05:45 PM	1	454	56	511	4	0	1	5	**24**	234	3	261	**51**	2	32	**85**	862
Total Volume	4	1878	271	2153	27	0	4	31	89	1020	21	1130	167	4	112	283	3597
% App. Total	0.2	87.2	12.6		87.1	0	12.9		7.9	90.3	1.9		59	1.4	39.6		
PHF	1.00	.898	.826	.905	.750	.000	.500	.775	.927	.911	.525	.908	.819	.500	.800	.832	.948



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_16th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

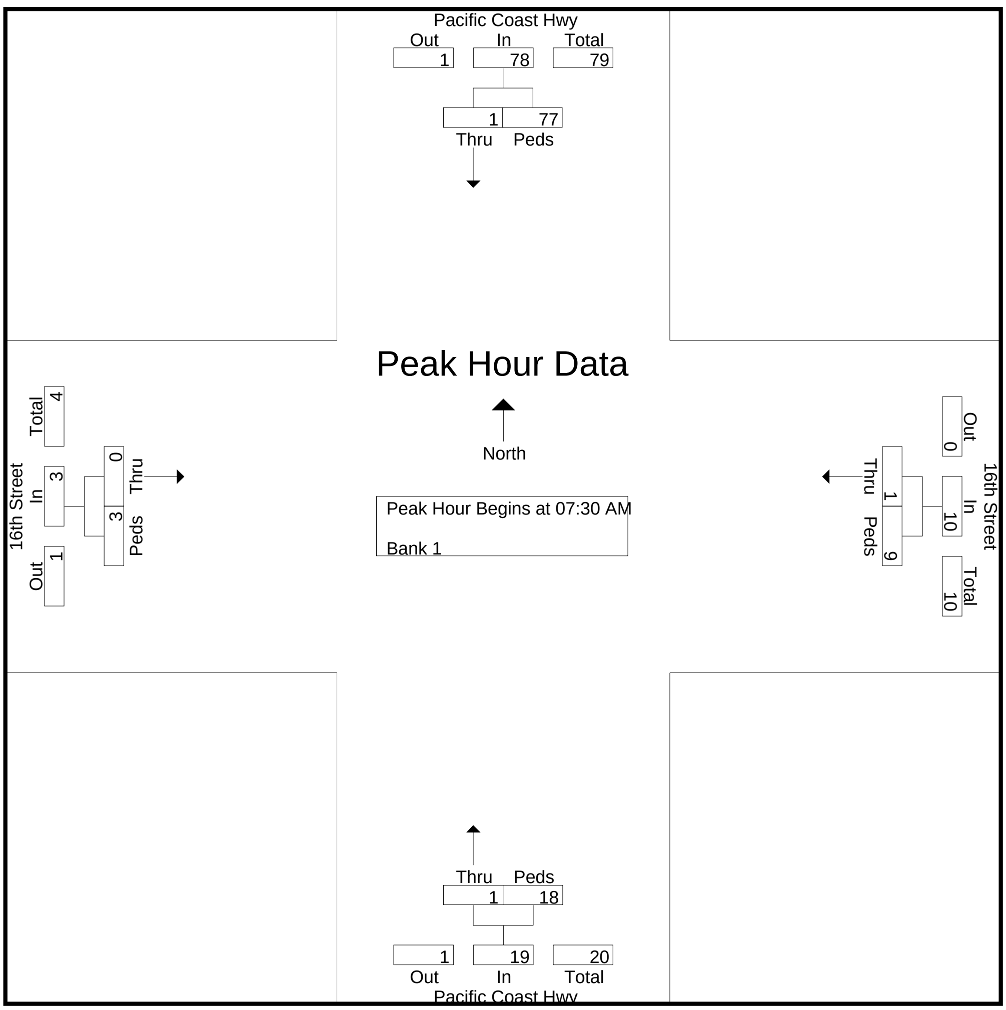
Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		16th Street Westbound		Pacific Coast Hwy Northbound		16th Street Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	0	0	1	0	2	0	0	3
07:15 AM	0	6	0	1	0	1	0	0	8
07:30 AM	0	4	0	4	1	3	0	0	12
07:45 AM	0	19	0	0	0	6	0	1	26
Total	0	29	0	6	1	12	0	1	49
08:00 AM	0	46	1	3	0	5	0	1	56
08:15 AM	1	8	0	2	0	4	0	1	16
08:30 AM	0	3	0	2	0	4	0	0	9
08:45 AM	0	2	2	2	0	3	0	2	11
Total	1	59	3	9	0	16	0	4	92
04:00 PM	0	12	0	4	0	4	0	0	20
04:15 PM	1	6	0	2	0	3	1	0	13
04:30 PM	0	11	0	5	0	2	0	0	18
04:45 PM	0	5	0	8	0	4	0	1	18
Total	1	34	0	19	0	13	1	1	69
05:00 PM	2	6	0	8	0	7	0	0	23
05:15 PM	0	5	0	6	0	8	0	2	21
05:30 PM	0	6	0	2	0	1	0	1	10
05:45 PM	0	2	0	8	0	5	0	1	16
Total	2	19	0	24	0	21	0	4	70
06:00 PM	0	6	0	0	0	7	0	3	16
06:15 PM	0	7	0	4	0	6	2	2	21
06:30 PM	0	3	1	2	0	1	0	0	7
06:45 PM	0	2	0	5	0	1	1	0	9
Total	0	18	1	11	0	15	3	5	53
Grand Total	4	159	4	69	1	77	4	15	333
Apprch %	2.5	97.5	5.5	94.5	1.3	98.7	21.1	78.9	
Total %	1.2	47.7	1.2	20.7	0.3	23.1	1.2	4.5	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_16th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

	Pacific Coast Hwy Southbound			16th Street Westbound			Pacific Coast Hwy Northbound			16th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	4	4	0	**4**	**4**	**1**	3	4	0	0	0	12
07:45 AM	0	19	19	0	0	0	0	**6**	**6**	0	**1**	**1**	26
08:00 AM	0	**46**	**46**	**1**	3	4	0	5	5	0	1	1	**56**
08:15 AM	**1**	8	9	0	2	2	0	4	4	0	1	1	16
Total Volume	1	77	78	1	9	10	1	18	19	0	3	3	110
% App. Total	1.3	98.7		10	90		5.3	94.7		0	100		
PHF	.250	.418	.424	.250	.563	.625	.250	.750	.792	.000	.750	.750	.491

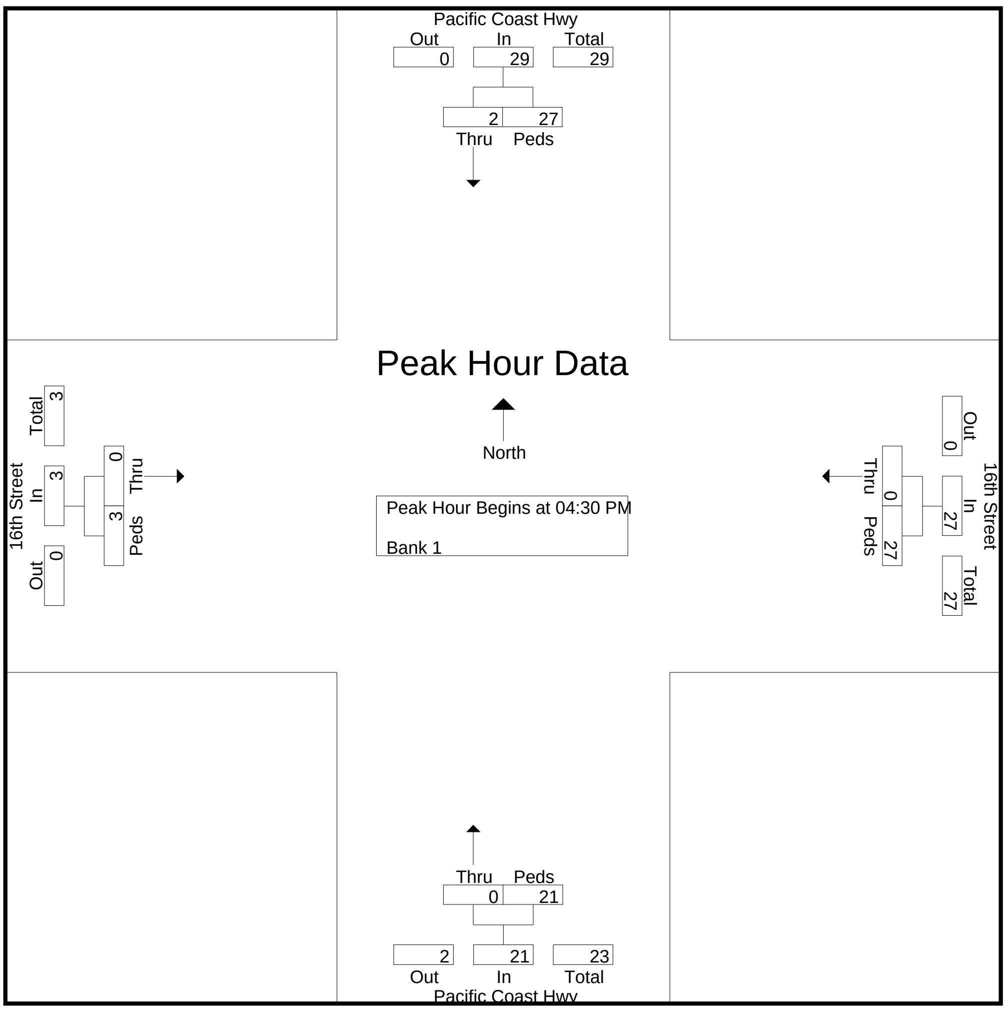


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : PacificCoastHwy_16th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 3

	Pacific Coast Hwy Southbound			16th Street Westbound			Pacific Coast Hwy Northbound			16th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	**11**	**11**	0	5	5	0	2	2	0	0	0	18
04:45 PM	0	5	5	0	**8**	**8**	0	4	4	0	1	1	18
05:00 PM	**2**	6	8	0	8	8	0	7	7	0	0	0	**23**
05:15 PM	0	5	5	0	6	6	0	**8**	**8**	0	**2**	**2**	21
Total Volume	2	27	29	0	27	27	0	21	21	0	3	3	80
% App. Total	6.9	93.1		0	100		0	100		0	100		
PHF	.250	.614	.659	.000	.844	.844	.000	.656	.656	.000	.375	.375	.870



CITY TRAFFIC COUNTERS

www.ctcounters.com

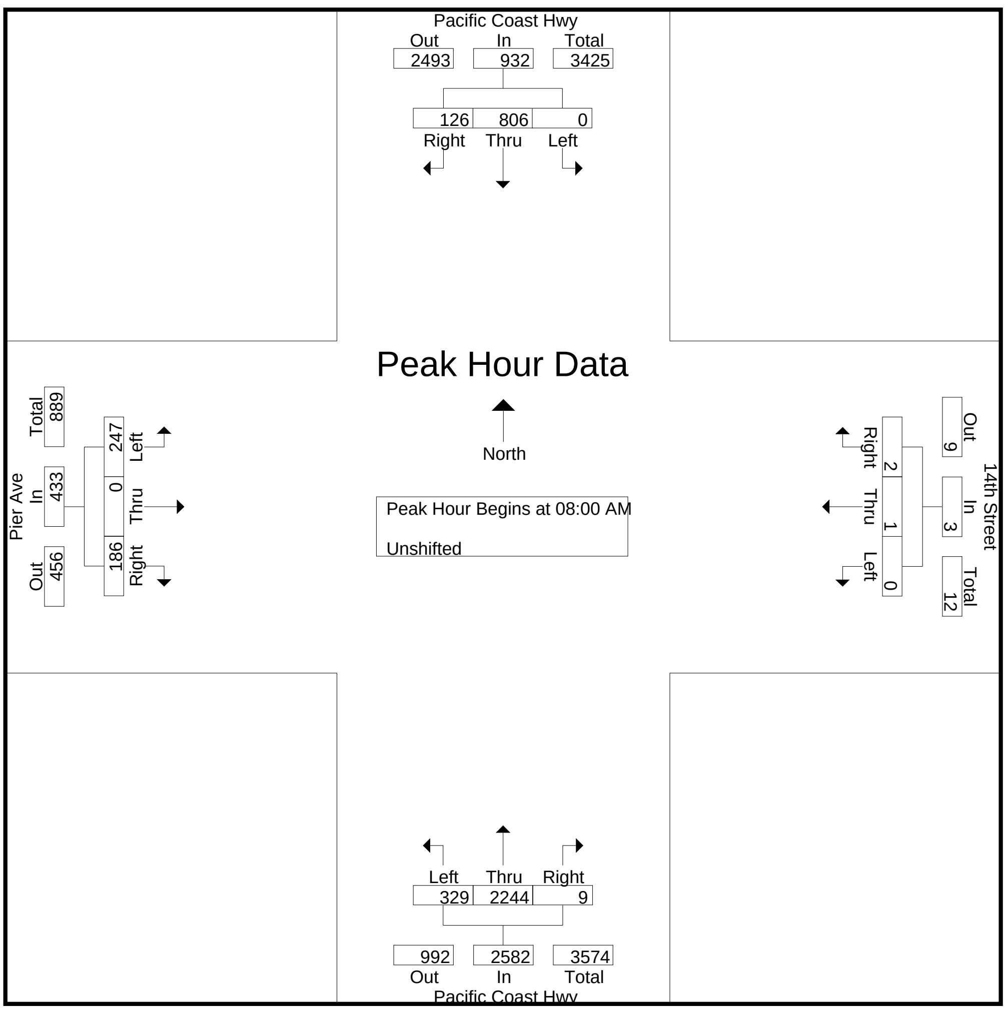
File Name : PacificCoastHwy_Pier-14th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

Groups Printed- Unshifted

	Pacific Coast Hwy Southbound			14th Street Westbound			Pacific Coast Hwy Northbound			Pier Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	148	10	0	0	0	35	592	0	40	0	26	851
07:15 AM	1	162	26	0	0	0	45	623	0	45	0	33	935
07:30 AM	0	147	14	0	0	0	51	614	0	63	0	31	920
07:45 AM	0	172	16	0	0	3	47	589	2	87	0	37	953
Total	1	629	66	0	0	3	178	2418	2	235	0	127	3659
08:00 AM	0	185	27	0	0	0	91	585	3	71	0	55	1017
08:15 AM	0	212	32	0	1	1	63	556	2	65	0	54	986
08:30 AM	0	205	39	0	0	1	87	563	4	54	0	40	993
08:45 AM	0	204	28	0	0	0	88	540	0	57	0	37	954
Total	0	806	126	0	1	2	329	2244	9	247	0	186	3950
04:00 PM	2	438	31	0	0	1	73	253	2	57	0	81	938
04:15 PM	1	461	18	0	0	5	75	247	1	60	0	80	948
04:30 PM	1	427	36	0	0	1	88	242	6	35	0	74	910
04:45 PM	1	434	38	0	0	2	77	236	4	71	0	68	931
Total	5	1760	123	0	0	9	313	978	13	223	0	303	3727
05:00 PM	0	457	29	0	0	2	69	219	1	71	0	77	925
05:15 PM	3	455	30	0	0	3	71	233	1	46	0	65	907
05:30 PM	0	508	38	0	0	2	86	243	2	36	0	74	989
05:45 PM	2	463	27	0	0	3	85	247	3	41	0	64	935
Total	5	1883	124	0	0	10	311	942	7	194	0	280	3756
06:00 PM	2	416	36	0	0	12	80	244	5	56	0	90	941
06:15 PM	0	454	42	0	0	3	80	232	3	56	0	58	928
06:30 PM	1	449	29	0	0	4	67	221	1	52	0	62	886
06:45 PM	0	466	40	0	0	4	74	214	2	45	0	57	902
Total	3	1785	147	0	0	23	301	911	11	209	0	267	3657
Grand Total	14	6863	586	0	1	47	1432	7493	42	1108	0	1163	18749
Apprch %	0.2	92	7.9	0	2.1	97.9	16	83.6	0.5	48.8	0	51.2	
Total %	0.1	36.6	3.1	0	0	0.3	7.6	40	0.2	5.9	0	6.2	

File Name : PacificCoastHwy_Pier-14th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

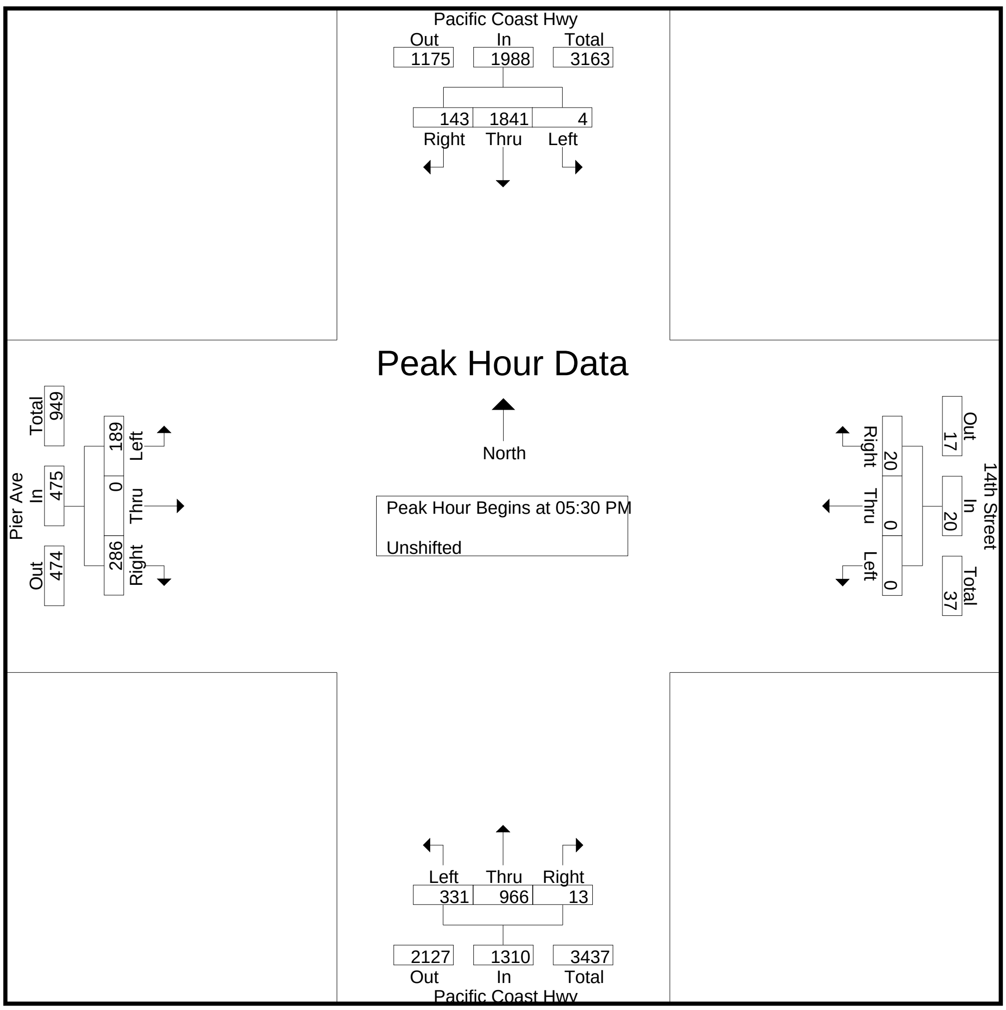
	Pacific Coast Hwy Southbound				14th Street Westbound				Pacific Coast Hwy Northbound				Pier Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	185	27	212	0	0	0	0	**91**	**585**	3	**679**	**71**	0	**55**	**126**	**1017**
08:15 AM	0	**212**	32	**244**	0	**1**	**1**	**2**	63	556	2	621	65	0	54	119	986
08:30 AM	0	205	**39**	244	0	0	1	1	87	563	**4**	654	54	0	40	94	993
08:45 AM	0	204	28	232	0	0	0	0	88	540	0	628	57	0	37	94	954
Total Volume	0	806	126	932	0	1	2	3	329	2244	9	2582	247	0	186	433	3950
% App. Total	0	86.5	13.5		0	33.3	66.7		12.7	86.9	0.3		57	0	43		
PHF	.000	.950	.808	.955	.000	.250	.500	.375	.904	.959	.563	.951	.870	.000	.845	.859	.971



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Pier-14th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 3

	Pacific Coast Hwy Southbound				**14th Street Westbound**				**Pacific Coast Hwy Northbound**				**Pier Ave Eastbound**				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:30 PM																	
05:30 PM	0	**508**	38	**546**	0	0	2	2	**86**	243	2	331	36	0	74	110	**989**
05:45 PM	**2**	463	27	492	0	0	3	3	85	**247**	3	**335**	41	0	64	105	935
06:00 PM	2	416	36	454	0	0	**12**	**12**	80	244	**5**	329	**56**	0	**90**	**146**	941
06:15 PM	0	454	**42**	496	0	0	3	3	80	232	3	315	56	0	58	114	928
Total Volume	4	1841	143	1988	0	0	20	20	331	966	13	1310	189	0	286	475	3793
% App. Total	0.2	92.6	7.2		0	0	100		25.3	73.7	1		39.8	0	60.2		
PHF	.500	.906	.851	.910	.000	.000	.417	.417	.962	.978	.650	.978	.844	.000	.794	.813	.959



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Pier-14th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

Groups Printed- Bank 1

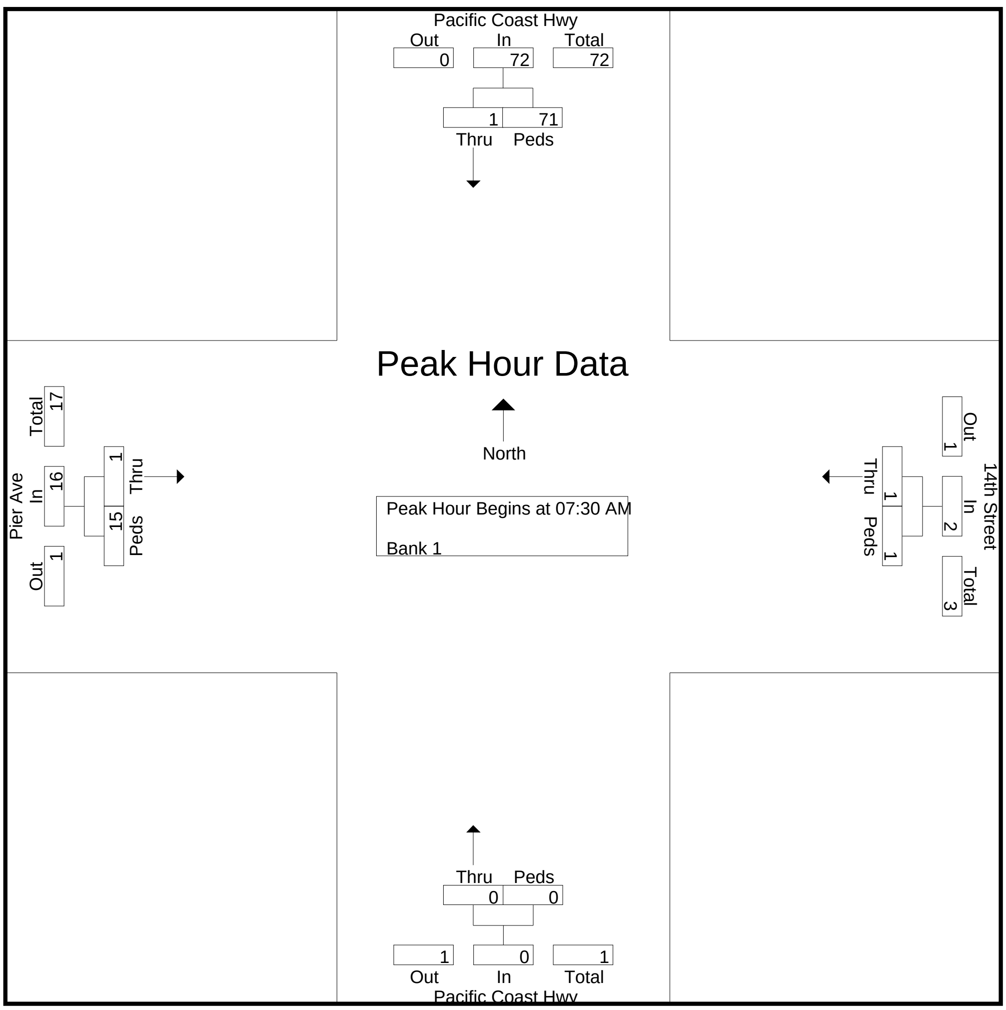
	Pacific Coast Hwy Southbound		14th Street Westbound		Pacific Coast Hwy Northbound		Pier Ave Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	7	0	0	0	0	0	6	13
07:15 AM	0	4	0	0	0	0	0	3	7
07:30 AM	1	14	0	0	0	0	0	3	18
07:45 AM	0	22	0	0	0	0	0	5	27
Total	1	47	0	0	0	0	0	17	65
08:00 AM	0	27	1	0	0	0	0	3	31
08:15 AM	0	8	0	1	0	0	1	4	14
08:30 AM	0	6	0	0	0	0	0	2	8
08:45 AM	1	10	2	0	0	0	1	3	17
Total	1	51	3	1	0	0	2	12	70
04:00 PM	0	12	0	8	0	0	0	6	26
04:15 PM	0	15	0	8	0	0	0	5	28
04:30 PM	0	4	0	5	0	1	0	1	11
04:45 PM	0	12	0	3	0	0	0	2	17
Total	0	43	0	24	0	1	0	14	82
05:00 PM	0	15	0	8	0	0	0	2	25
05:15 PM	0	14	0	4	0	0	1	5	24
05:30 PM	0	3	0	4	0	0	0	3	10
05:45 PM	0	8	0	4	0	0	0	4	16
Total	0	40	0	20	0	0	1	14	75
06:00 PM	0	32	0	7	0	0	0	9	48
06:15 PM	0	11	0	1	0	0	2	1	15
06:30 PM	0	15	1	7	0	0	2	5	30
06:45 PM	0	12	0	13	0	0	0	7	32
Total	0	70	1	28	0	0	4	22	125
Grand Total	2	251	4	73	0	1	7	79	417
Apprch %	0.8	99.2	5.2	94.8	0	100	8.1	91.9	
Total %	0.5	60.2	1	17.5	0	0.2	1.7	18.9	

CITY TRAFFIC COUNTERS

www.ctcounters.com

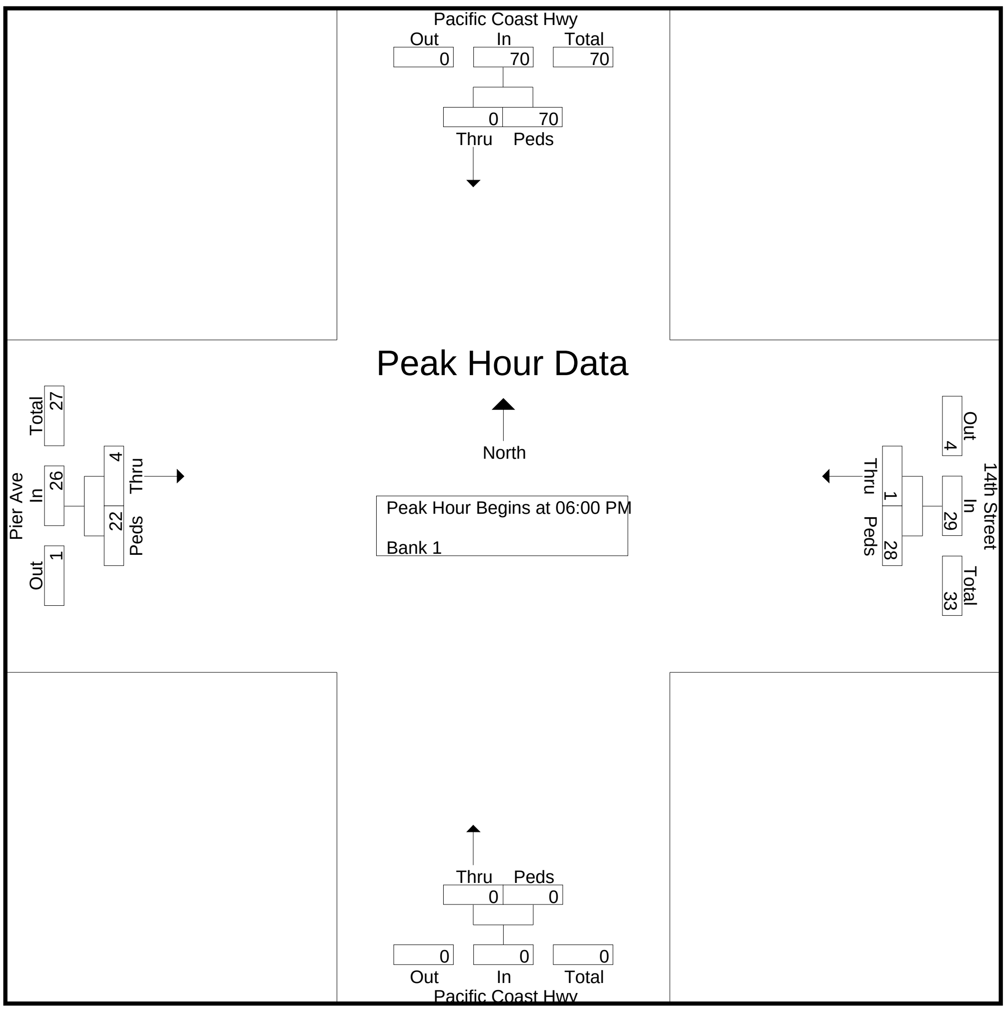
File Name : PacificCoastHwy_Pier-14th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

	Pacific Coast Hwy Southbound			**14th Street Westbound**			**Pacific Coast Hwy Northbound**			**Pier Ave Eastbound**			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	**1**	14	15	0	0	0	0	0	0	0	3	3	18
07:45 AM	0	22	22	0	0	0	0	0	0	0	**5**	**5**	27
08:00 AM	0	**27**	**27**	**1**	0	**1**	0	0	0	0	3	3	**31**
08:15 AM	0	8	8	0	**1**	1	0	0	0	**1**	4	5	14
Total Volume	1	71	72	1	1	2	0	0	0	1	15	16	90
% App. Total	1.4	98.6		50	50		0	0		6.2	93.8		
PHF	.250	.657	.667	.250	.250	.500	.000	.000	.000	.250	.750	.800	.726



File Name : PacificCoastHwy_Pier-14th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 3

	Pacific Coast Hwy Southbound			14th Street Westbound			Pacific Coast Hwy Northbound			Pier Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 06:00 PM													
06:00 PM	0	**32**	**32**	0	7	7	0	0	0	0	**9**	**9**	**48**
06:15 PM	0	11	11	0	1	1	0	0	0	**2**	1	3	15
06:30 PM	0	15	15	**1**	7	8	0	0	0	2	5	7	30
06:45 PM	0	12	12	0	**13**	**13**	0	0	0	0	7	7	32
Total Volume	0	70	70	1	28	29	0	0	0	4	22	26	125
% App. Total	0	100		3.4	96.6		0	0		15.4	84.6		
PHF	.000	.547	.547	.250	.538	.558	.000	.000	.000	.500	.611	.722	.651



CITY TRAFFIC COUNTERS
www.ctcounters.com

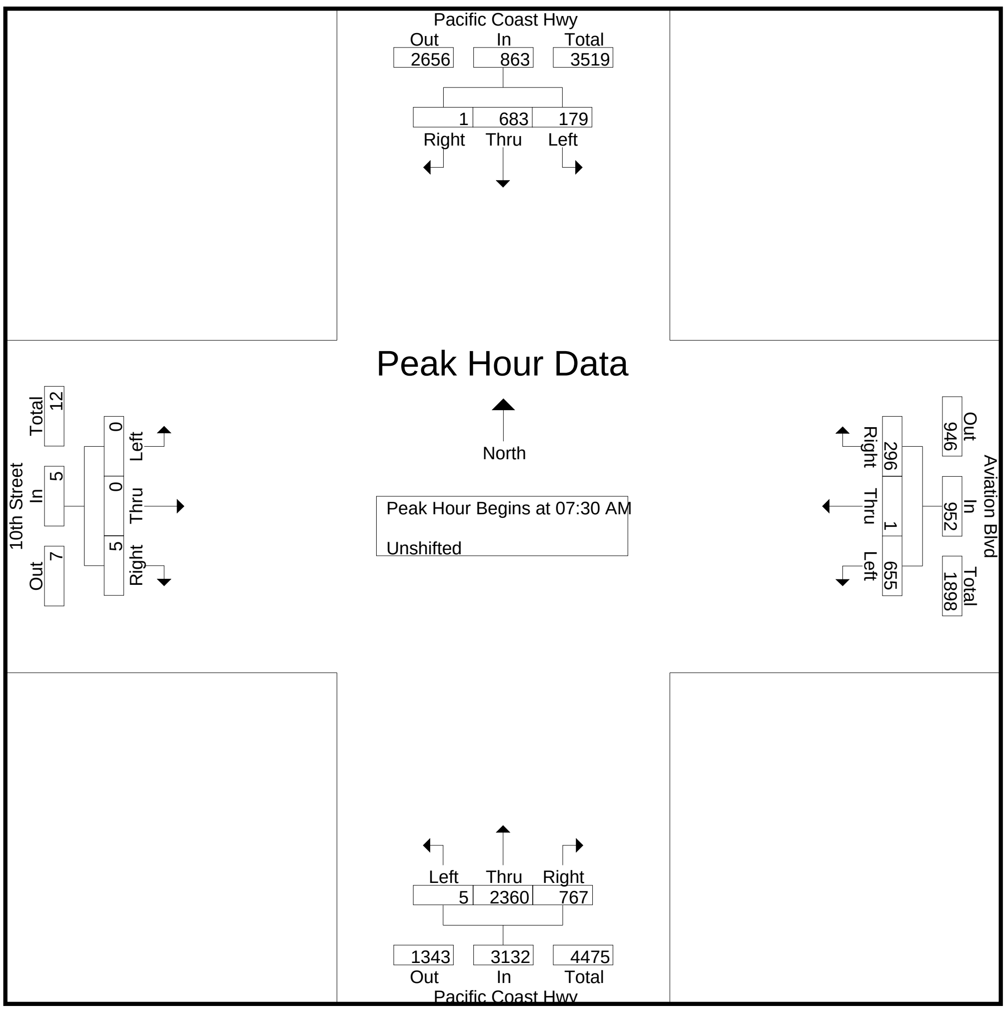
File Name : PacificCoastHwy_Aviation-10th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

Groups Printed- Unshifted

	Pacific Coast Hwy Southbound			Aviation Blvd Westbound			Pacific Coast Hwy Northbound			10th Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	31	123	0	109	0	30	1	630	170	0	0	0	1094
07:15 AM	23	172	0	116	1	46	1	655	177	0	0	0	1191
07:30 AM	31	142	0	180	1	68	1	636	200	0	0	2	1261
07:45 AM	38	169	0	204	0	72	1	588	194	0	0	0	1266
Total	123	606	0	609	2	216	4	2509	741	0	0	2	4812
08:00 AM	57	184	0	141	0	74	2	589	183	0	0	2	1232
08:15 AM	53	188	1	130	0	82	1	547	190	0	0	1	1193
08:30 AM	35	190	0	139	0	79	6	603	170	0	0	1	1223
08:45 AM	39	171	0	153	0	89	5	555	159	0	0	1	1172
Total	184	733	1	563	0	324	14	2294	702	0	0	5	4820
04:00 PM	82	407	0	179	4	61	3	292	148	0	0	1	1177
04:15 PM	79	428	0	164	3	76	1	262	132	0	0	1	1146
04:30 PM	70	451	0	157	1	64	3	241	142	0	0	0	1129
04:45 PM	69	453	0	151	0	76	4	230	130	0	0	0	1113
Total	300	1739	0	651	8	277	11	1025	552	0	0	2	4565
05:00 PM	78	457	0	155	0	53	2	236	153	0	0	0	1134
05:15 PM	78	420	0	127	4	70	2	275	158	0	0	0	1134
05:30 PM	86	475	0	157	8	56	1	254	125	0	0	0	1162
05:45 PM	49	482	0	183	6	65	5	234	128	0	0	1	1153
Total	291	1834	0	622	18	244	10	999	564	0	0	1	4583
06:00 PM	85	428	0	143	1	58	3	244	123	0	0	1	1086
06:15 PM	76	412	0	160	2	59	2	276	136	0	0	2	1125
06:30 PM	53	424	0	164	4	56	6	223	113	0	0	0	1043
06:45 PM	73	432	0	168	2	58	2	229	118	0	0	0	1082
Total	287	1696	0	635	9	231	13	972	490	0	0	3	4336
Grand Total	1185	6608	1	3080	37	1292	52	7799	3049	0	0	13	23116
Apprch %	15.2	84.8	0	69.9	0.8	29.3	0.5	71.6	28	0	0	100	
Total %	5.1	28.6	0	13.3	0.2	5.6	0.2	33.7	13.2	0	0	0.1	

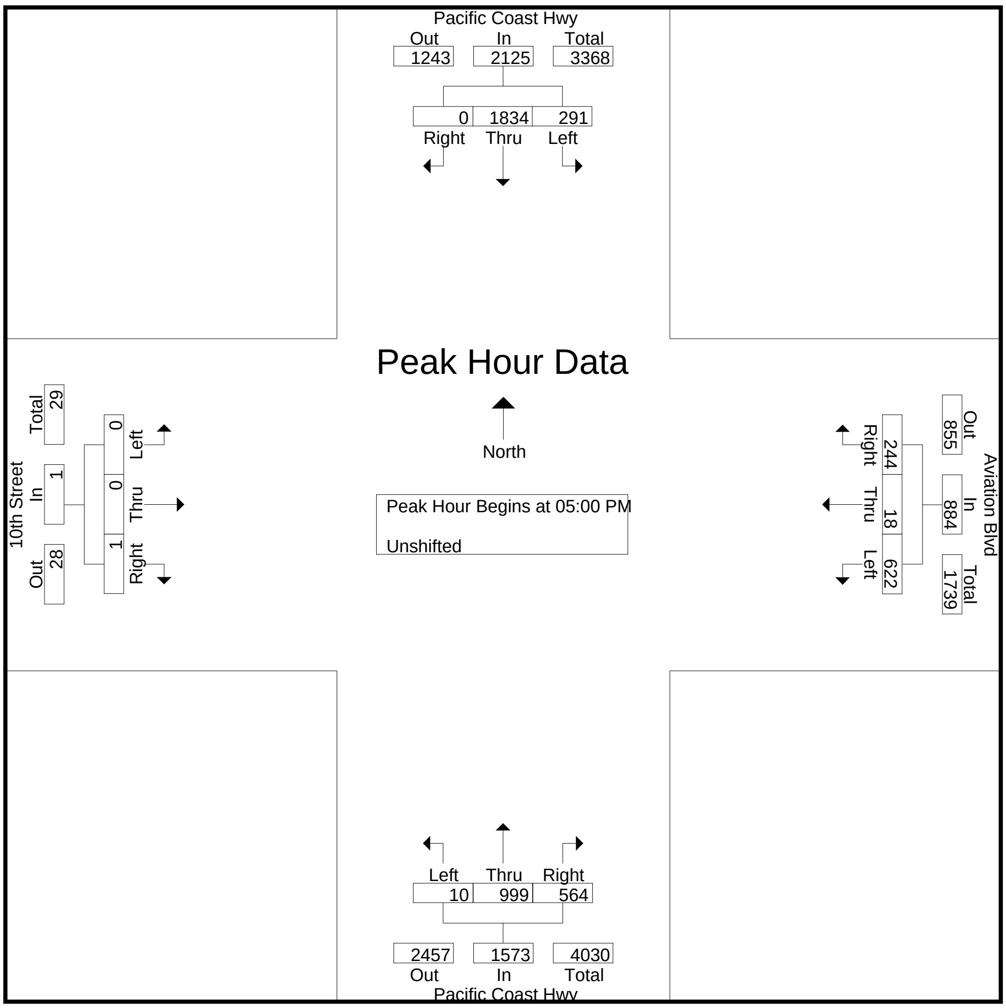
File Name : PacificCoastHwy_Aviation-10th
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

	Pacific Coast Hwy Southbound				Aviation Blvd Westbound				Pacific Coast Hwy Northbound				10th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	31	142	0	173	180	**1**	68	249	1	**636**	**200**	**837**	0	0	**2**	**2**	1261
07:45 AM	38	169	0	207	**204**	0	72	**276**	1	588	194	783	0	0	0	0	**1266**
08:00 AM	**57**	184	0	241	141	0	74	215	**2**	589	183	774	0	0	2	2	1232
08:15 AM	53	**188**	**1**	**242**	130	0	**82**	212	1	547	190	738	0	0	1	1	1193
Total Volume	179	683	1	863	655	1	296	952	5	2360	767	3132	0	0	5	5	4952
% App. Total	20.7	79.1	0.1		68.8	0.1	31.1		0.2	75.4	24.5		0	0	100		
PHF	.785	.908	.250	.892	.803	.250	.902	.862	.625	.928	.959	.935	.000	.000	.625	.625	.978



File Name : PacificCoastHwy_Aviation-10th
Site Code : 00000000
Start Date : 3/1/2016

	Pacific Coast Hwy Southbound				**Aviation Blvd Westbound**				**Pacific Coast Hwy Northbound**				**10th Street Eastbound**				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	78	457	0	535	155	0	53	208	2	236	153	391	0	0	0	0	1134
05:15 PM	78	420	0	498	127	4	**70**	201	2	**275**	**158**	**435**	0	0	0	0	1134
05:30 PM	**86**	475	0	**561**	157	**8**	56	221	1	254	125	380	0	0	0	0	**1162**
05:45 PM	49	**482**	0	531	**183**	6	65	**254**	**5**	234	128	367	0	0	**1**	**1**	1153
Total Volume	291	1834	0	2125	622	18	244	884	10	999	564	1573	0	0	1	1	4583
% App. Total	13.7	86.3	0		70.4	2	27.6		0.6	63.5	35.9		0	0	100		
PHF	.846	.951	.000	.947	.850	.563	.871	.870	.500	.908	.892	.904	.000	.000	.250	.250	.986



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Aviation-10th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

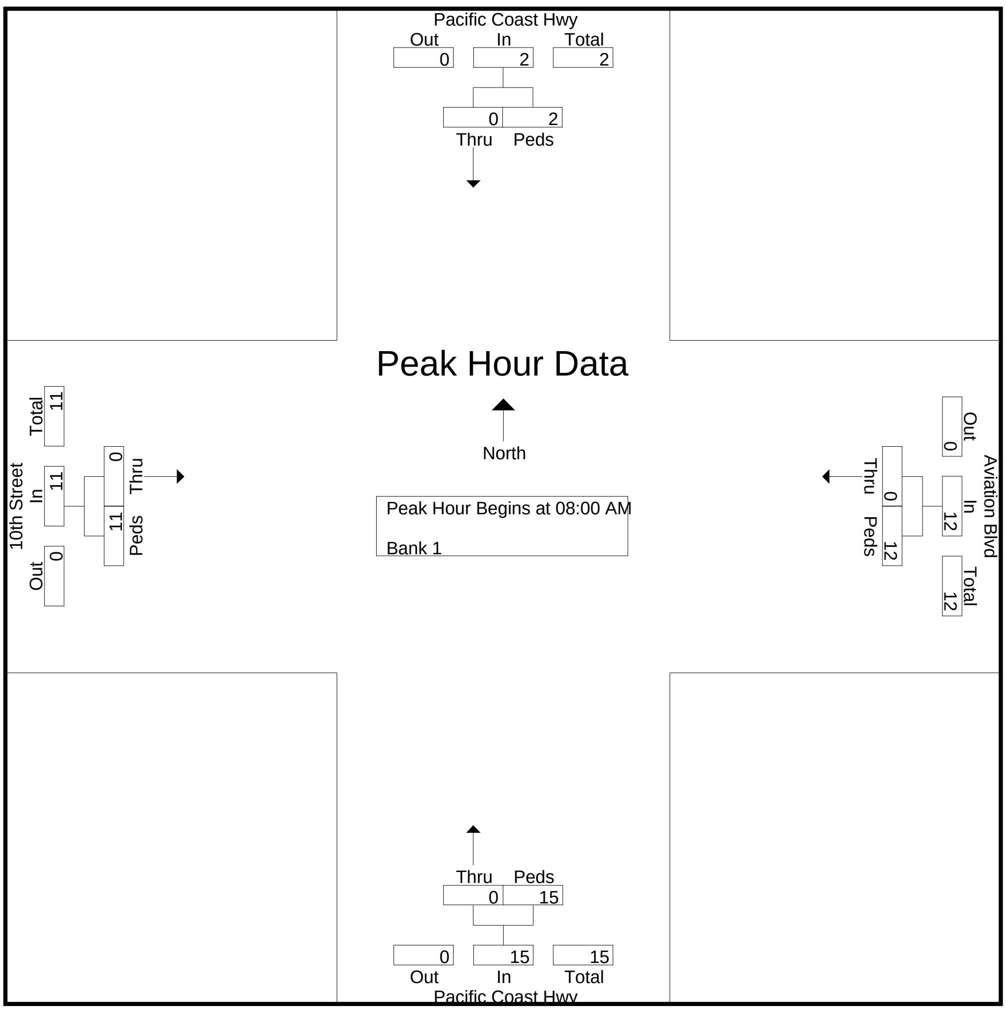
Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		Aviation Blvd Westbound		Pacific Coast Hwy Northbound		10th Street Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	0	0	1	0	1	0	0	2
07:15 AM	0	0	0	0	0	3	0	0	3
07:30 AM	0	0	0	1	0	2	0	2	5
07:45 AM	0	0	0	1	0	2	2	1	6
Total	0	0	0	3	0	8	2	3	16
08:00 AM	0	0	0	2	0	5	0	1	8
08:15 AM	0	1	0	4	0	0	0	4	9
08:30 AM	0	1	0	4	0	5	0	4	14
08:45 AM	0	0	0	2	0	5	0	2	9
Total	0	2	0	12	0	15	0	11	40
04:00 PM	0	0	0	0	0	1	0	0	1
04:15 PM	0	0	0	0	0	0	0	3	3
04:30 PM	0	0	0	0	0	3	0	1	4
04:45 PM	0	0	0	0	0	0	2	2	4
Total	0	0	0	0	0	4	2	6	12
05:00 PM	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	1	0	0	1
05:30 PM	0	0	0	0	0	4	3	4	11
05:45 PM	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	7	3	6	16
06:00 PM	0	0	0	0	0	1	0	3	4
06:15 PM	0	0	0	1	0	3	0	5	9
06:30 PM	0	0	0	2	0	4	0	2	8
06:45 PM	0	0	0	3	0	1	0	0	4
Total	0	0	0	6	0	9	0	10	25
Grand Total	0	2	0	21	0	43	7	36	109
Apprch %	0	100	0	100	0	100	16.3	83.7	
Total %	0	1.8	0	19.3	0	39.4	6.4	33	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Aviation-10th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

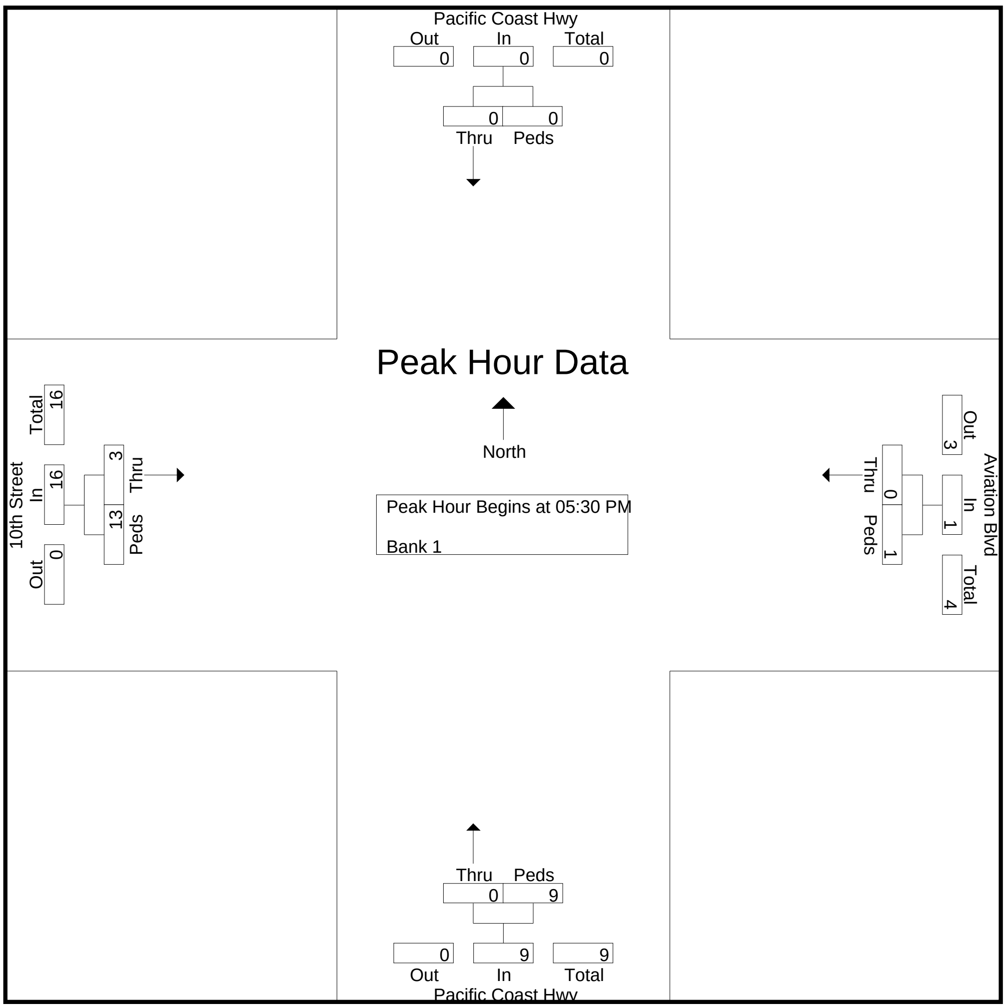
	Pacific Coast Hwy Southbound			Aviation Blvd Westbound			Pacific Coast Hwy Northbound			10th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	2	2	0	**5**	**5**	0	1	1	8
08:15 AM	0	**1**	**1**	0	**4**	**4**	0	0	0	0	**4**	**4**	9
08:30 AM	0	1	1	0	4	4	0	5	5	0	4	4	**14**
08:45 AM	0	0	0	0	2	2	0	5	5	0	2	2	9
Total Volume	0	2	2	0	12	12	0	15	15	0	11	11	40
% App. Total	0	100		0	100		0	100		0	100		
PHF	.000	.500	.500	.000	.750	.750	.000	.750	.750	.000	.688	.688	.714



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : PacificCoastHwy_Aviation-10th_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 3

	Pacific Coast Hwy Southbound			Aviation Blvd Westbound			Pacific Coast Hwy Northbound			10th Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:30 PM													
05:30 PM	0	0	0	0	0	0	0	**4**	**4**	**3**	4	**7**	**11**
05:45 PM	0	0	0	0	0	0	0	1	1	0	1	1	2
06:00 PM	0	0	0	0	0	0	0	1	1	0	3	3	4
06:15 PM	0	0	0	0	**1**	**1**	0	3	3	0	**5**	5	9
Total Volume	0	0	0	0	1	1	0	9	9	3	13	16	26
% App. Total	0	0		0	100		0	100		18.8	81.2		
PHF	.000	.000	.000	.000	.250	.250	.000	.563	.563	.250	.650	.571	.591



CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Prospect_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 1

Groups Printed- Unshifted

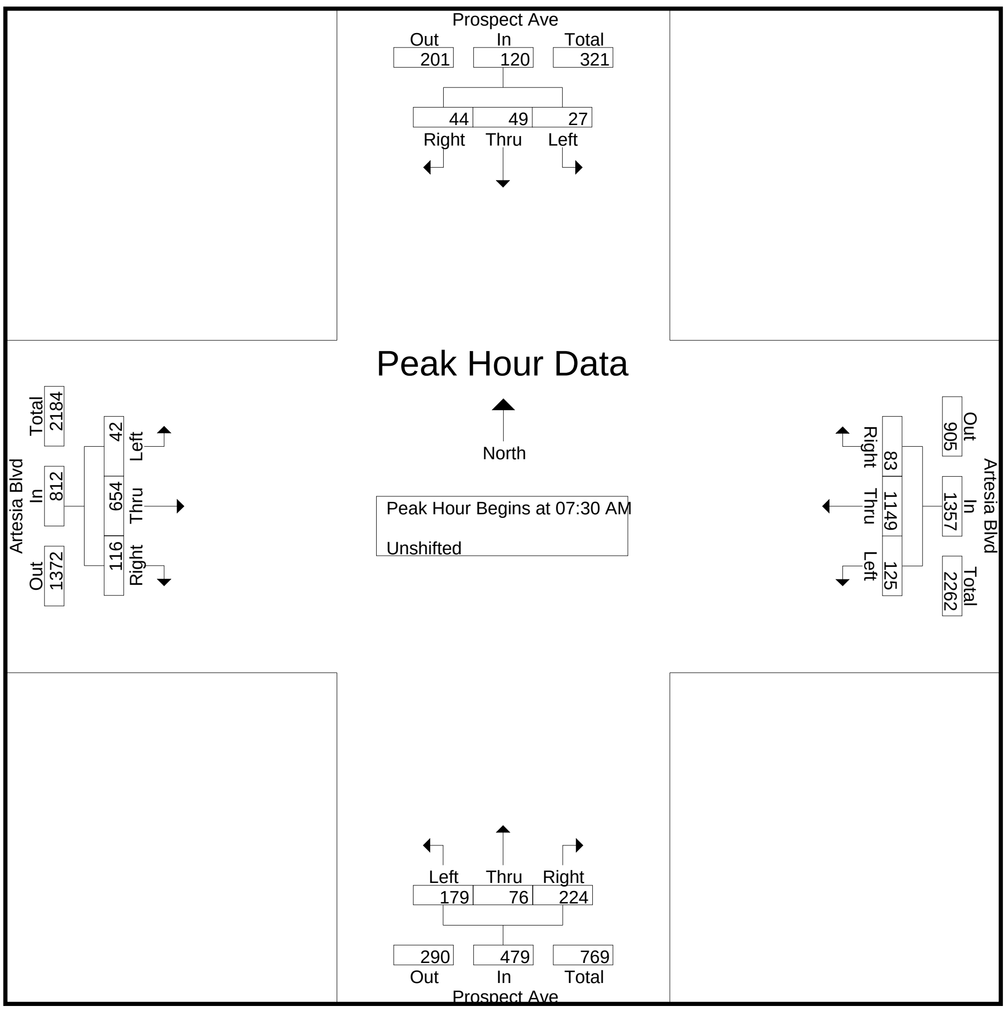
	Prospect Ave Southbound			Artesia Blvd Westbound			Prospect Ave Northbound			Artesia Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	9	3	1	20	205	14	27	6	25	1	105	4	420
07:15 AM	1	3	0	19	226	9	27	10	33	9	127	10	474
07:30 AM	9	10	12	30	250	20	25	20	56	24	199	14	669
07:45 AM	4	24	18	39	355	23	45	18	64	5	185	20	800
Total	23	40	31	108	1036	66	124	54	178	39	616	48	2363
08:00 AM	9	6	3	29	260	21	46	23	47	4	135	44	627
08:15 AM	5	9	11	27	284	19	63	15	57	9	135	38	672
08:30 AM	5	10	4	23	273	20	39	10	60	13	143	17	617
08:45 AM	5	6	3	21	303	26	43	25	31	12	117	13	605
Total	24	31	21	100	1120	86	191	73	195	38	530	112	2521
04:00 PM	14	13	4	24	177	6	23	5	6	10	257	24	563
04:15 PM	9	15	4	24	171	11	36	8	11	10	203	27	529
04:30 PM	16	19	9	39	171	6	28	6	11	7	275	26	613
04:45 PM	14	13	3	39	142	2	21	4	10	11	226	24	509
Total	53	60	20	126	661	25	108	23	38	38	961	101	2214
05:00 PM	10	26	1	31	158	7	22	7	15	12	298	35	622
05:15 PM	21	28	3	45	236	11	25	8	22	8	234	36	677
05:30 PM	10	20	9	53	150	12	21	14	7	6	281	24	607
05:45 PM	9	23	8	38	148	8	30	11	9	7	255	24	570
Total	50	97	21	167	692	38	98	40	53	33	1068	119	2476
06:00 PM	15	20	7	38	184	10	29	8	17	6	253	26	613
06:15 PM	15	25	9	43	160	11	30	3	6	13	243	24	582
06:30 PM	8	18	8	41	154	26	27	13	10	14	183	19	521
06:45 PM	18	17	8	50	185	22	38	10	11	18	187	14	578
Total	56	80	32	172	683	69	124	34	44	51	866	83	2294
Grand Total	206	308	125	673	4192	284	645	224	508	199	4041	463	11868
Apprch %	32.2	48.2	19.6	13.1	81.4	5.5	46.8	16.3	36.9	4.2	85.9	9.8	
Total %	1.7	2.6	1.1	5.7	35.3	2.4	5.4	1.9	4.3	1.7	34	3.9	

CITY TRAFFIC COUNTERS

www.ctcounters.com

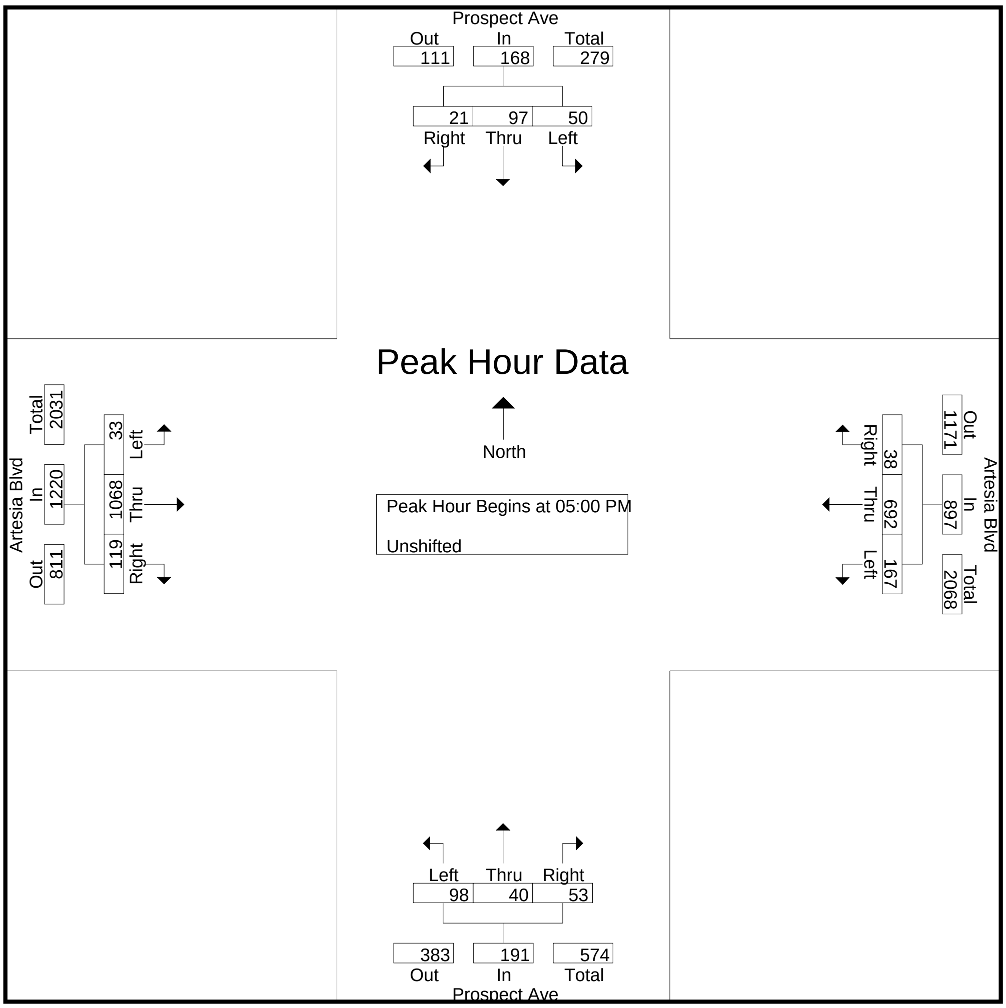
File Name : Prospect_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 2

	Prospect Ave Southbound				Artesia Blvd Westbound				Prospect Ave Northbound				Artesia Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**9**	10	12	31	30	250	20	300	25	20	56	101	**24**	**199**	14	**237**	669
07:45 AM	4	**24**	**18**	**46**	**39**	**355**	**23**	**417**	45	18	**64**	127	5	185	20	210	**800**
08:00 AM	9	6	3	18	29	260	21	310	46	**23**	47	116	4	135	**44**	183	627
08:15 AM	5	9	11	25	27	284	19	330	**63**	15	57	**135**	9	135	38	182	672
Total Volume	27	49	44	120	125	1149	83	1357	179	76	224	479	42	654	116	812	2768
% App. Total	22.5	40.8	36.7		9.2	84.7	6.1		37.4	15.9	46.8		5.2	80.5	14.3		
PHF	.750	.510	.611	.652	.801	.809	.902	.814	.710	.826	.875	.887	.438	.822	.659	.857	.865



File Name : Prospect_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 3

	Prospect Ave Southbound				Artesia Blvd Westbound				Prospect Ave Northbound				Artesia Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	10	26	1	37	31	158	7	196	22	7	15	44	**12**	**298**	35	**345**	622
05:15 PM	**21**	**28**	3	**52**	45	**236**	11	**292**	25	8	**22**	**55**	8	234	**36**	278	**677**
05:30 PM	10	20	**9**	39	**53**	150	**12**	215	21	**14**	7	42	6	281	24	311	607
05:45 PM	9	23	8	40	38	148	8	194	**30**	11	9	50	7	255	24	286	570
Total Volume	50	97	21	168	167	692	38	897	98	40	53	191	33	1068	119	1220	2476
% App. Total	29.8	57.7	12.5		18.6	77.1	4.2		51.3	20.9	27.7		2.7	87.5	9.8		
PHF	.595	.866	.583	.808	.788	.733	.792	.768	.817	.714	.602	.868	.688	.896	.826	.884	.914



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Prospect_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 1

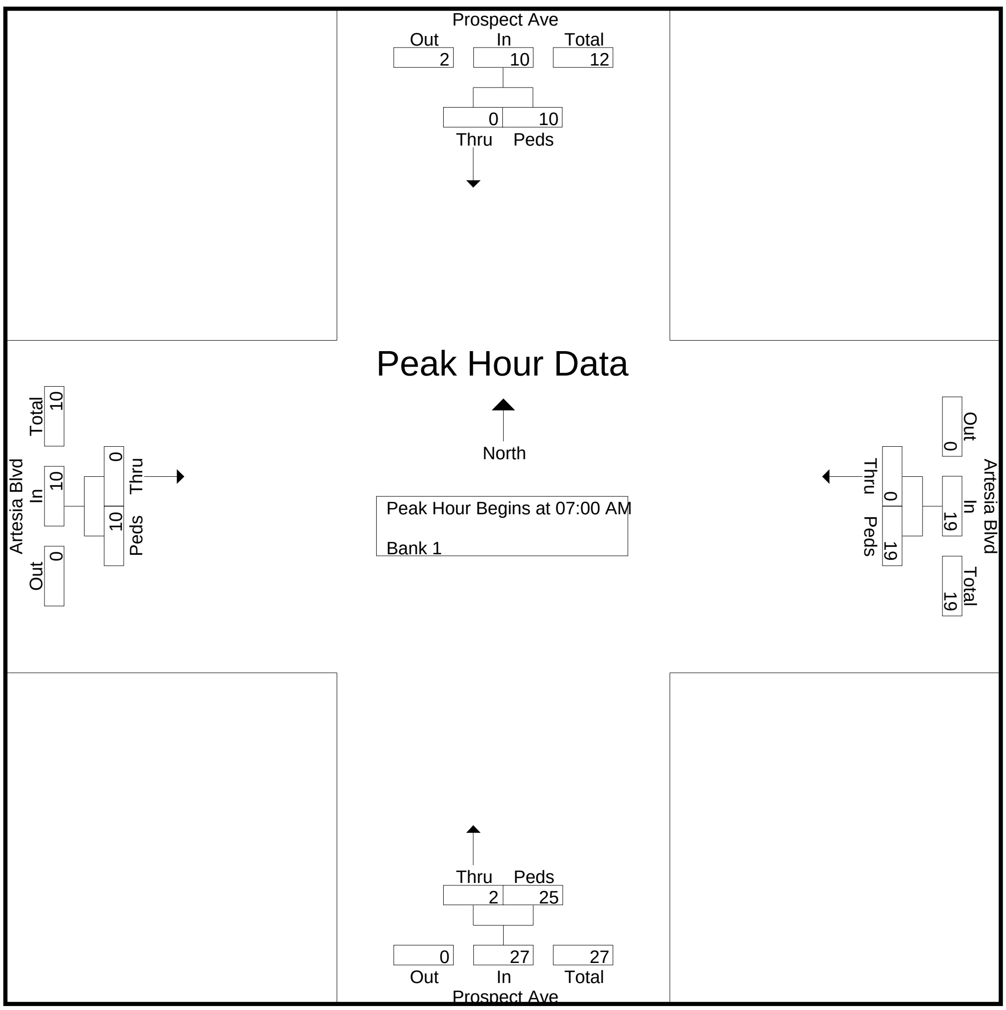
Groups Printed- Bank 1

	Prospect Ave Southbound		**Artesia Blvd Westbound**		**Prospect Ave Northbound**		**Artesia Blvd Eastbound**		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	1	0	7	0	8	0	1	17
07:15 AM	0	3	0	5	1	7	0	0	16
07:30 AM	0	2	0	5	0	7	0	1	15
07:45 AM	0	4	0	2	1	3	0	8	18
Total	0	10	0	19	2	25	0	10	66
08:00 AM	0	3	1	5	0	3	0	4	16
08:15 AM	0	3	1	4	1	4	0	3	16
08:30 AM	0	7	0	4	0	0	0	3	14
08:45 AM	0	2	1	6	0	0	0	0	9
Total	0	15	3	19	1	7	0	10	55
04:00 PM	0	1	0	5	0	3	0	0	9
04:15 PM	0	0	0	3	1	10	1	2	17
04:30 PM	1	4	0	6	0	2	0	1	14
04:45 PM	0	1	0	5	0	4	1	1	12
Total	1	6	0	19	1	19	2	4	52
05:00 PM	0	0	0	6	1	6	0	0	13
05:15 PM	0	2	0	1	0	6	0	5	14
05:30 PM	1	0	0	1	0	7	0	1	10
05:45 PM	0	3	0	1	0	5	1	0	10
Total	1	5	0	9	1	24	1	6	47
06:00 PM	0	3	0	1	0	7	0	0	11
06:15 PM	0	4	0	1	0	0	0	1	6
06:30 PM	2	0	0	0	0	4	0	2	8
06:45 PM	0	3	0	2	0	1	0	0	6
Total	2	10	0	4	0	12	0	3	31
Grand Total	4	46	3	70	5	87	3	33	251
Apprch %	8	92	4.1	95.9	5.4	94.6	8.3	91.7	
Total %	1.6	18.3	1.2	27.9	2	34.7	1.2	13.1	

CITY TRAFFIC COUNTERS
www.ctcounters.com

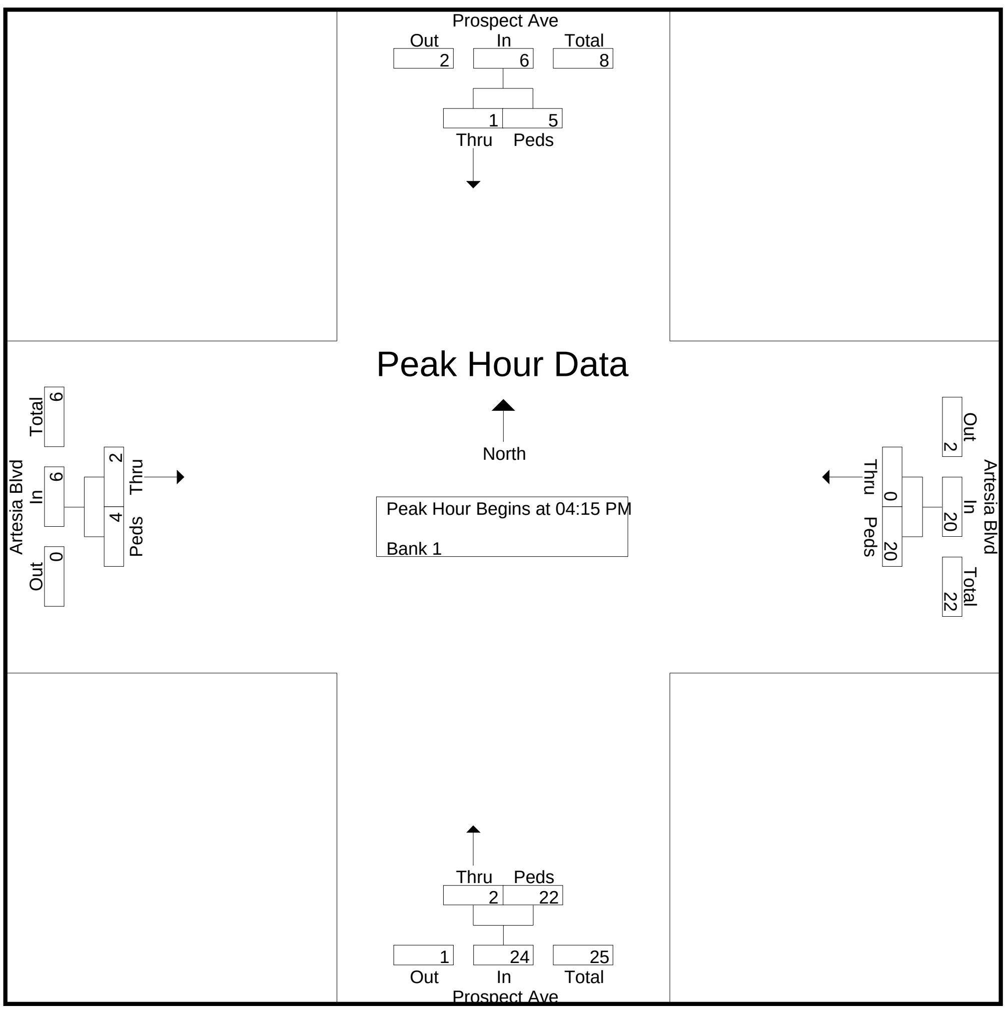
File Name : Prospect_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 2

	Prospect Ave Southbound			Artesia Blvd Westbound			Prospect Ave Northbound			Artesia Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	1	1	0	**7**	**7**	0	**8**	**8**	0	1	1	17
07:15 AM	0	3	3	0	5	5	**1**	7	8	0	0	0	16
07:30 AM	0	2	2	0	5	5	0	7	7	0	1	1	15
07:45 AM	0	**4**	**4**	0	2	2	1	3	4	0	**8**	**8**	**18**
Total Volume	0	10	10	0	19	19	2	25	27	0	10	10	66
% App. Total	0	100		0	100		7.4	92.6		0	100		
PHF	.000	.625	.625	.000	.679	.679	.500	.781	.844	.000	.313	.313	.917



File Name : Prospect_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 3

	Prospect Ave Southbound			Artesia Blvd Westbound			Prospect Ave Northbound			Artesia Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	0	0	0	3	3	**1**	**10**	**11**	**1**	**2**	**3**	**17**
04:30 PM	**1**	**4**	**5**	0	**6**	**6**	0	2	2	0	1	1	14
04:45 PM	0	1	1	0	5	5	0	4	4	1	1	2	12
05:00 PM	0	0	0	0	6	6	1	6	7	0	0	0	13
Total Volume	1	5	6	0	20	20	2	22	24	2	4	6	56
% App. Total	16.7	83.3		0	100		8.3	91.7		33.3	66.7		
PHF	.250	.313	.300	.000	.833	.833	.500	.550	.545	.500	.500	.500	.824



CITY TRAFFIC COUNTERS

www.ctcounters.com

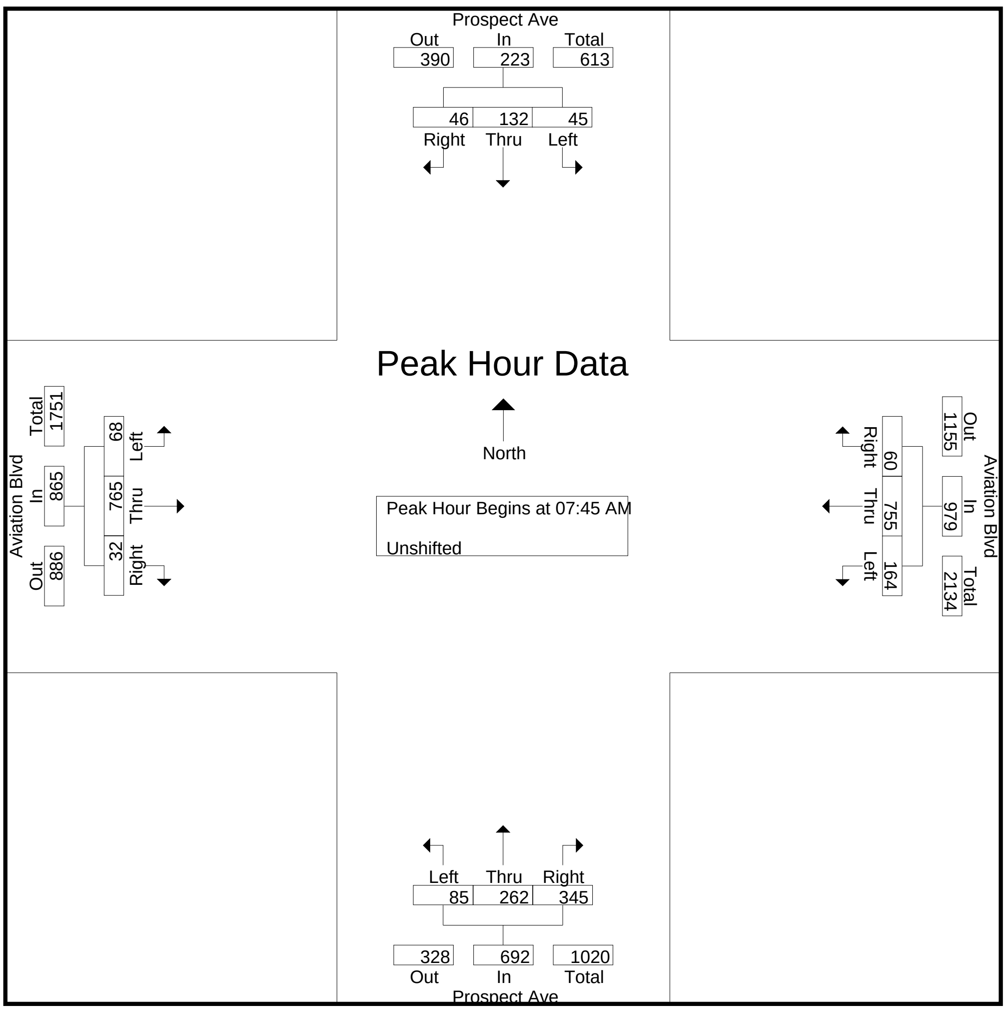
File Name : Prospect_Aviation
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

Groups Printed- Unshifted

	Prospect Ave Southbound			Aviation Blvd Westbound			Prospect Ave Northbound			Aviation Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	8	15	8	27	110	3	15	41	70	2	197	6	502
07:15 AM	12	21	4	45	145	3	18	47	76	0	201	6	578
07:30 AM	9	29	7	52	185	9	19	71	86	10	175	5	657
07:45 AM	3	30	9	52	232	18	20	63	90	11	193	4	725
Total	32	95	28	176	672	33	72	222	322	23	766	21	2462
08:00 AM	13	26	10	34	182	21	24	64	96	23	193	11	697
08:15 AM	14	44	5	41	158	10	23	85	77	22	171	7	657
08:30 AM	15	32	22	37	183	11	18	50	82	12	208	10	680
08:45 AM	14	29	10	51	170	13	15	54	69	7	168	10	610
Total	56	131	47	163	693	55	80	253	324	64	740	38	2644
04:00 PM	21	41	9	65	188	13	13	52	61	11	195	13	682
04:15 PM	30	72	6	65	178	12	16	53	48	8	187	19	694
04:30 PM	30	66	8	72	200	14	26	41	56	10	178	24	725
04:45 PM	37	60	14	80	204	9	17	40	61	12	181	16	731
Total	118	239	37	282	770	48	72	186	226	41	741	72	2832
05:00 PM	30	75	10	61	173	10	15	46	57	11	174	30	692
05:15 PM	22	75	9	73	186	12	21	51	57	20	203	17	746
05:30 PM	23	91	11	73	186	10	14	50	34	11	212	9	724
05:45 PM	21	74	7	90	183	15	5	42	45	10	167	16	675
Total	96	315	37	297	728	47	55	189	193	52	756	72	2837
06:00 PM	32	59	10	73	183	8	16	54	42	11	172	16	676
06:15 PM	24	63	16	65	196	10	8	53	40	17	192	13	697
06:30 PM	32	48	6	73	186	6	24	29	40	8	157	7	616
06:45 PM	20	70	10	75	197	14	8	45	36	7	151	9	642
Total	108	240	42	286	762	38	56	181	158	43	672	45	2631
Grand Total	410	1020	191	1204	3625	221	335	1031	1223	223	3675	248	13406
Apprch %	25.3	62.9	11.8	23.8	71.8	4.4	12.9	39.8	47.2	5.4	88.6	6	
Total %	3.1	7.6	1.4	9	27	1.6	2.5	7.7	9.1	1.7	27.4	1.8	

File Name : Prospect_Aviation
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

	Prospect Ave Southbound				Aviation Blvd Westbound				Prospect Ave Northbound				Aviation Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	3	30	9	42	**52**	**232**	18	**302**	20	63	90	173	11	193	4	208	**725**
08:00 AM	13	26	10	49	34	182	**21**	237	**24**	64	**96**	184	**23**	193	**11**	227	697
08:15 AM	14	**44**	5	63	41	158	10	209	23	**85**	77	**185**	22	171	7	200	657
08:30 AM	**15**	32	**22**	**69**	37	183	11	231	18	50	82	150	12	**208**	10	**230**	680
Total Volume	45	132	46	223	164	755	60	979	85	262	345	692	68	765	32	865	2759
% App. Total	20.2	59.2	20.6		16.8	77.1	6.1		12.3	37.9	49.9		7.9	88.4	3.7		
PHF	.750	.750	.523	.808	.788	.814	.714	.810	.885	.771	.898	.935	.739	.919	.727	.940	.951

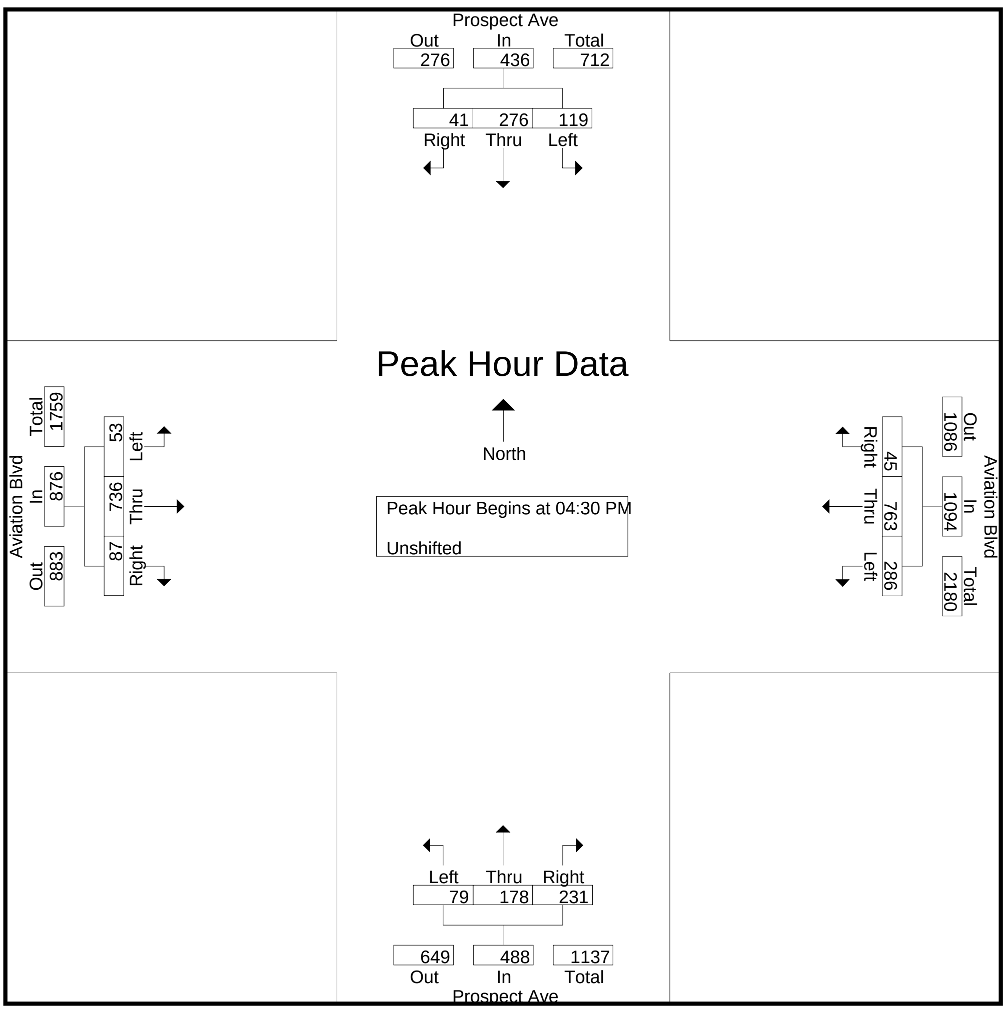


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Prospect_Aviation
Site Code : 00000000
Start Date : 3/1/2016
Page No : 3

	Prospect Ave Southbound				Aviation Blvd Westbound				Prospect Ave Northbound				Aviation Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	30	66	8	104	72	200	**14**	286	**26**	41	56	123	10	178	24	212	725
04:45 PM	**37**	60	**14**	111	**80**	**204**	9	**293**	17	40	**61**	118	12	181	16	209	731
05:00 PM	30	**75**	10	**115**	61	173	10	244	15	46	57	118	11	174	**30**	215	692
05:15 PM	22	75	9	106	73	186	12	271	21	**51**	57	**129**	**20**	**203**	17	**240**	**746**
Total Volume	119	276	41	436	286	763	45	1094	79	178	231	488	53	736	87	876	2894
% App. Total	27.3	63.3	9.4		26.1	69.7	4.1		16.2	36.5	47.3		6.1	84	9.9		
PHF	.804	.920	.732	.948	.894	.935	.804	.933	.760	.873	.947	.946	.663	.906	.725	.913	.970



CITY TRAFFIC COUNTERS
www.ctcounters.com

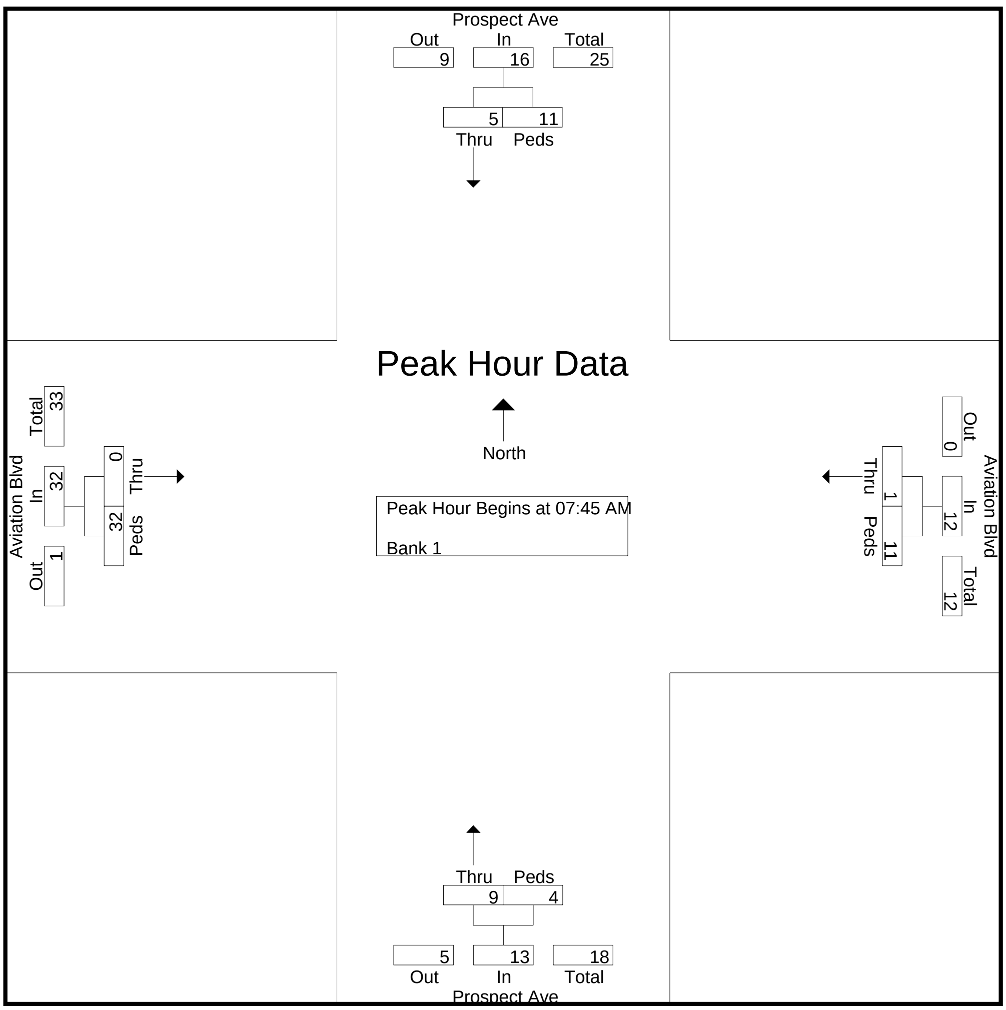
File Name : Prospect_Aviation_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 1

Groups Printed- Bank 1

	Prospect Ave Southbound		**Aviation Blvd Westbound**		**Prospect Ave Northbound**		**Aviation Blvd Eastbound**		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	4	0	0	0	0	1	1	6
07:15 AM	0	2	1	2	2	0	0	0	7
07:30 AM	0	1	0	1	1	0	0	2	5
07:45 AM	3	3	1	2	3	0	0	5	17
Total	3	10	2	5	6	0	1	8	35
08:00 AM	0	3	0	6	2	0	0	17	28
08:15 AM	0	4	0	1	1	3	0	9	18
08:30 AM	2	1	0	2	3	1	0	1	10
08:45 AM	0	1	0	1	2	5	0	1	10
Total	2	9	0	10	8	9	0	28	66
04:00 PM	3	0	1	2	1	3	3	5	18
04:15 PM	3	0	1	2	0	7	0	3	16
04:30 PM	2	1	1	2	1	5	0	3	15
04:45 PM	0	5	0	3	0	8	0	0	16
Total	8	6	3	9	2	23	3	11	65
05:00 PM	4	5	0	2	0	6	0	1	18
05:15 PM	2	2	0	2	0	10	1	2	19
05:30 PM	1	3	0	0	0	3	0	2	9
05:45 PM	1	3	0	4	1	4	0	3	16
Total	8	13	0	8	1	23	1	8	62
06:00 PM	1	0	0	0	0	0	0	0	1
06:15 PM	1	3	1	0	0	6	0	4	15
06:30 PM	1	0	0	0	0	6	0	2	9
06:45 PM	1	2	0	1	0	1	1	1	7
Total	4	5	1	1	0	13	1	7	32
Grand Total	25	43	6	33	17	68	6	62	260
Apprch %	36.8	63.2	15.4	84.6	20	80	8.8	91.2	
Total %	9.6	16.5	2.3	12.7	6.5	26.2	2.3	23.8	

File Name : Prospect_Aviation_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 2

	Prospect Ave Southbound			Aviation Blvd Westbound			Prospect Ave Northbound			Aviation Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**3**	3	**6**	**1**	2	3	**3**	0	3	0	5	5	17
08:00 AM	0	3	3	0	**6**	**6**	2	0	2	0	**17**	**17**	**28**
08:15 AM	0	**4**	4	0	1	1	1	**3**	**4**	0	9	9	18
08:30 AM	2	1	3	0	2	2	3	1	4	0	1	1	10
Total Volume	5	11	16	1	11	12	9	4	13	0	32	32	73
% App. Total	31.2	68.8		8.3	91.7		69.2	30.8		0	100		
PHF	.417	.688	.667	.250	.458	.500	.750	.333	.813	.000	.471	.471	.652

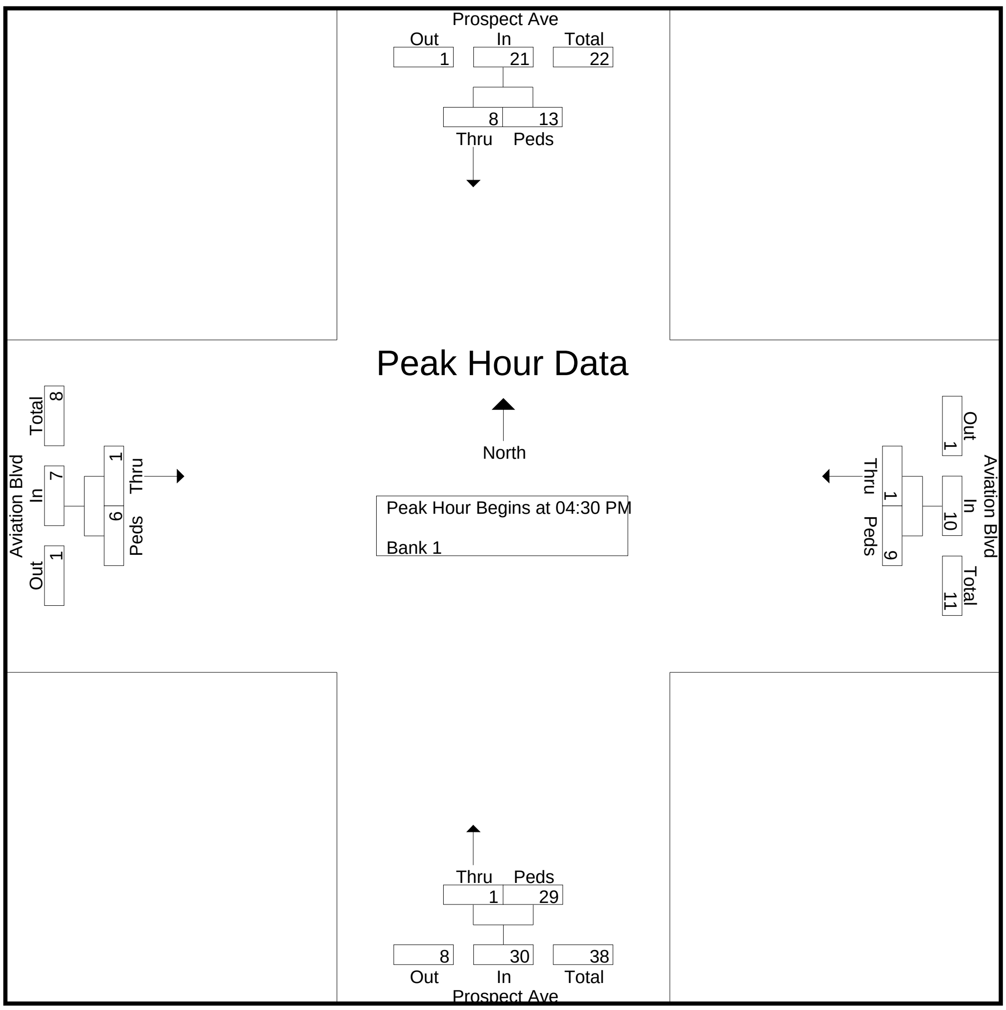


CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Prospect_Aviation_BP
Site Code : 00000000
Start Date : 3/1/2016
Page No : 3

	Prospect Ave Southbound			Aviation Blvd Westbound			Prospect Ave Northbound			Aviation Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	2	1	3	**1**	2	**3**	**1**	5	6	0	**3**	**3**	15
04:45 PM	0	**5**	5	0	**3**	3	0	8	8	0	0	0	16
05:00 PM	**4**	5	**9**	0	2	2	0	6	6	0	1	1	18
05:15 PM	2	2	4	0	2	2	0	**10**	**10**	**1**	2	3	**19**
Total Volume	8	13	21	1	9	10	1	29	30	1	6	7	68
% App. Total	38.1	61.9		10	90		3.3	96.7		14.3	85.7		
PHF	.500	.650	.583	.250	.750	.833	.250	.725	.750	.250	.500	.583	.895



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Meadows_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 1

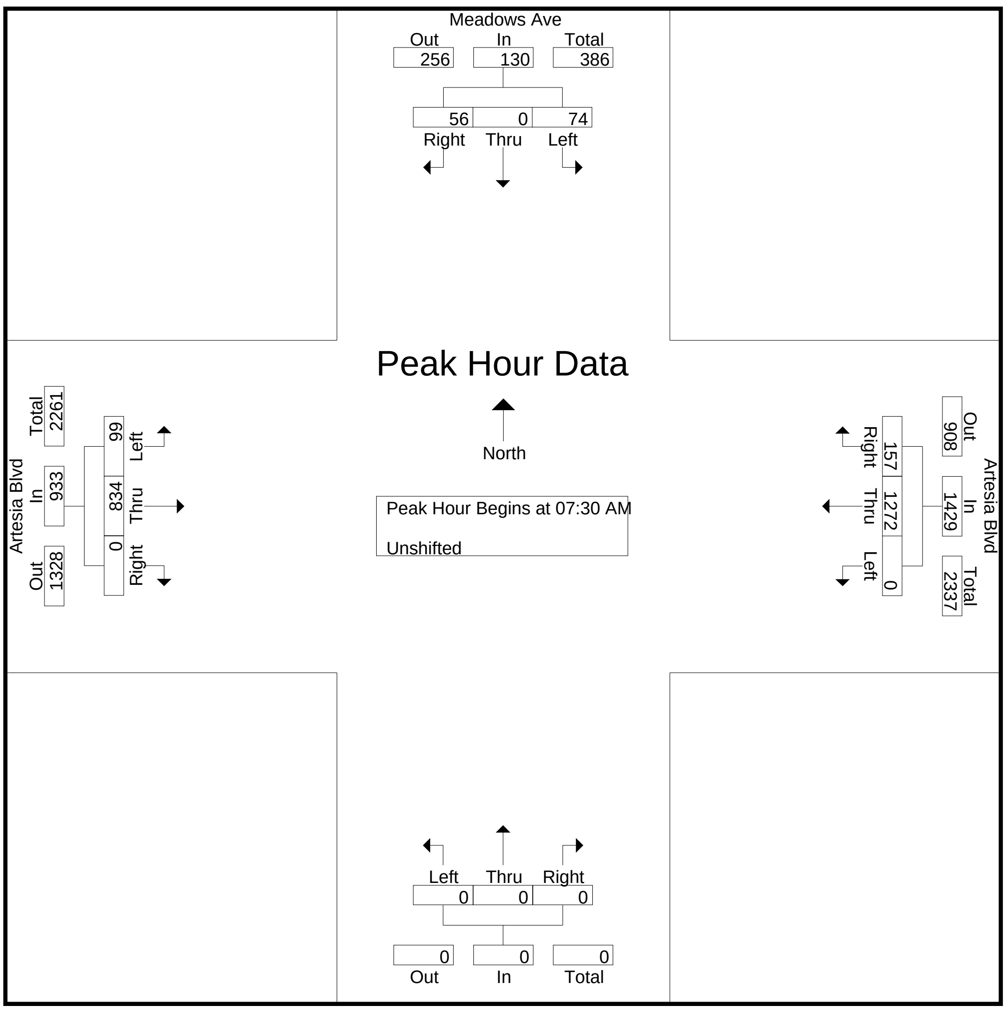
Groups Printed- Unshifted

	Meadows Ave Southbound			Artesia Blvd Westbound			Northbound			Artesia Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	5	0	9	0	218	10	0	0	0	8	154	0	404
07:15 AM	6	0	9	0	261	17	0	0	0	14	139	0	446
07:30 AM	18	0	15	0	333	42	0	0	0	25	283	0	716
07:45 AM	14	0	15	0	392	43	0	0	0	23	196	0	683
Total	43	0	48	0	1204	112	0	0	0	70	772	0	2249
08:00 AM	18	0	16	0	252	40	0	0	0	22	173	0	521
08:15 AM	24	0	10	0	295	32	0	0	0	29	182	0	572
08:30 AM	24	0	15	0	346	24	0	0	0	12	166	0	587
08:45 AM	19	0	15	0	308	55	0	0	0	6	121	0	524
Total	85	0	56	0	1201	151	0	0	0	69	642	0	2204
04:00 PM	30	0	13	0	193	14	0	0	0	29	268	0	547
04:15 PM	24	0	15	0	191	21	0	0	0	25	237	0	513
04:30 PM	25	0	30	0	194	16	0	0	0	20	309	0	594
04:45 PM	28	0	29	0	168	9	0	0	0	11	266	0	511
Total	107	0	87	0	746	60	0	0	0	85	1080	0	2165
05:00 PM	33	0	20	0	182	14	0	0	0	16	316	0	581
05:15 PM	37	0	24	0	280	25	0	0	0	20	273	0	659
05:30 PM	32	0	30	0	190	30	0	0	0	17	291	0	590
05:45 PM	40	0	16	0	213	20	0	0	0	20	289	0	598
Total	142	0	90	0	865	89	0	0	0	73	1169	0	2428
06:00 PM	43	0	22	0	222	17	0	0	0	13	319	0	636
06:15 PM	34	0	32	0	189	12	0	0	0	7	261	0	535
06:30 PM	23	0	25	0	213	32	0	0	0	18	208	1	520
06:45 PM	35	0	23	0	223	37	0	0	0	28	206	0	552
Total	135	0	102	0	847	98	0	0	0	66	994	1	2243
Grand Total	512	0	383	0	4863	510	0	0	0	363	4657	1	11289
Apprch %	57.2	0	42.8	0	90.5	9.5	0	0	0	7.2	92.8	0	
Total %	4.5	0	3.4	0	43.1	4.5	0	0	0	3.2	41.3	0	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Meadows_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 2

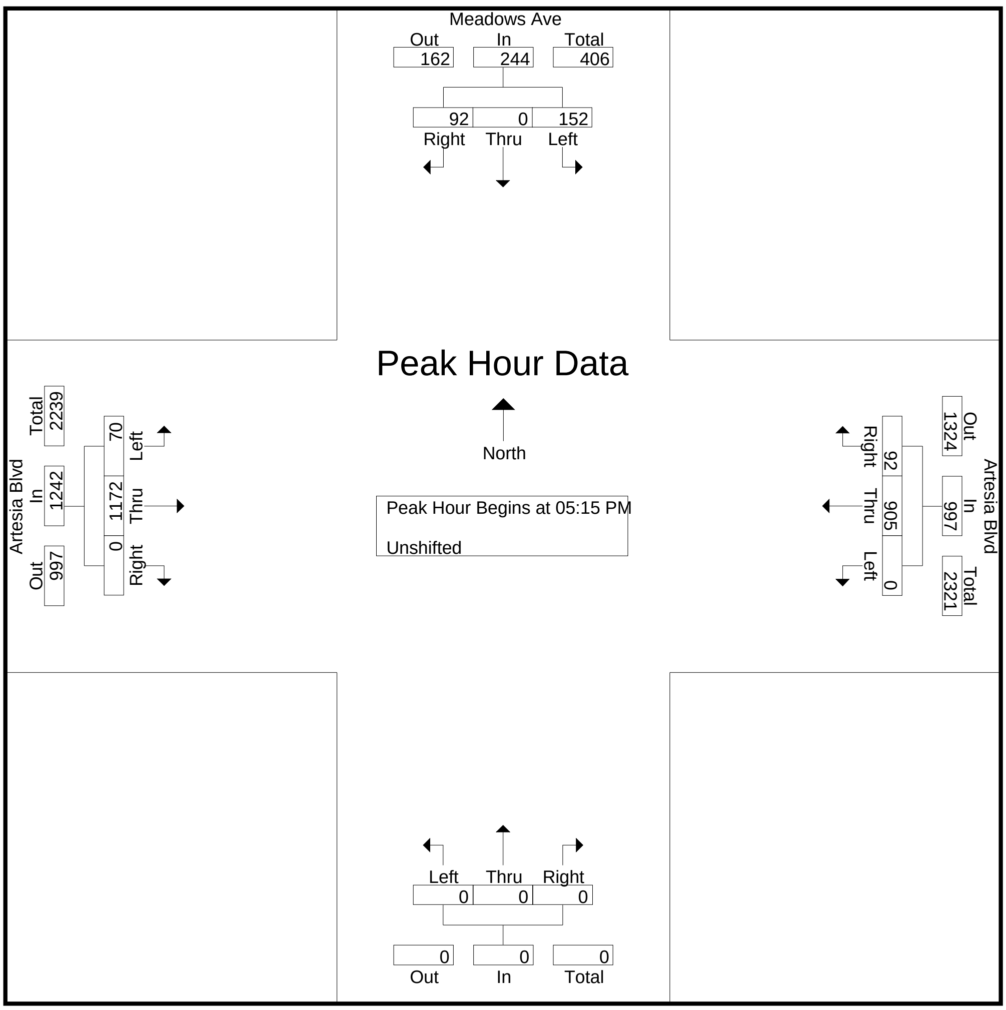
	Meadows Ave Southbound				Artesia Blvd Westbound				Northbound				Artesia Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	18	0	15	33	0	333	42	375	0	0	0	0	25	**283**	0	**308**	**716**
07:45 AM	14	0	15	29	0	**392**	**43**	**435**	0	0	0	0	23	196	0	219	683
08:00 AM	18	0	**16**	**34**	0	252	40	292	0	0	0	0	22	173	0	195	521
08:15 AM	**24**	0	10	34	0	295	32	327	0	0	0	0	**29**	182	0	211	572
Total Volume	74	0	56	130	0	1272	157	1429	0	0	0	0	99	834	0	933	2492
% App. Total	56.9	0	43.1		0	89	11		0	0	0		10.6	89.4	0		
PHF	.771	.000	.875	.956	.000	.811	.913	.821	.000	.000	.000	.000	.853	.737	.000	.757	.870



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Meadows_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 3

	Meadows Ave Southbound				Artesia Blvd Westbound				Northbound				Artesia Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	37	0	24	61	0	**280**	25	**305**	0	0	0	0	**20**	273	0	293	**659**
05:30 PM	32	0	**30**	62	0	190	**30**	220	0	0	0	0	17	291	0	308	590
05:45 PM	40	0	16	56	0	213	20	233	0	0	0	0	20	289	0	309	598
06:00 PM	**43**	0	22	**65**	0	222	17	239	0	0	0	0	13	**319**	0	**332**	636
Total Volume	152	0	92	244	0	905	92	997	0	0	0	0	70	1172	0	1242	2483
% App. Total	62.3	0	37.7		0	90.8	9.2		0	0	0		5.6	94.4	0		
PHF	.884	.000	.767	.938	.000	.808	.767	.817	.000	.000	.000	.000	.875	.918	.000	.935	.942



CITY TRAFFIC COUNTERS
www.ctcounters.com

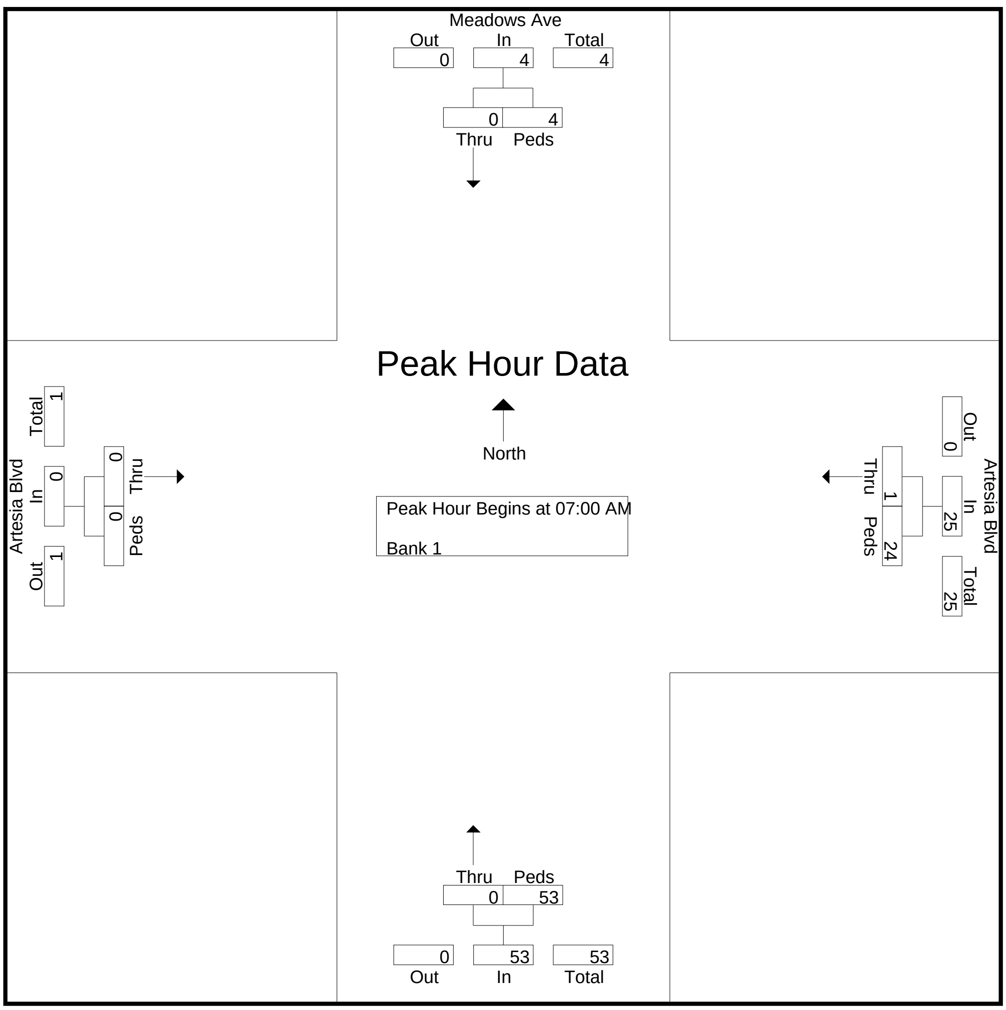
File Name : Meadows_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 1

Groups Printed- Bank 1

	Meadows Ave Southbound		Artesia Blvd Westbound		Northbound		Artesia Blvd Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	1	0	0	0	3	0	0	4
07:15 AM	0	3	0	2	0	6	0	0	11
07:30 AM	0	0	1	20	0	30	0	0	51
07:45 AM	0	0	0	2	0	14	0	0	16
Total	0	4	1	24	0	53	0	0	82
08:00 AM	0	0	0	1	0	2	0	0	3
08:15 AM	0	0	0	1	0	1	0	0	2
08:30 AM	1	0	0	1	0	1	0	0	3
08:45 AM	0	0	0	1	0	1	0	0	2
Total	1	0	0	4	0	5	0	0	10
04:00 PM	0	3	0	0	0	0	0	2	5
04:15 PM	0	4	0	3	1	18	0	0	26
04:30 PM	1	2	0	2	2	9	0	0	16
04:45 PM	0	2	0	1	0	5	0	0	8
Total	1	11	0	6	3	32	0	2	55
05:00 PM	0	0	0	2	1	7	0	0	10
05:15 PM	0	1	0	0	0	6	0	0	7
05:30 PM	1	0	0	3	0	10	0	0	14
05:45 PM	1	0	0	1	0	6	0	0	8
Total	2	1	0	6	1	29	0	0	39
06:00 PM	0	7	0	4	0	2	0	0	13
06:15 PM	2	1	0	4	2	11	0	0	20
06:30 PM	1	1	0	0	0	6	0	0	8
06:45 PM	0	0	0	7	1	3	0	0	11
Total	3	9	0	15	3	22	0	0	52
Grand Total	7	25	1	55	7	141	0	2	238
Apprch %	21.9	78.1	1.8	98.2	4.7	95.3	0	100	
Total %	2.9	10.5	0.4	23.1	2.9	59.2	0	0.8	

File Name : Meadows_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 2

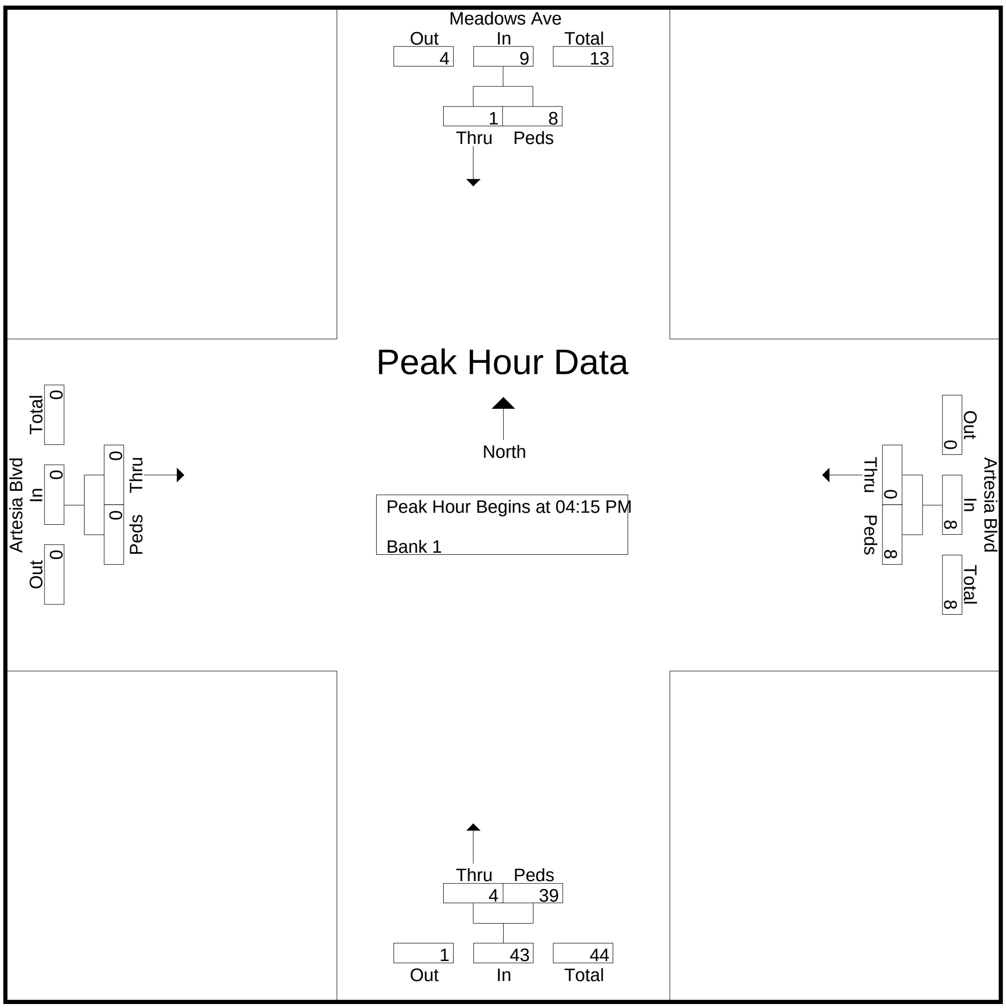
	Meadows Ave Southbound			Artesia Blvd Westbound			Northbound			Artesia Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	1	1	0	0	0	0	3	3	0	0	0	4
07:15 AM	0	**3**	**3**	0	2	2	0	6	6	0	0	0	11
07:30 AM	0	0	0	**1**	**20**	**21**	0	**30**	**30**	0	0	0	**51**
07:45 AM	0	0	0	0	2	2	0	14	14	0	0	0	16
Total Volume	0	4	4	1	24	25	0	53	53	0	0	0	82
% App. Total	0	100		4	96		0	100		0	0		
PHF	.000	.333	.333	.250	.300	.298	.000	.442	.442	.000	.000	.000	.402



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Meadows_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016

	Meadows Ave Southbound			Artesia Blvd Westbound			Northbound			Artesia Blvd Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:30 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	**4**	**4**	0	**3**	**3**	1	**18**	**19**	0	0	0	**26**
04:30 PM	**1**	2	3	0	2	2	**2**	9	11	0	0	0	16
04:45 PM	0	2	2	0	1	1	0	5	5	0	0	0	8
05:00 PM	0	0	0	0	2	2	1	7	8	0	0	0	10
Total Volume	1	8	9	0	8	8	4	39	43	0	0	0	60
% App. Total	11.1	88.9		0	100		9.3	90.7		0	0		
PHF	.250	.500	.563	.000	.667	.667	.500	.542	.566	.000	.000	.000	.577



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Peck-Ford_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 1

Groups Printed- Unshifted

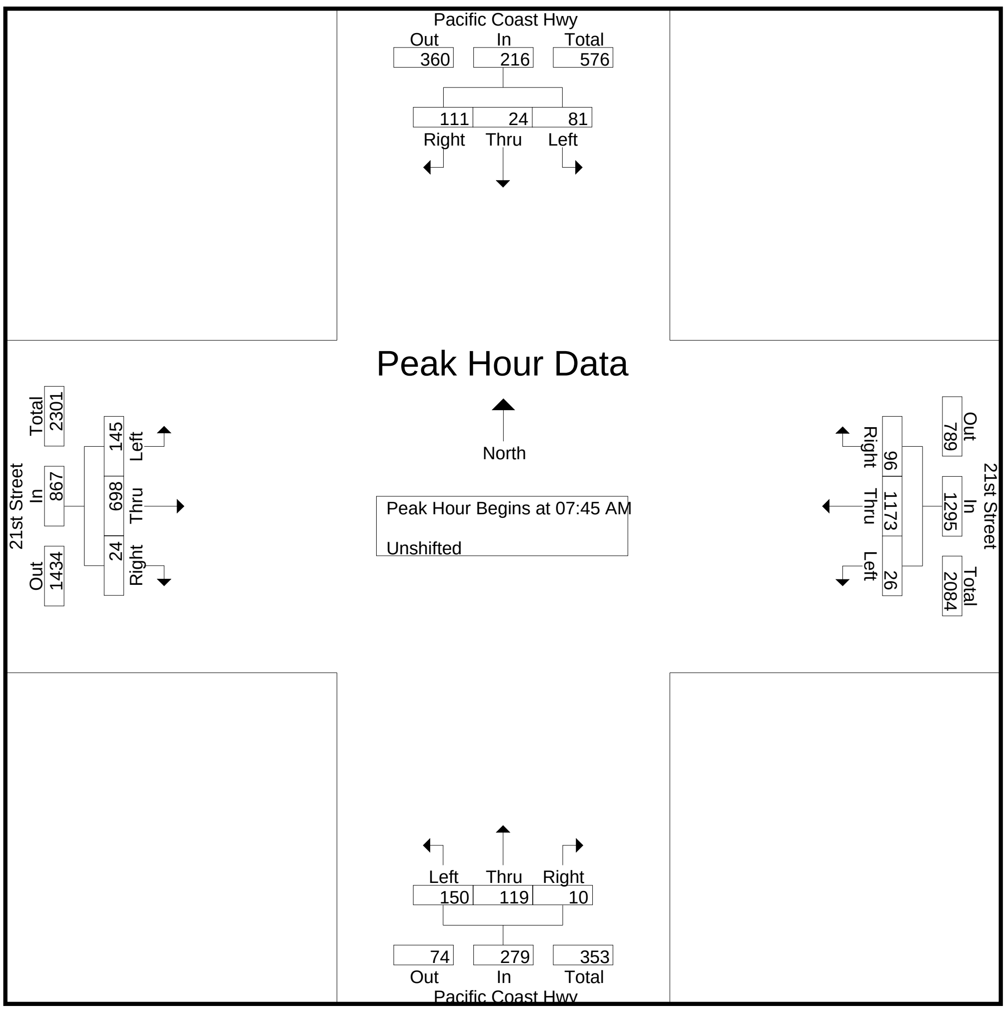
	Pacific Coast Hwy Southbound			21st Street Westbound			Pacific Coast Hwy Northbound			21st Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	22	1	29	2	201	17	17	14	4	31	122	9	469
07:15 AM	8	1	9	7	256	20	17	7	0	25	118	2	470
07:30 AM	21	3	16	5	215	28	38	19	1	47	175	4	572
07:45 AM	34	4	34	5	339	47	33	35	1	46	171	4	753
Total	85	9	88	19	1011	112	105	75	6	149	586	19	2264
08:00 AM	25	3	41	10	285	23	29	28	4	37	182	6	673
08:15 AM	14	6	15	7	270	15	52	27	2	22	154	8	592
08:30 AM	8	11	21	4	279	11	36	29	3	40	191	6	639
08:45 AM	10	5	35	4	319	10	34	20	4	21	156	3	621
Total	57	25	112	25	1153	59	151	104	13	120	683	23	2525
04:00 PM	12	10	9	9	189	11	11	10	1	19	253	10	544
04:15 PM	11	9	20	9	174	12	9	6	1	18	233	9	511
04:30 PM	13	9	22	6	169	17	13	4	0	24	290	6	573
04:45 PM	14	8	16	4	139	7	13	6	2	20	256	14	499
Total	50	36	67	28	671	47	46	26	4	81	1032	39	2127
05:00 PM	6	10	17	11	175	5	14	7	4	19	296	19	583
05:15 PM	9	11	17	16	263	9	15	8	2	15	258	18	641
05:30 PM	13	14	15	13	180	13	12	10	3	19	266	26	584
05:45 PM	13	8	22	17	205	16	17	9	2	33	274	23	639
Total	41	43	71	57	823	43	58	34	11	86	1094	86	2447
06:00 PM	16	11	32	16	194	11	11	7	1	14	292	15	620
06:15 PM	11	10	10	8	174	12	8	4	2	12	273	23	547
06:30 PM	12	2	7	7	226	13	12	2	4	10	220	16	531
06:45 PM	5	3	21	13	239	9	9	1	2	17	234	12	565
Total	44	26	70	44	833	45	40	14	9	53	1019	66	2263
Grand Total	277	139	408	173	4491	306	400	253	43	489	4414	233	11626
Apprch %	33.6	16.9	49.5	3.5	90.4	6.2	57.5	36.4	6.2	9.5	85.9	4.5	
Total %	2.4	1.2	3.5	1.5	38.6	2.6	3.4	2.2	0.4	4.2	38	2	

CITY TRAFFIC COUNTERS

www.ctcounters.com

File Name : Peck-Ford_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 2

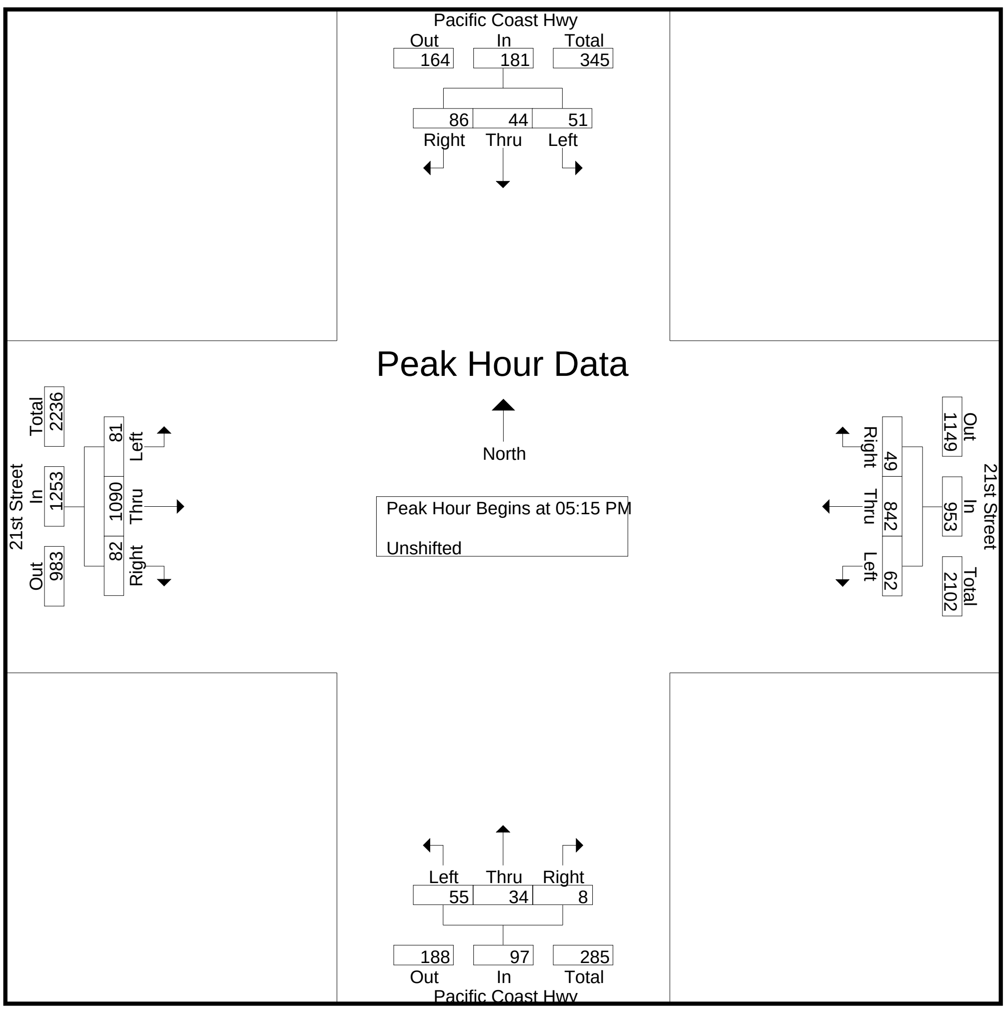
	Pacific Coast Hwy Southbound				21st Street Westbound				Pacific Coast Hwy Northbound				21st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**34**	4	34	**72**	5	**339**	**47**	**391**	33	**35**	1	69	**46**	171	4	221	**753**
08:00 AM	25	3	**41**	69	**10**	285	23	318	29	28	**4**	61	37	182	6	225	673
08:15 AM	14	6	15	35	7	270	15	292	**52**	27	2	**81**	22	154	**8**	184	592
08:30 AM	8	**11**	21	40	4	279	11	294	36	29	3	68	40	**191**	6	**237**	639
Total Volume	81	24	111	216	26	1173	96	1295	150	119	10	279	145	698	24	867	2657
% App. Total	37.5	11.1	51.4		2	90.6	7.4		53.8	42.7	3.6		16.7	80.5	2.8		
PHF	.596	.545	.677	.750	.650	.865	.511	.828	.721	.850	.625	.861	.788	.914	.750	.915	.882



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Peck-Ford_Artesia
Site Code : 00000000
Start Date : 3/9/2016
Page No : 3

	Pacific Coast Hwy Southbound				21st Street Westbound				Pacific Coast Hwy Northbound				21st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	9	11	17	37	16	**263**	9	**288**	15	8	2	25	15	258	18	291	**641**
05:30 PM	13	**14**	15	42	13	180	13	206	12	**10**	**3**	25	19	266	**26**	311	584
05:45 PM	13	8	22	43	**17**	205	**16**	238	**17**	9	2	**28**	**33**	274	23	**330**	639
06:00 PM	**16**	11	**32**	**59**	16	194	11	221	11	7	1	19	14	**292**	15	321	620
Total Volume	51	44	86	181	62	842	49	953	55	34	8	97	81	1090	82	1253	2484
% App. Total	28.2	24.3	47.5		6.5	88.4	5.1		56.7	35.1	8.2		6.5	87	6.5		
PHF	.797	.786	.672	.767	.912	.800	.766	.827	.809	.850	.667	.866	.614	.933	.788	.949	.969



CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Peck-Ford_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 1

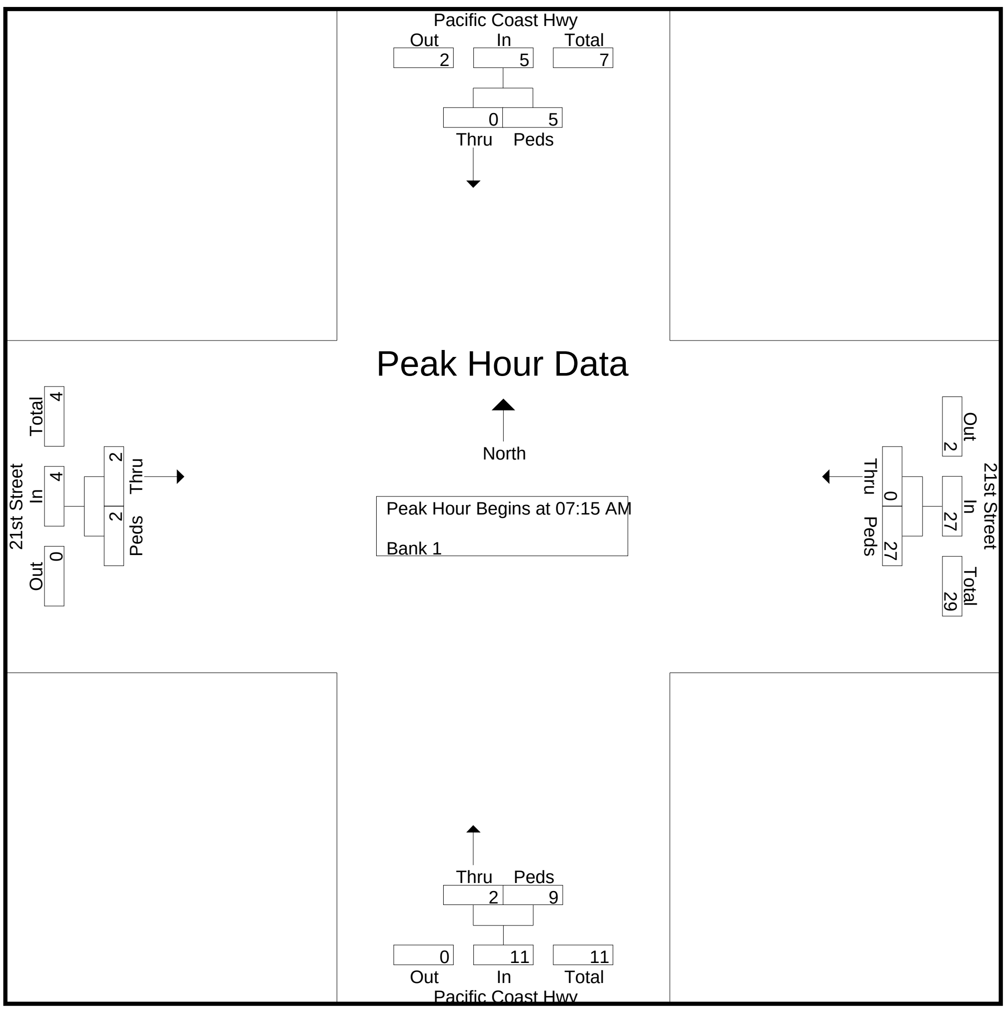
Groups Printed- Bank 1

	Pacific Coast Hwy Southbound		21st Street Westbound		Pacific Coast Hwy Northbound		21st Street Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	4	0	1	0	1	0	0	6
07:15 AM	0	1	0	0	1	3	0	0	5
07:30 AM	0	1	0	4	0	3	1	0	9
07:45 AM	0	1	0	22	0	2	1	0	26
Total	0	7	0	27	1	9	2	0	46
08:00 AM	0	2	0	1	1	1	0	2	7
08:15 AM	0	3	0	1	0	0	0	0	4
08:30 AM	0	2	0	0	0	1	0	0	3
08:45 AM	0	3	0	3	0	0	0	0	6
Total	0	10	0	5	1	2	0	2	20
04:00 PM	0	5	2	1	0	3	1	2	14
04:15 PM	0	2	0	0	0	1	0	0	3
04:30 PM	0	3	0	2	0	0	0	1	6
04:45 PM	0	1	0	0	0	1	0	1	3
Total	0	11	2	3	0	5	1	4	26
05:00 PM	0	3	0	1	1	0	0	0	5
05:15 PM	0	5	1	0	0	0	1	0	7
05:30 PM	0	2	0	8	0	1	0	0	11
05:45 PM	0	2	0	3	0	1	0	0	6
Total	0	12	1	12	1	2	1	0	29
06:00 PM	0	2	0	4	0	0	0	0	6
06:15 PM	1	1	1	1	2	2	0	1	9
06:30 PM	2	1	1	2	0	6	2	3	17
06:45 PM	0	0	0	1	0	1	0	0	2
Total	3	4	2	8	2	9	2	4	34
Grand Total	3	44	5	55	5	27	6	10	155
Apprch %	6.4	93.6	8.3	91.7	15.6	84.4	37.5	62.5	
Total %	1.9	28.4	3.2	35.5	3.2	17.4	3.9	6.5	

CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Peck-Ford_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 2

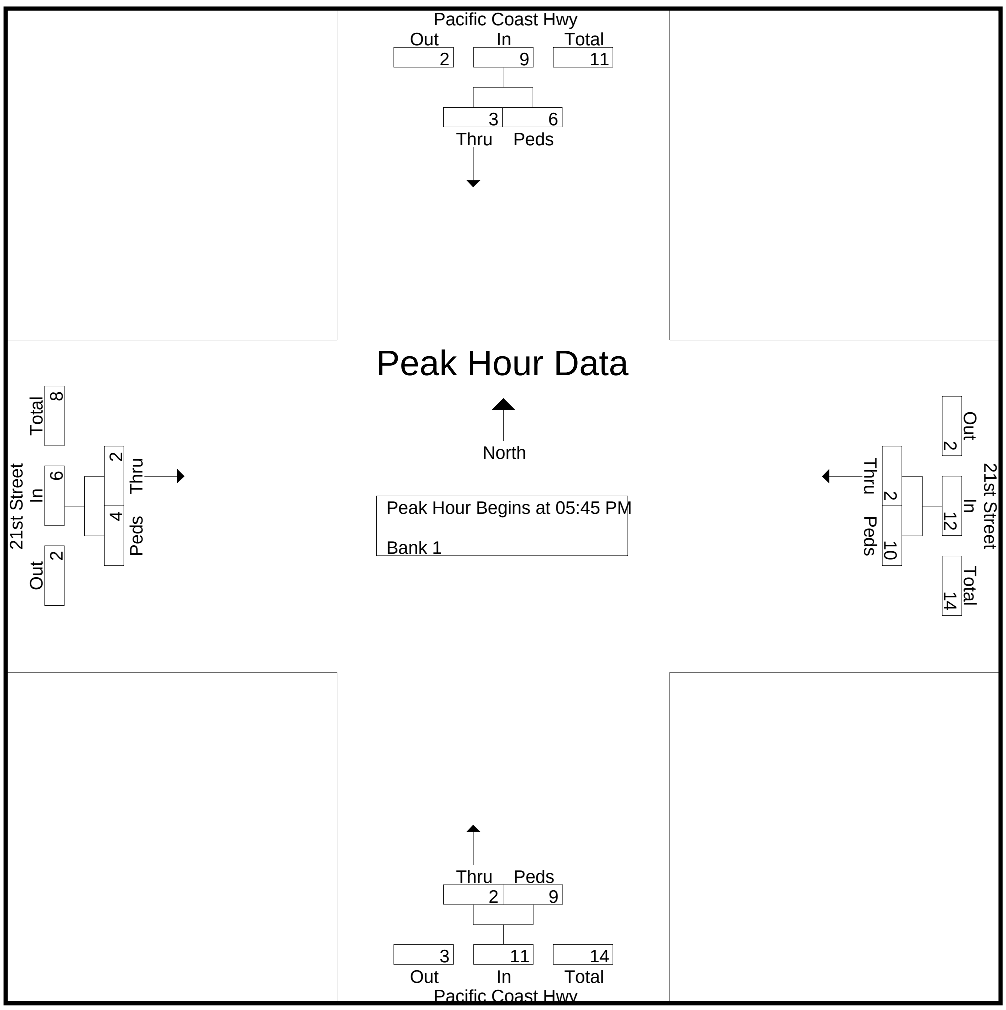
	Pacific Coast Hwy Southbound			21st Street Westbound			Pacific Coast Hwy Northbound			21st Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	1	1	0	0	0	**1**	**3**	**4**	0	0	0	5
07:30 AM	0	1	1	0	4	4	0	3	3	**1**	0	1	9
07:45 AM	0	1	1	0	**22**	**22**	0	2	2	1	0	1	**26**
08:00 AM	0	**2**	**2**	0	1	1	1	1	2	0	**2**	**2**	7
Total Volume	0	5	5	0	27	27	2	9	11	2	2	4	47
% App. Total	0	100		0	100		18.2	81.8		50	50		
PHF	.000	.625	.625	.000	.307	.307	.500	.750	.688	.500	.250	.500	.452

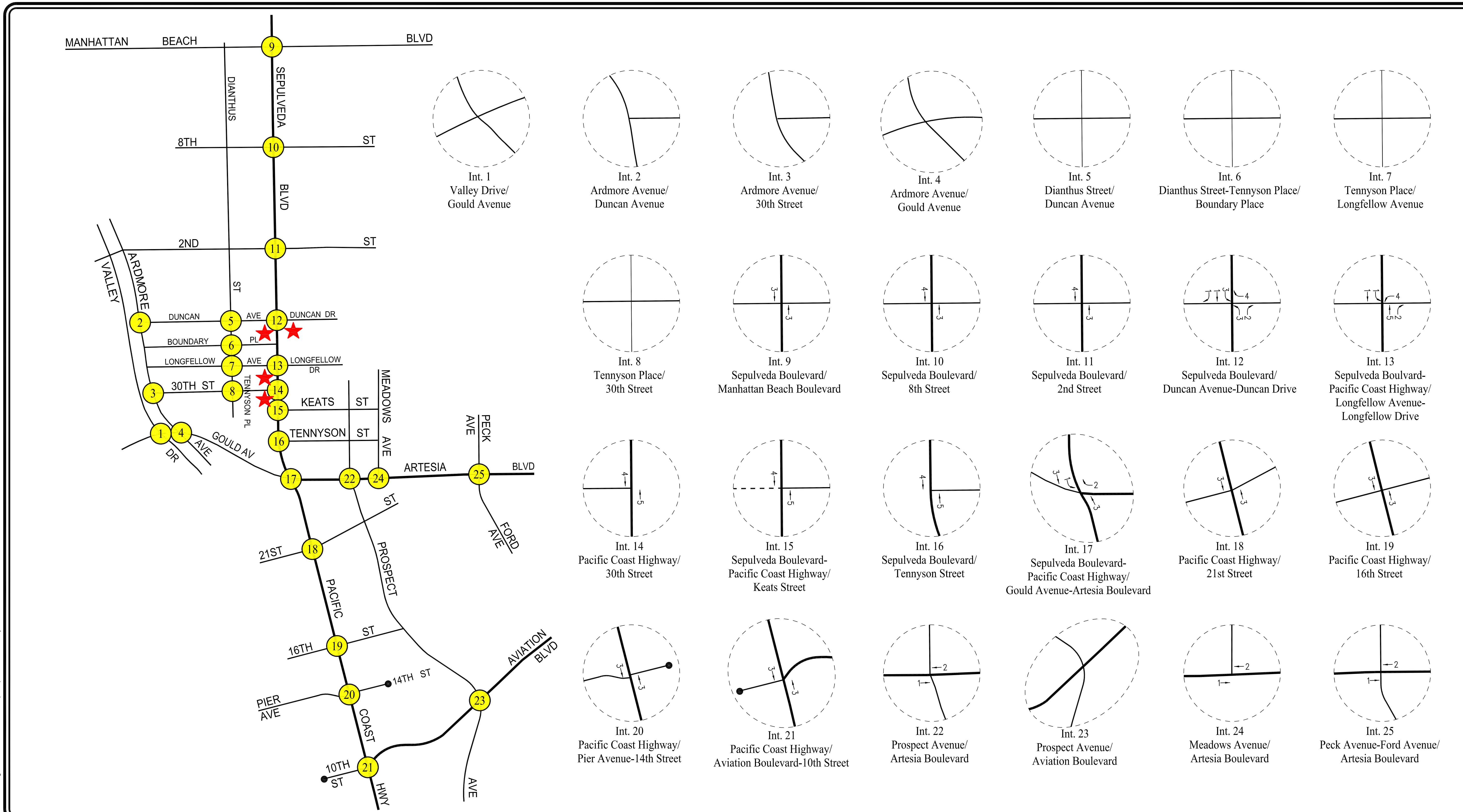


CITY TRAFFIC COUNTERS
www.ctcounters.com

File Name : Peck-Ford_Artesia_BP
Site Code : 00000000
Start Date : 3/9/2016
Page No : 3

	Pacific Coast Hwy Southbound			21st Street Westbound			Pacific Coast Hwy Northbound			21st Street Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:45 PM													
05:45 PM	0	**2**	2	0	3	3	0	1	1	0	0	0	6
06:00 PM	0	2	2	0	**4**	**4**	0	0	0	0	0	0	6
06:15 PM	1	1	2	**1**	1	2	**2**	2	4	0	1	1	9
06:30 PM	**2**	1	**3**	1	2	3	0	**6**	**6**	**2**	**3**	**5**	**17**
Total Volume	3	6	9	2	10	12	2	9	11	2	4	6	38
% App. Total	33.3	66.7		16.7	83.3		18.2	81.8		33.3	66.7		
PHF	.375	.750	.750	.500	.625	.750	.250	.375	.458	.250	.333	.300	.559



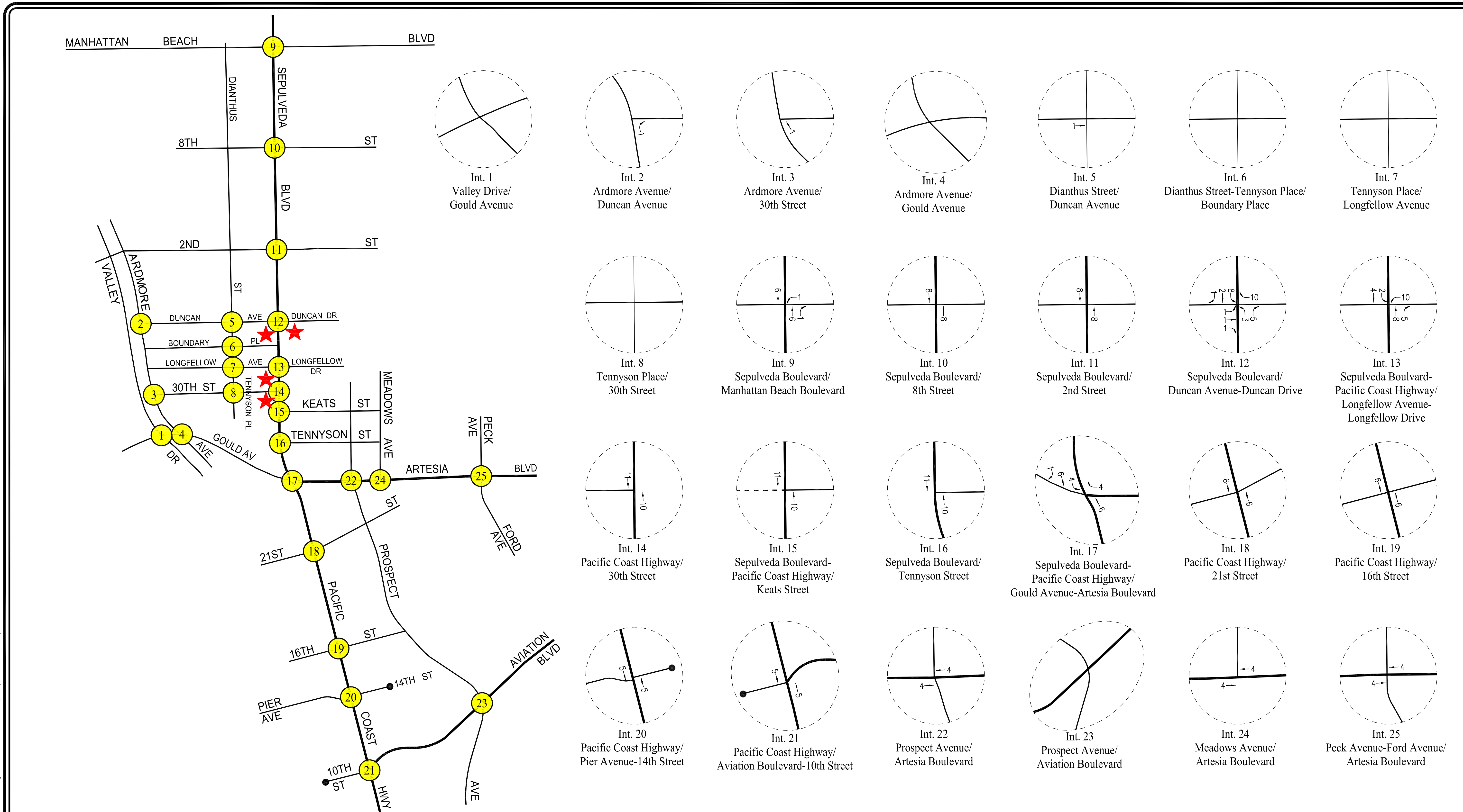


N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE B-1
ON-SITE VACANT USE TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT



NOT TO SCALE

PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE B-2
ON-SITE VACANT USE TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\appf-a-2.dwg LDP 17:52:49 07/27/2016 turney

DRIVEWAY STUDY SUMMARY - RESULTS

CLIENT: LLG - PASADENA
PROJECT: SKECHERS - CITY OF MANHATTAN BEACH
DATE: WEDNESDAY, MARCH 02, 2016
PERIOD: 07:00 AM TO 09:00 AM
04:00 PM TO 06:00 PM

	LOCATION B - SUBTERRANEAN				LOCATION B - SURFACE LOT				LOCATION C		LOCATION D				LOCATION E - NORTH LOT				E - SOUTH LOT		LOCATION F - NORTH LOT			
15-MIN	INBOUND		OUTBOUND		INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND		INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND	
PERIOD	WBRT	EBLT	SBRT	SBLT	WBRT	EBLT	SBRT	SBLT	NBRT	WBRT	WBRT	EBLT	SBRT	SBLT	WBRT	EBLT	SBRT	SBLT	SBRT	EBRT	WBRT	EBLT	SBRT	SBLT
0700-0715	7	1	0	0	1	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3	0	0	0
0715-0730	8	2	1	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	5	0	0	0
0730-0745	9	2	1	0	3	0	1	0	1	0	5	3	0	0	0	0	0	0	1	0	4	0	0	0
0745-0800	9	5	1	0	1	0	0	2	2	1	7	0	0	0	0	0	0	0	0	0	3	0	0	0
0800-0815	9	3	0	0	1	1	1	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0
0815-0830	11	1	0	0	1	0	2	0	0	1	5	3	0	0	0	0	0	0	1	0	0	0	0	0
0830-0845	8	2	0	0	3	1	1	0	2	0	15	4	1	0	0	0	0	0	1	0	1	0	1	0
0845-0900	11	4	0	0	3	0	1	0	4	1	15	2	0	0	2	0	0	0	1	0	0	0	0	0

	LOCATION G - SOUTH LOT				LOCATION H - NORTH				H - SOUTH		LOCATION I - NORTH *				I - MID BLK		I - SOUTH				TOTAL AM			Hourly	Hourly	Hourly	
15-MIN	INBOUND		OUTBOUND		INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND								
PERIOD	WBLT	EBRT	NBRT	NBLT	SBRT	NBLT	EBRT	EBLT	SBRT	EBRT	WBLT	EBRT	NBRT	NBLT	SBRT	EBRT	WBRT	EBLT	SBRT	SBLT	IN	OUT	TOTAL	IN	OUT	TOTAL	HOUR
0700-0715	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	17	1	**18**				
0715-0730	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	0	19	6	**25**				
0730-0745	5	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	35	3	**38**				
0745-0800	7	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	36	5	**41**	107	15	122	7:00-8:00AM
0800-0815	8	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	30	2	**32**	120	16	136	7:15-8:15AM
0815-0830	10	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	35	5	**40**	136	15	151	7:30-8:30AM
0830-0845	6	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	45	3	**48**	146	15	161	7:45-8:45AM
0845-0900	8	3	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	55	3	**58**	165	13	178	8:00-9:00AM

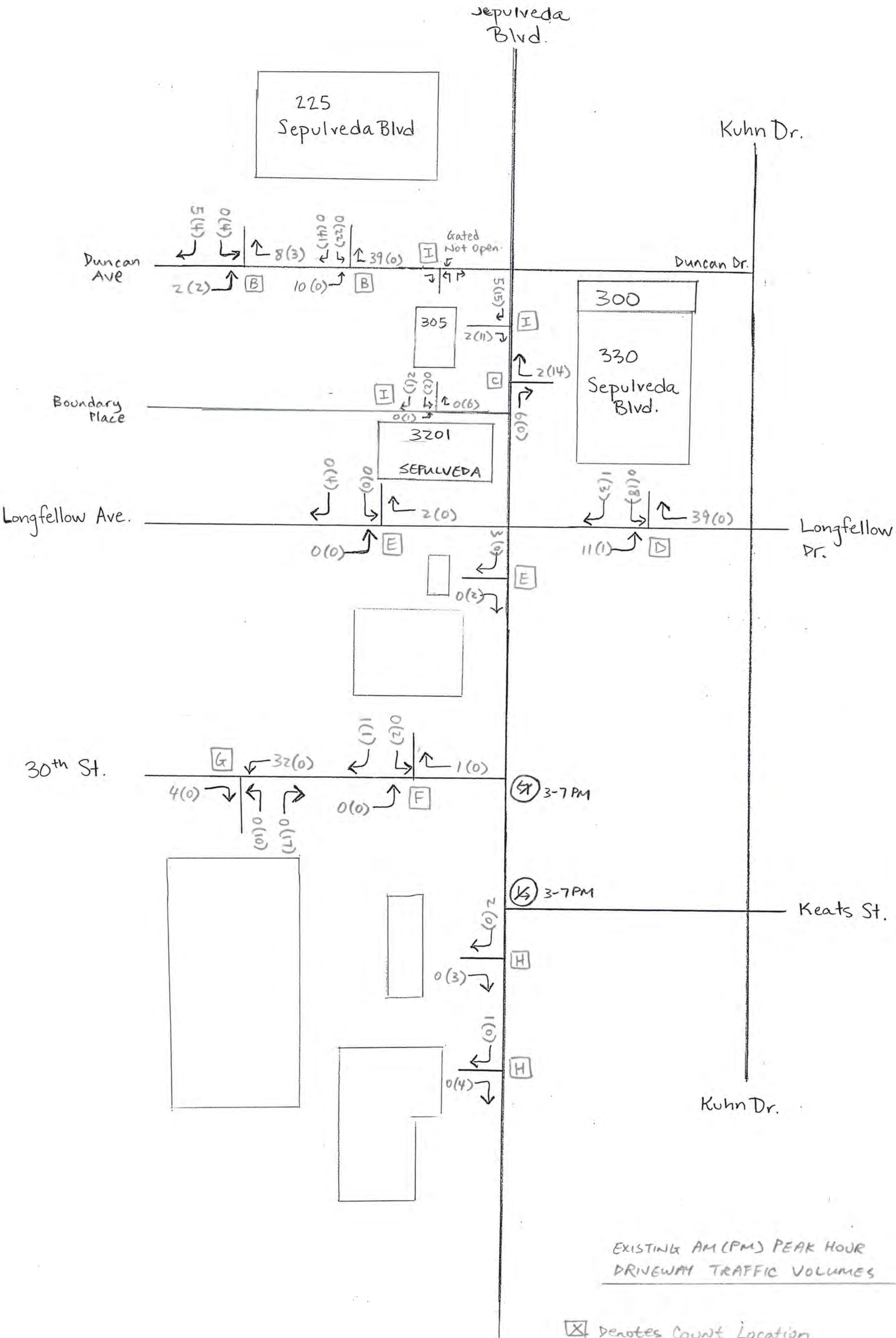
	LOCATION B - SUBTERRANEAN				LOCATION B - SURFACE LOT				LOCATION C		LOCATION D				LOCATION E - NORTH LOT				E - SOUTH LOT		LOCATION F - NORTH LOT			
15-MIN	INBOUND		OUTBOUND		INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND		INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND	
PERIOD	WBRT	EBLT	SBRT	SBLT	WBRT	EBLT	SBRT	SBLT	NBRT	WBRT	WBRT	EBLT	SBRT	SBLT	WBRT	EBLT	SBRT	SBLT	SBRT	EBRT	WBRT	EBLT	SBRT	SBLT
0400-0415	0	0	4	4	0	2	0	0	0	1	0	2	0	0	1	0	0	0	0	0	0	0	1	3
0415-0430	0	0	2	4	0	2	3	2	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	1
0430-0445	0	2	8	3	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5
0445-0500	0	0	5	2	2	1	0	2	0	1	1	1	1	0	0	0	0	0	0	1	0	0	0	1
0500-0515	0	0	15	5	0	1	0	2	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0
0515-0530	0	0	5	5	2	0	1	0	0	4	0	1	0	3	0	0	0	0	0	1	0	0	1	1
0530-0545	0	0	9	5	0	1	1	1	0	2	0	0	1	6	0	0	1	0	0	1	0	0	0	0
0545-0600	0	0	12	7	1	0	2	1	0	3	0	0	2	4	0	0	3	0	0	0	0	0	0	1

	LOCATION G - SOUTH LOT				LOCATION H - NORTH				H - SOUTH		LOCATION I - NORTH *				I - MID BLK		I - SOUTH				TOTAL PM			Hourly	Hourly	Hourly	
15-MIN	INBOUND		OUTBOUND		INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND		IN	OUT	INBOUND		OUTBOUND								
PERIOD	WBLT	EBRT	NBRT	NBLT	SBRT	NBLT	EBRT	EBLT	SBRT	EBRT	WBLT	EBRT	NBRT	NBLT	SBRT	EBRT	WBRT	EBLT	SBRT	SBLT	IN	OUT	TOTAL	IN	OUT	TOTAL	HOUR
0400-0415	0	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	18	**23**				
0415-0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	9	15	**24**				
0430-0445	0	0	2	2	0	0	1	0	0	2	0	0	0	0	1	0	0	0	0	1	8	29	**37**				
0445-0500	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	7	20	**27**	29	82	111	4:00-5:00PM
0500-0515	0	0	3	4	0	0	0	0	0	0	0	0	0	0	5	1	1	0	0	0	7	40	**47**	31	104	135	4:15-5:15PM
0515-0530	0	0	1	4	0	0	2	0	0	0	0	0	0	0	4	4	4	0	0	0	11	32	**43**	33	121	154	4:30-5:30PM
0530-0545	0	0	9	2	0	0	1	0	0	2	0	0	0	0	2	1	0	1	1	0	4	43	**47**	29	135	164	4:45-5:45PM
0545-0600	0	0	4	0	0	0	0	0	0	2	0	0	0	0	4	5	1	0	0	2	6	48	**54**	28	163	191	5:00-6:00PM

LOCATION B - SEPULVEDA BOULEVARD / DUNCAN AVENUE (No observed Skechers Street Parking)
LOCATION C - 330 SO. SEPULVEDA BOULEVARD
LOCATION D - LONGFELLOW AVENUE
LOCATION E - SEPULVEDA BOULEVARD / LONGFELLOW AVENUE (No observed Skechers Street Parking)
LOCATION F - NORTHWEST LOT - 30TH ST/ SEPULVEDA BLVD (No observed Skechers Street Parking)
LOCATION G - 30TH STREET (SOUTH) (No observed Skechers Street Parking)
LOCATION H - DRIVEWAYS WEST OF SEPULVEDA BOULEVARD
LOCATION I - 305 S. SEPULVEDA BOULEVARD (North Gate closed during observations)

OBSERVED SKECHERS PARKING / KUHN STREET	
7 AM-9 AM	4 PM-6 PM
07:35 AM	04:08 PM
08:08 AM	04:22 PM
08:42 AM	
08:49 AM	
08:56 AM	

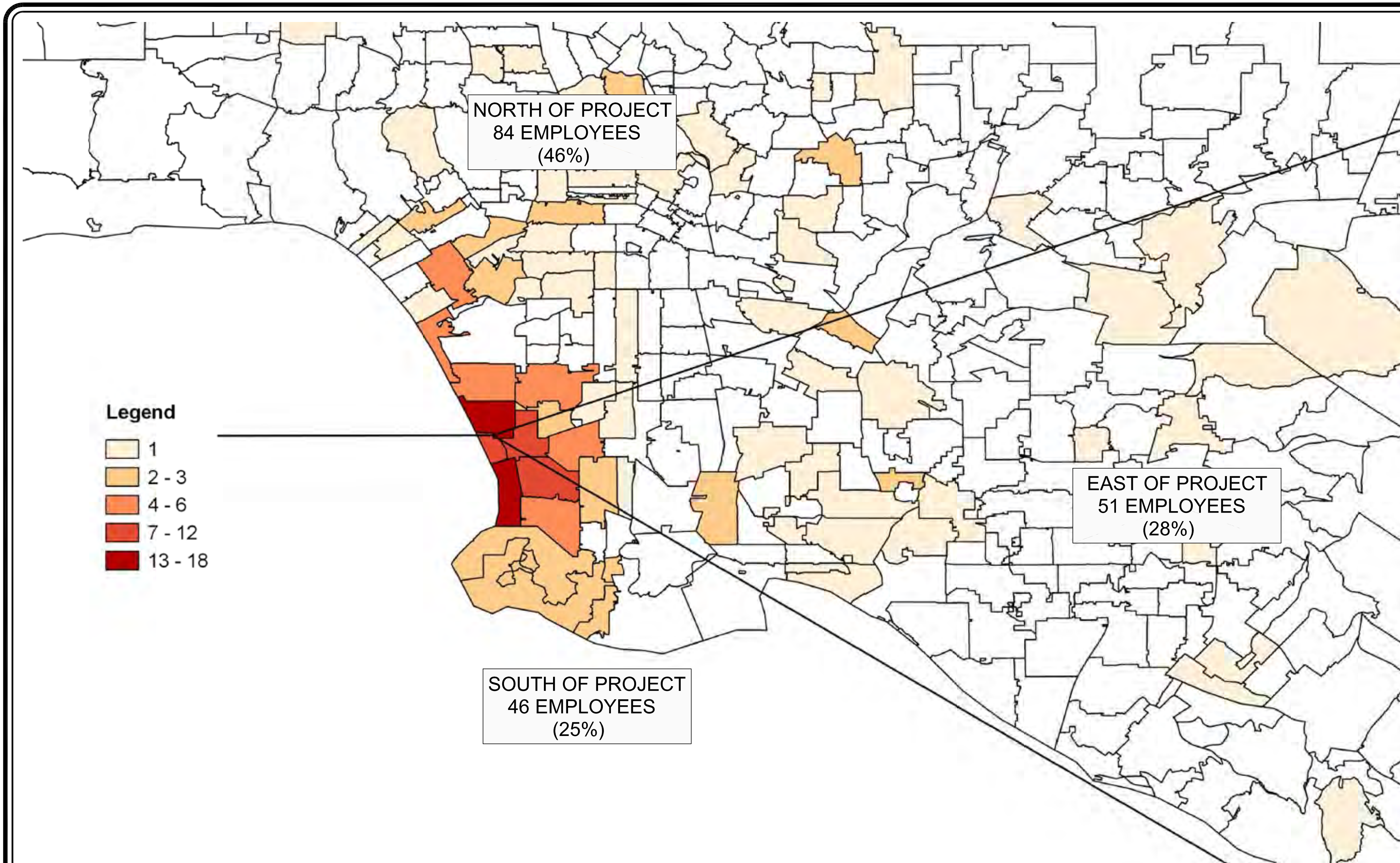
THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978 PHONE



MAR 2016 COUNTS

APPENDIX C

SPATIAL DISTRIBUTION OF EXISTING SKECHERS EMPLOYEES



MAP SOURCE: US CENSUS ZIP CODE BOUNDARIES; QGIS

NOT TO SCALE

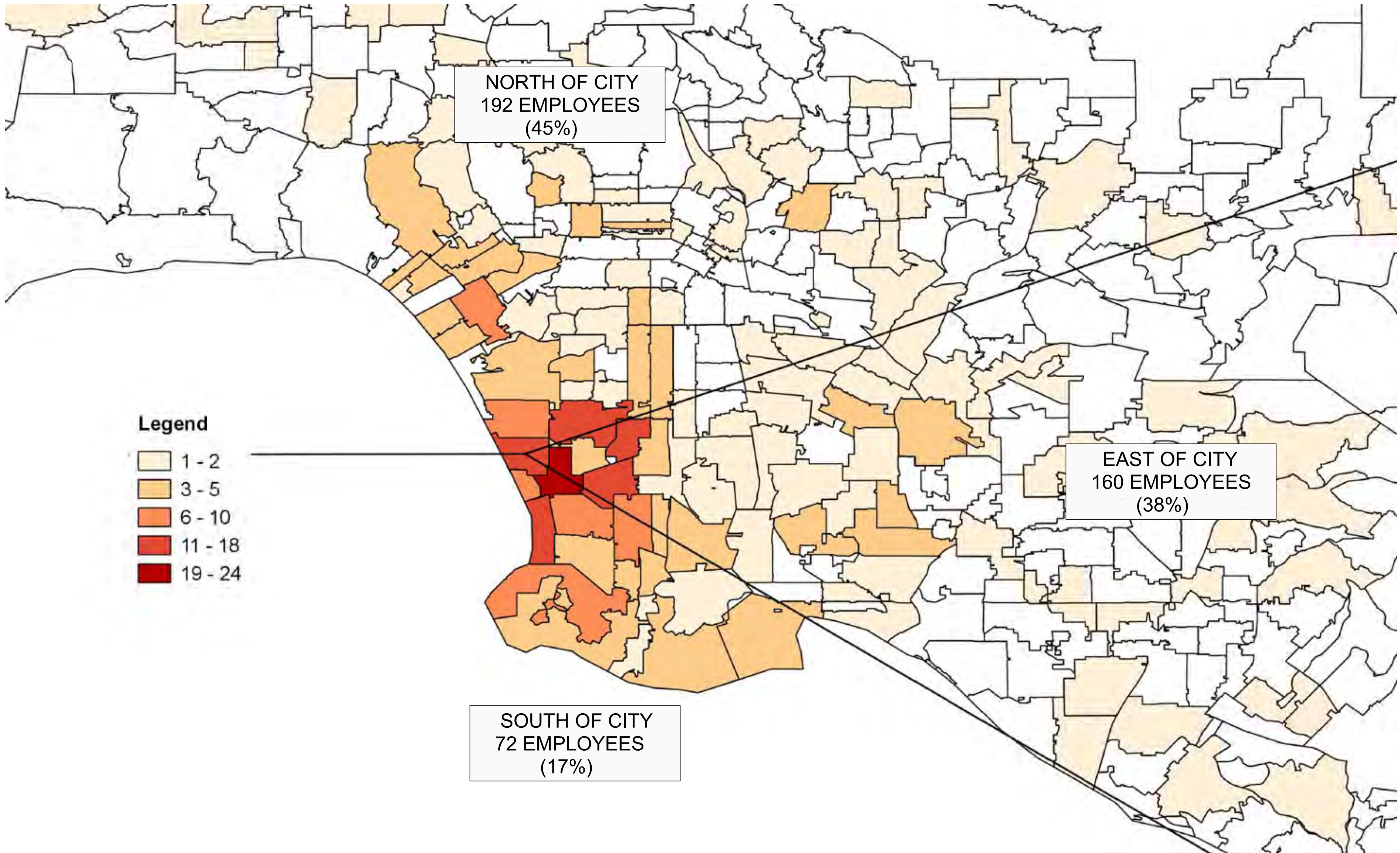
APPENDIX FIGURE C-1
SPATIAL DISTRIBUTION OF EMPLOYEES BY ZIP CODE

330 SOUTH SEPULVEDA BOULEVARD BUILDING EMPLOYEE DATA

SKECHERS DESIGN CENTER AND OFFICES PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4065-2\dwg\appf-c-1.dwg LDP 11:20:08 05/22/2016 rodriquez



MAP SOURCE: US CENSUS ZIP CODE BOUNDARIES; QGIS

N
NOT TO SCALE

APPENDIX FIGURE C-2
SPATIAL DISTRIBUTION OF EMPLOYEES BY ZIP CODE

ALL MANHATTAN BEACH EMPLOYEE DATA

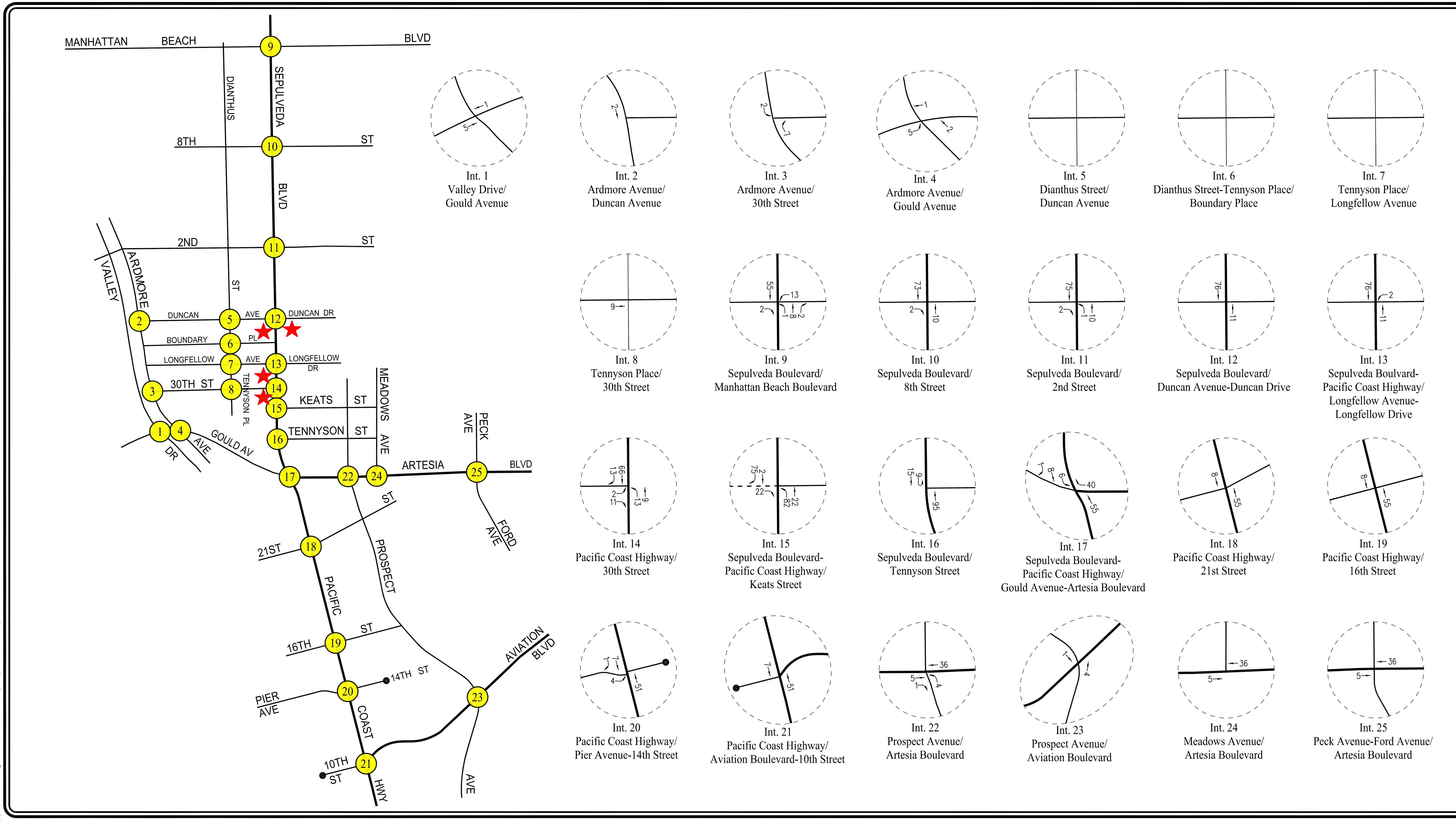
SKECHERS DESIGN CENTER AND OFFICES PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4065-2\dwg\appf-c-2.dwg LDP 11:22:45 05/22/2016 rodriquez

APPENDIX D

HERMOSA BEACH ONLY AND MANHATTAN BEACH PROJECTS ONLY TRAFFIC VOLUME FIGURES



NOT TO SCALE

PROJECT SITE

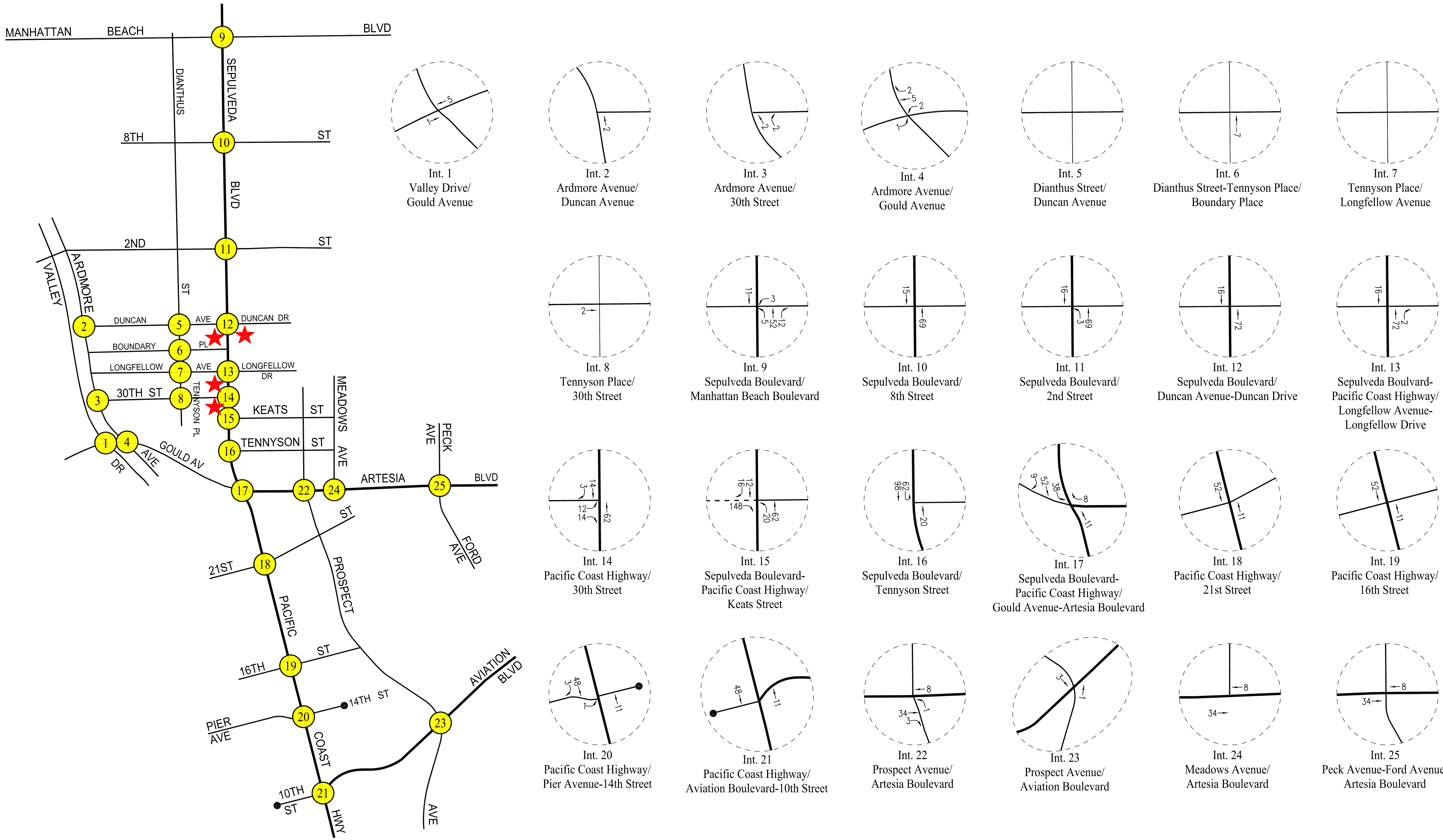
LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-1A

HERMOSA BEACH PROJECT ONLY TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



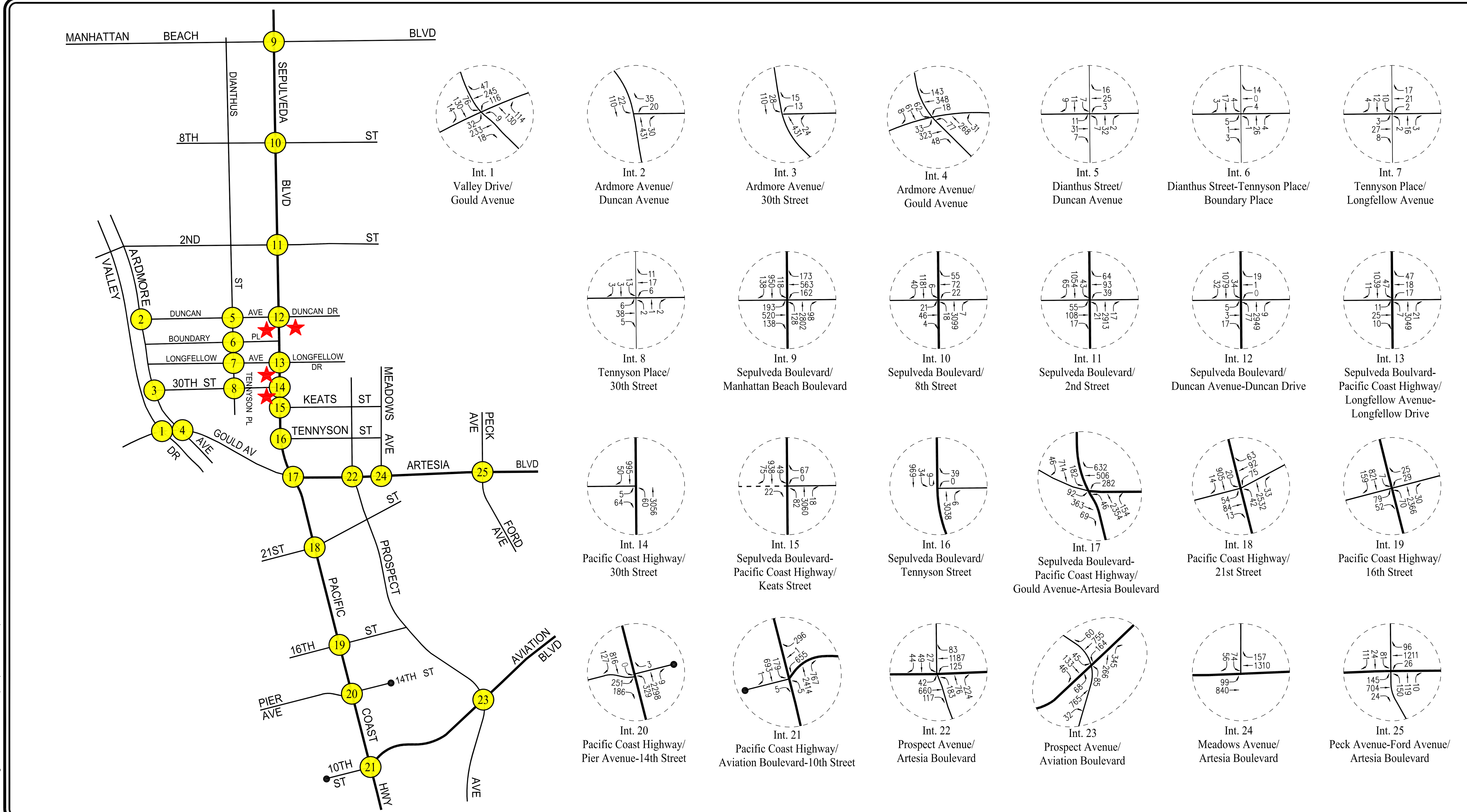
NOT TO SCALE

PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-1B
HERMOSA BEACH PROJECT ONLY TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\appf-d-1b.dwg LDP 12:50:55 05/22/2016 rodriquez



LINSCOTT, LAW & GREENSPAN, engineers

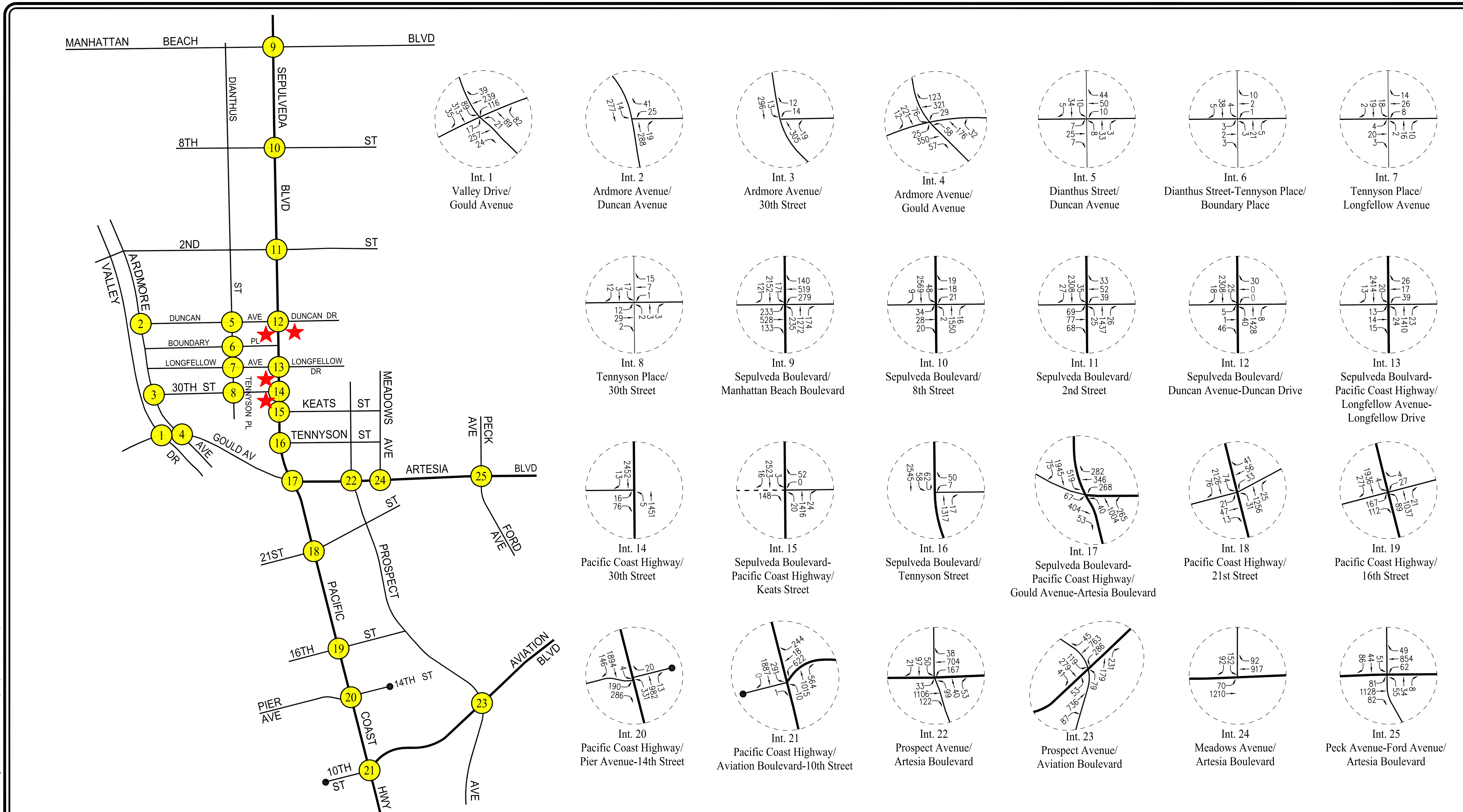
APPENDIX FIGURE D-1C

EXISTING WITH HERMOSA BEACH PROJECT ONLY TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\appf-d-1c.dwg LDP 12:52:57 05/22/2016 rodriquez



NOT TO SCALE

PROJECT SITE

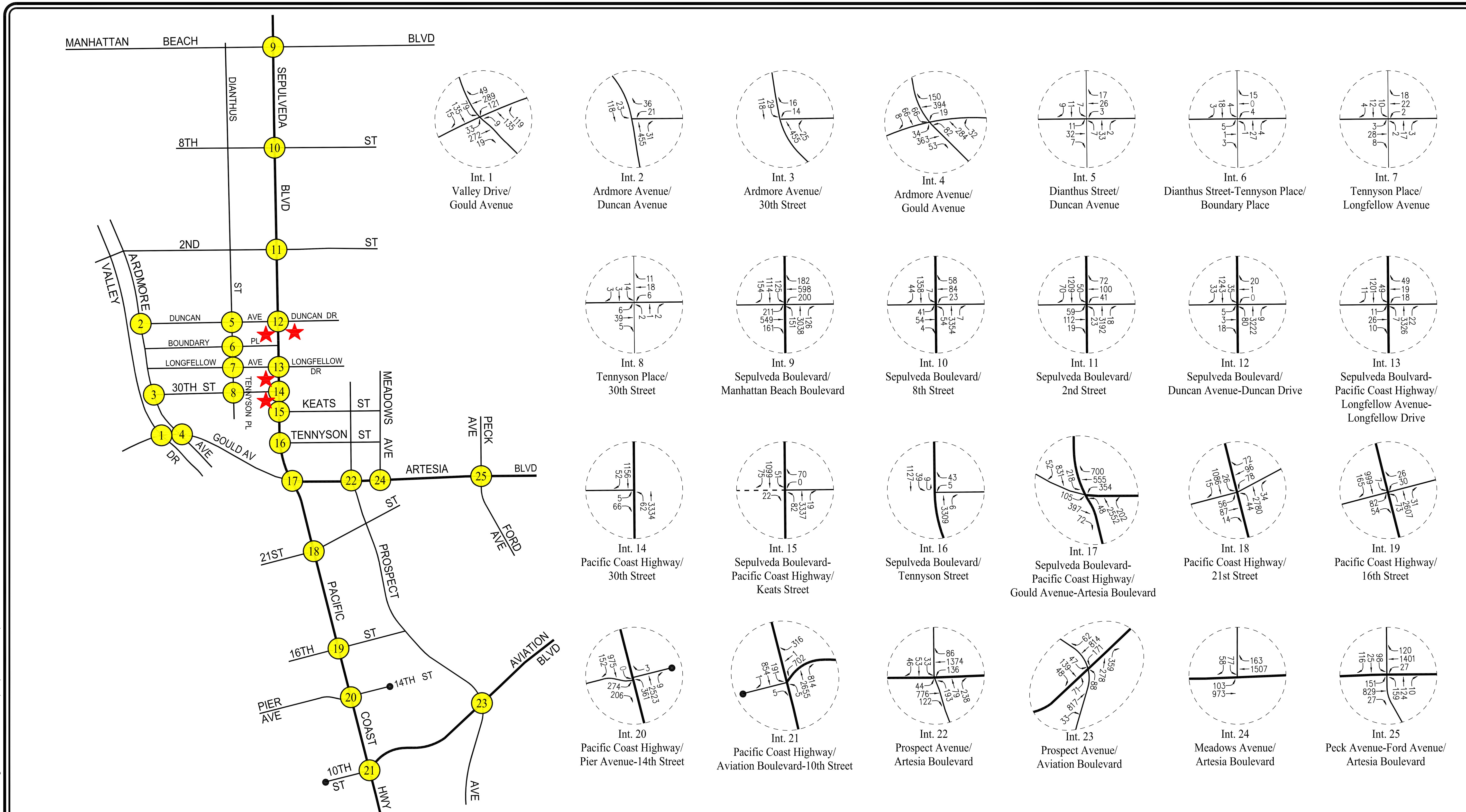
LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-1D

EXISTING WITH HERMOSA BEACH PROJECT ONLY TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



N
NOT TO SCALE

★ PROJECT SITE

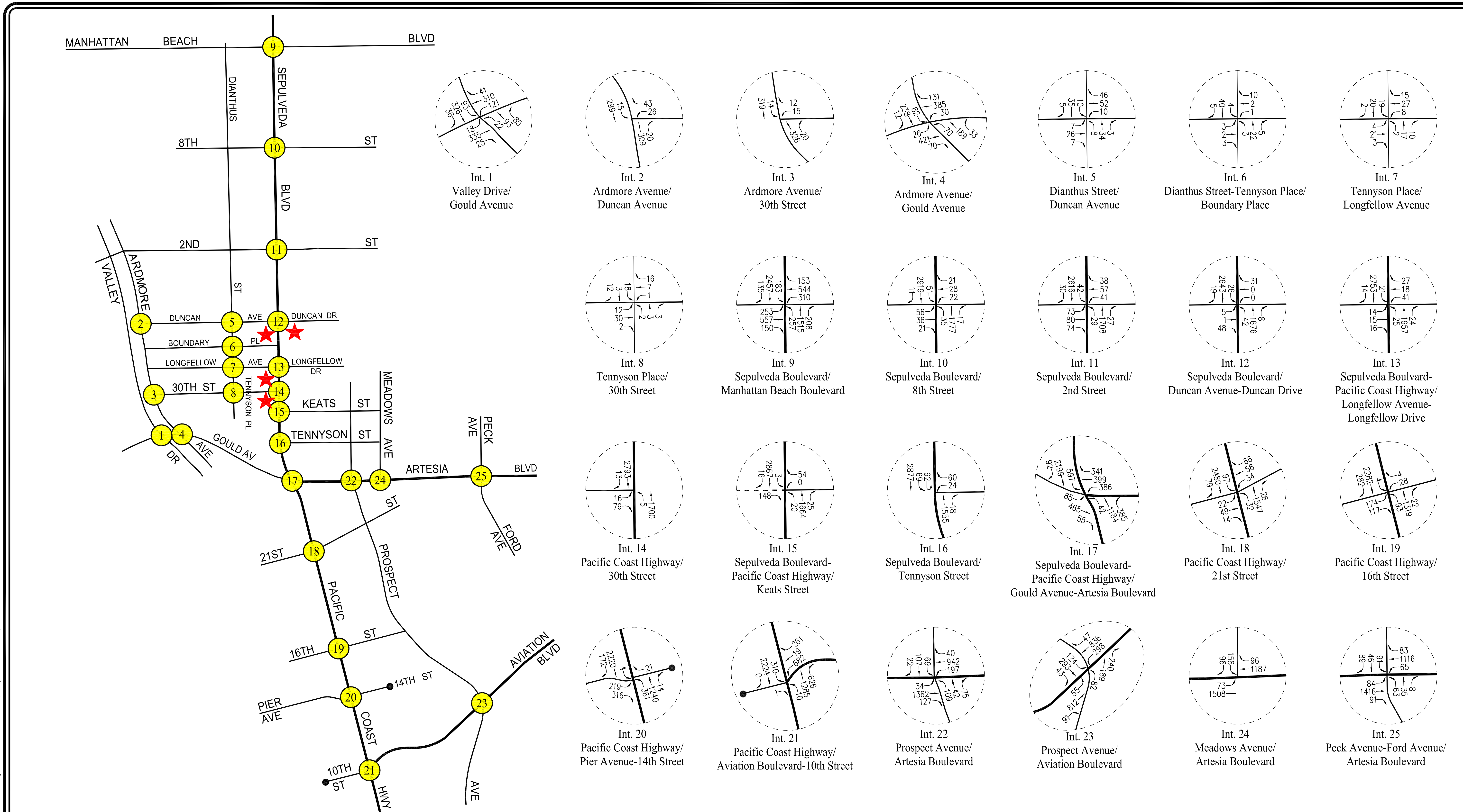
LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-1E

FUTURE WITH HERMOSA BEACH PROJECT ONLY TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



LINSCOTT, LAW & GREENSPAN, engineers

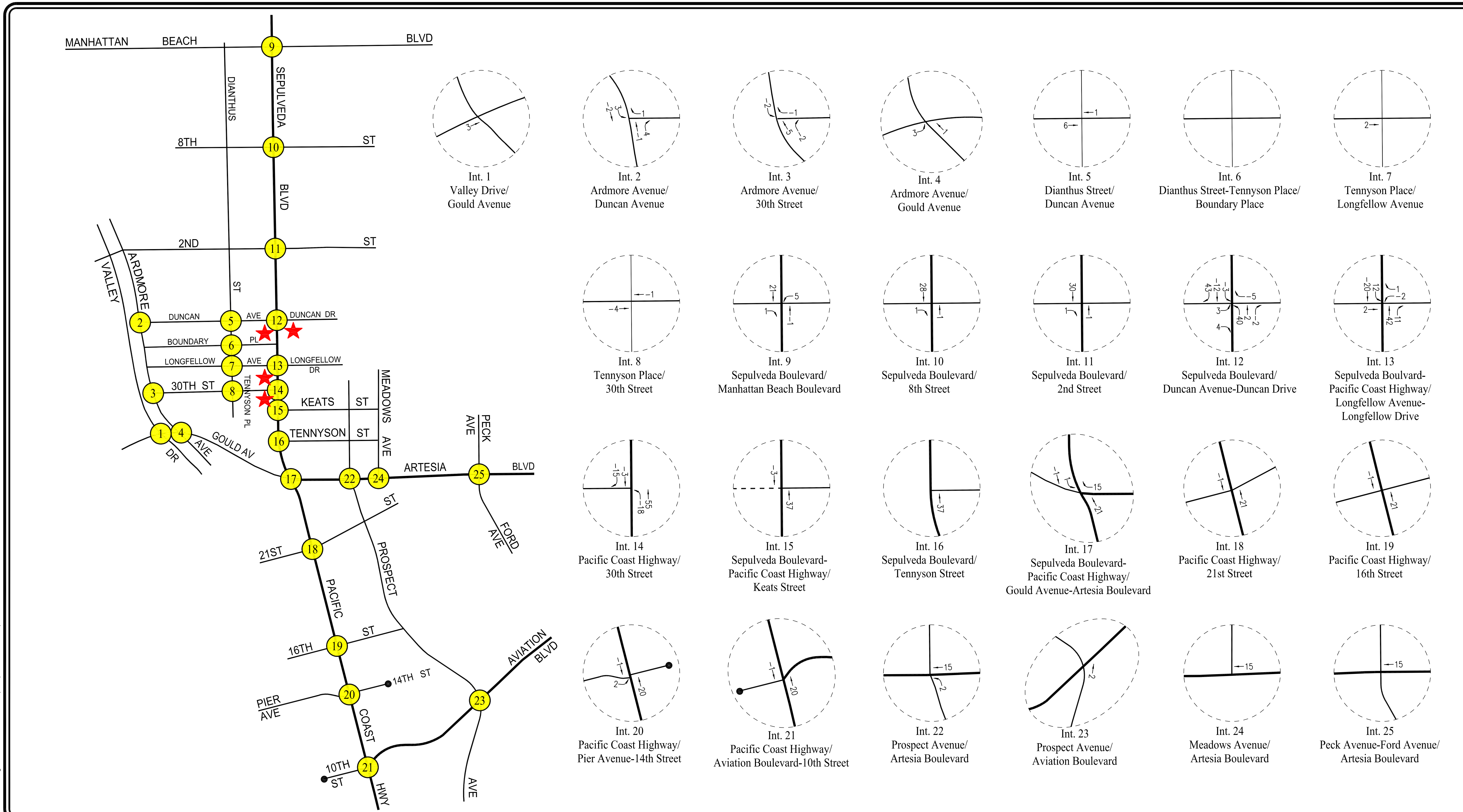
APPENDIX FIGURE D-1F

FUTURE WITH HERMOSA BEACH PROJECT ONLY TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\appf-d-1f.dwg LDP 12:58:18 05/22/2016 rodriquez

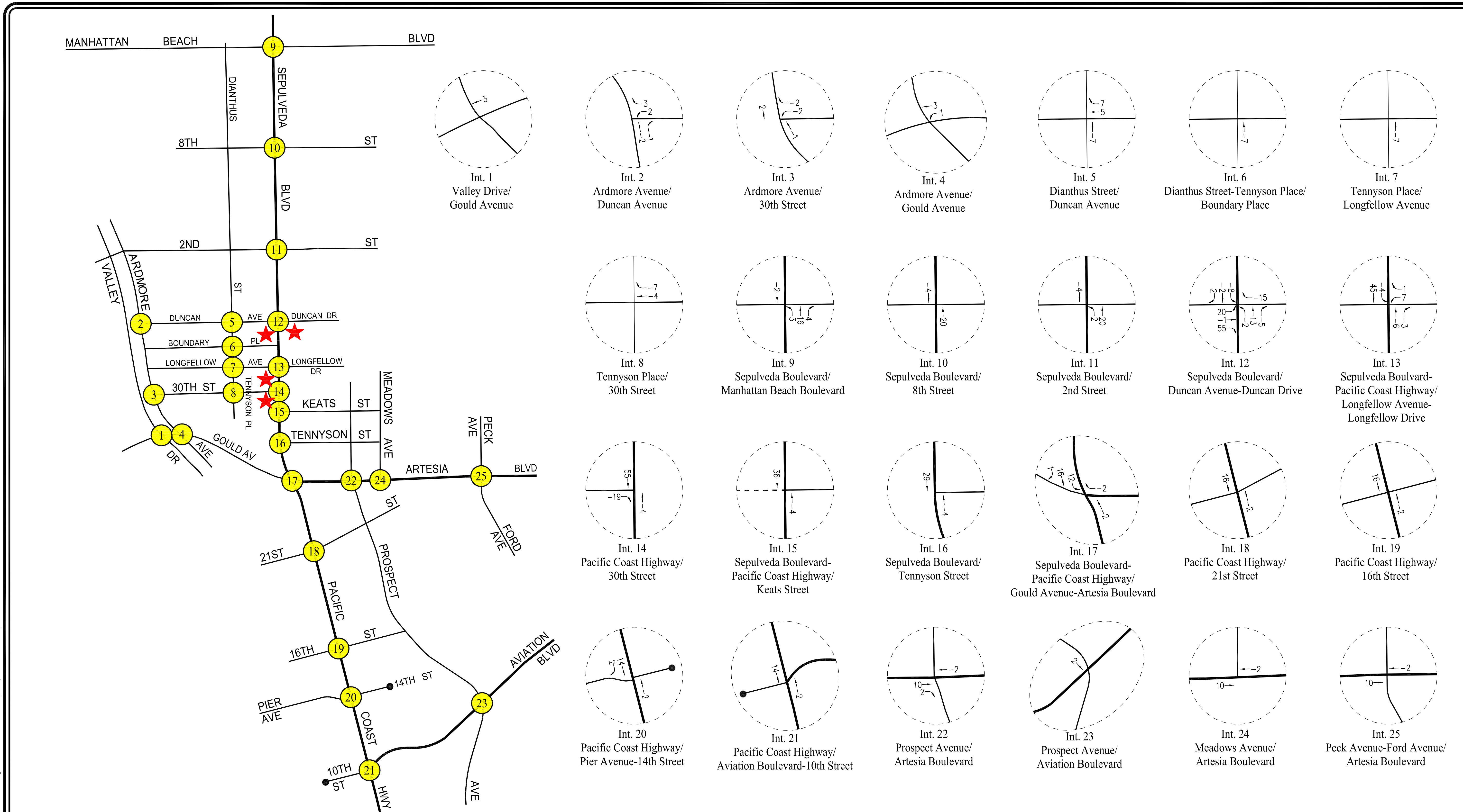


N
NOT TO SCALE

★ PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-2A
MANHATTAN BEACH PROJECTS ONLY TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
SKECHERS DESIGN CENTER AND OFFICES PROJECT



N
NOT TO SCALE

PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

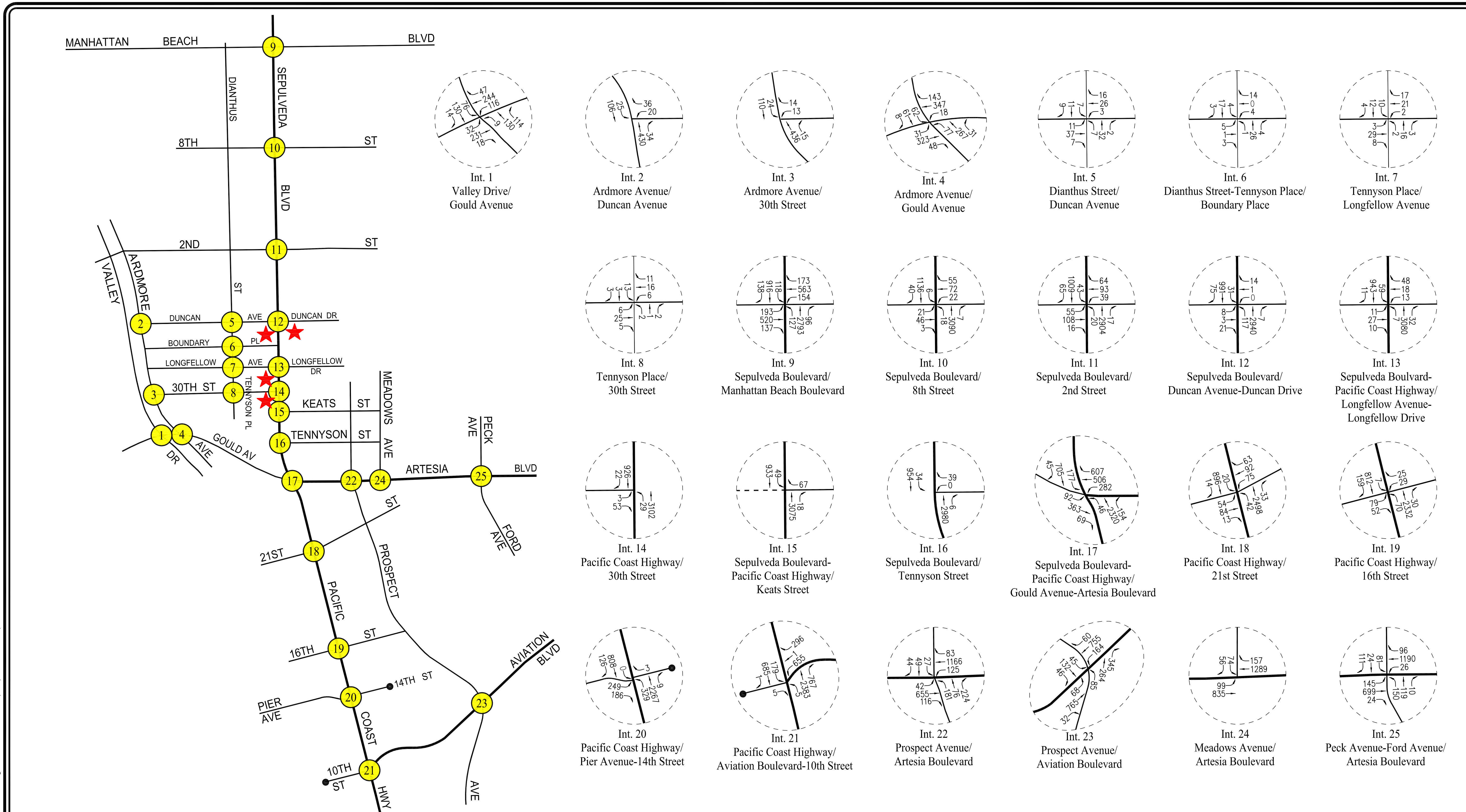
APPENDIX FIGURE D-2B

MANHATTAN BEACH PROJECTS ONLY TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\appf-d-2b.dwg LDP 13:16:21 05/22/2016 rodriquez



NOT TO SCALE

PROJECT SITE

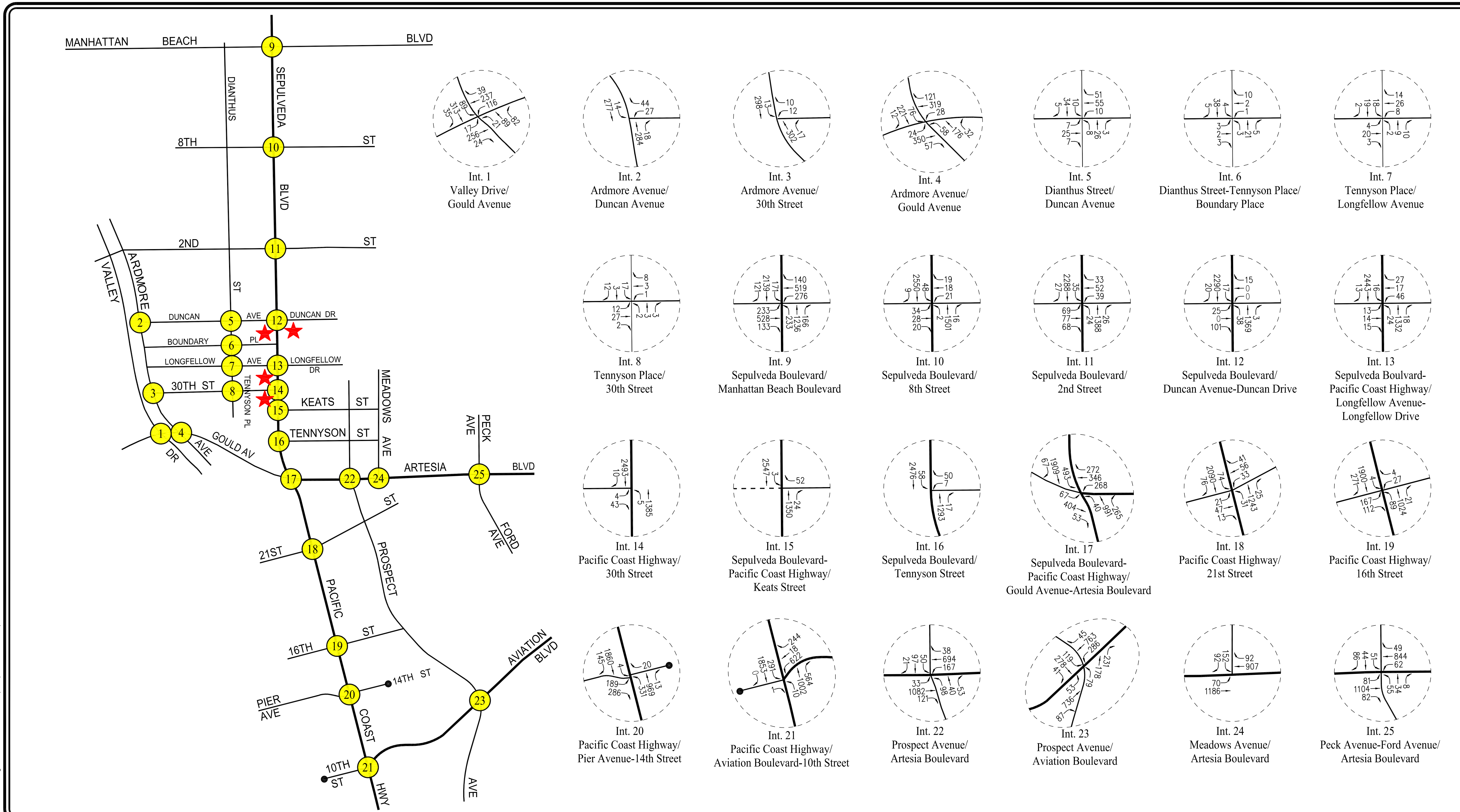
LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-2C

EXISTING WITH MANHATTAN BEACH PROJECT ONLY TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



N
NOT TO SCALE

PROJECT SITE

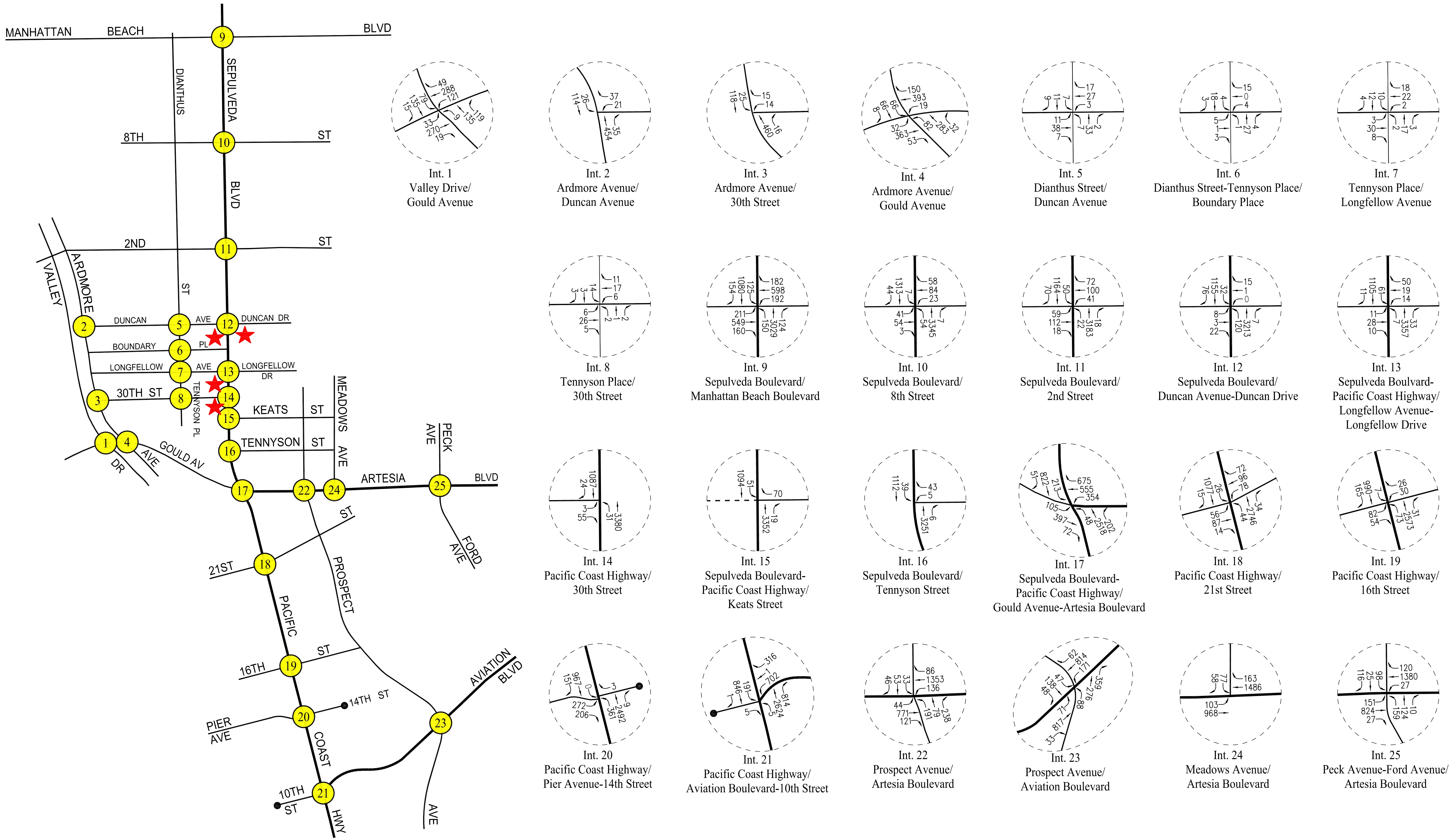
LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-2D

EXISTING WITH MANHATTAN BEACH PROJECTS ONLY TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT



LINSCOTT, LAW & GREENSPAN, engineers

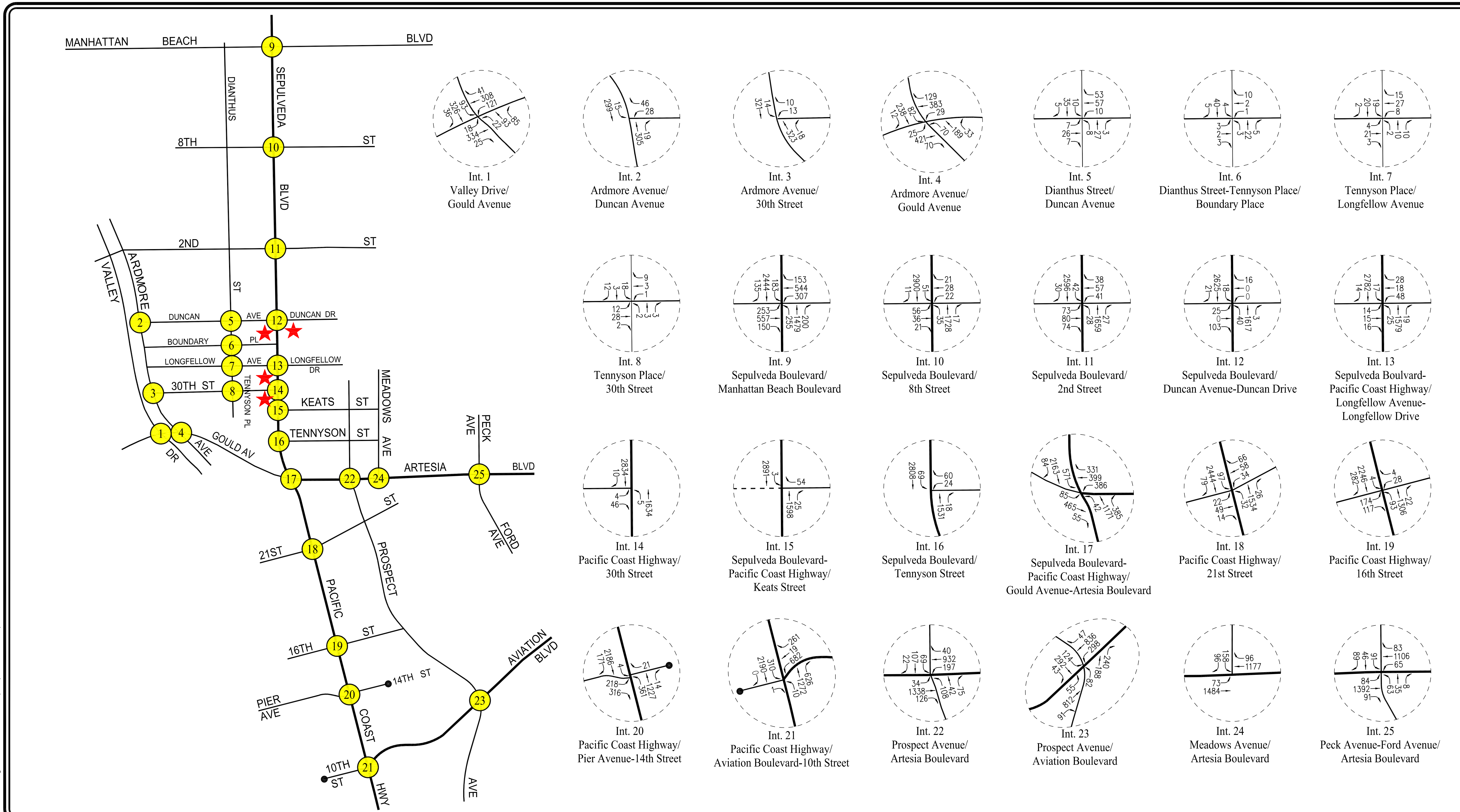
APPENDIX FIGURE D-2E

FUTURE WITH MANHATTAN BEACH PROJECTS ONLY TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

o:\job_file\4065-2\dwg\appf-d-2e.dwg LDP 13:39:23 05/22/2016 rodriquez



LINSCOTT, LAW & GREENSPAN, engineers

APPENDIX FIGURE D-2F

FUTURE WITH MANHATTAN BEACH PROJECT ONLY TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

SKECHERS DESIGN CENTER AND OFFICES PROJECT

APPENDIX E

COMBINED PROJECT
ICU AND LEVELS OF SERVICE EXPLANATION
HCM AND LEVELS OF SERVICE EXPLANATION
INTERSECTION LEVELS OF SERVICE DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	32	228	18	0	116	244	47	0	9	130	114
Future Vol, veh/h	0	32	228	18	0	116	244	47	0	9	130	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	253	20	0	129	271	52	0	10	144	127
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	19.8	18.8	17.3
HCM LOS	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	12%	0%	100%	0%	35%
Vol Thru, %	51%	88%	0%	0%	84%	59%
Vol Right, %	45%	0%	100%	0%	16%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	253	260	18	116	291	220
LT Vol	9	32	0	116	0	76
Through Vol	130	228	0	0	244	130
RT Vol	114	0	18	0	47	14
Lane Flow Rate	281	289	20	129	323	244
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.529	0.593	0.037	0.273	0.628	0.486
Departure Headway (Hd)	6.775	7.389	6.605	7.621	6.991	7.154
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	528	485	539	469	514	501
Service Time	4.859	5.173	4.388	5.403	4.773	5.242
HCM Lane V/C Ratio	0.532	0.596	0.037	0.275	0.628	0.487
HCM Control Delay	17.3	20.5	9.6	13.3	21	16.9
HCM Lane LOS	C	C	A	B	C	C
HCM 95th-tile Q	3.1	3.8	0.1	1.1	4.3	2.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	76	130	14
Future Vol, veh/h	0	76	130	14
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	84	144	16
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	16.9
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	26.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	17	256	24	0	116	234	39	0	21	89	82
Future Vol, veh/h	0	17	256	24	0	116	234	39	0	21	89	82
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	18	264	25	0	120	241	40	0	22	92	85
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	21.9	19.3	16
HCM LOS	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	11%	6%	0%	100%	0%	20%
Vol Thru, %	46%	94%	0%	0%	86%	72%
Vol Right, %	43%	0%	100%	0%	14%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	192	273	24	116	273	437
LT Vol	21	17	0	116	0	89
Through Vol	89	256	0	0	234	313
RT Vol	82	0	24	0	39	35
Lane Flow Rate	198	281	25	120	281	451
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.417	0.622	0.049	0.276	0.601	0.86
Departure Headway (Hd)	7.581	7.957	7.2	8.305	7.684	7.02
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	475	456	498	434	470	518
Service Time	5.621	5.687	4.929	6.034	5.413	5.02
HCM Lane V/C Ratio	0.417	0.616	0.05	0.276	0.598	0.871
HCM Control Delay	16	22.9	10.3	14.2	21.4	39.4
HCM Lane LOS	C	C	B	B	C	E
HCM 95th-tile Q	2	4.1	0.2	1.1	3.9	9.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	89	313	35
Future Vol, veh/h	0	89	313	35
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	92	323	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	39.4
HCM LOS	E

Lane

Intersection	
Intersection Delay, s/veh	18.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	32	236	18	0	116	245	47	0	9	130	114
Future Vol, veh/h	0	32	236	18	0	116	245	47	0	9	130	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	262	20	0	129	272	52	0	10	144	127
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	20.6	19	17.5
HCM LOS	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	4%	12%	0%	100%	0%	35%
Vol Thru, %	51%	88%	0%	0%	84%	59%
Vol Right, %	45%	0%	100%	0%	16%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	253	268	18	116	292	220
LT Vol	9	32	0	116	0	76
Through Vol	130	236	0	0	245	130
RT Vol	114	0	18	0	47	14
Lane Flow Rate	281	298	20	129	324	244
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.533	0.613	0.037	0.274	0.633	0.489
Departure Headway (Hd)	6.825	7.406	6.624	7.658	7.028	7.206
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	526	485	537	467	509	496
Service Time	4.912	5.192	4.409	5.444	4.814	5.297
HCM Lane V/C Ratio	0.534	0.614	0.037	0.276	0.637	0.492
HCM Control Delay	17.5	21.3	9.7	13.3	21.3	17.1
HCM Lane LOS	C	C	A	B	C	C
HCM 95th-tile Q	3.1	4	0.1	1.1	4.4	2.6

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	76	130	14
Future Vol, veh/h	0	76	130	14
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	84	144	16
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	17.1
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	27.3
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	17	257	24	0	116	242	39	0	21	89	82
Future Vol, veh/h	0	17	257	24	0	116	242	39	0	21	89	82
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	18	265	25	0	120	249	40	0	22	92	85
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	22.4	20	16.2
HCM LOS	C	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	11%	6%	0%	100%	0%	20%
Vol Thru, %	46%	94%	0%	0%	86%	72%
Vol Right, %	43%	0%	100%	0%	14%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	192	274	24	116	281	437
LT Vol	21	17	0	116	0	89
Through Vol	89	257	0	0	242	313
RT Vol	82	0	24	0	39	35
Lane Flow Rate	198	282	25	120	290	451
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.42	0.627	0.05	0.277	0.621	0.878
Departure Headway (Hd)	7.636	7.997	7.239	8.329	7.711	7.015
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	471	452	494	431	466	518
Service Time	5.704	5.756	4.998	6.088	5.47	5.065
HCM Lane V/C Ratio	0.42	0.624	0.051	0.278	0.622	0.871
HCM Control Delay	16.2	23.4	10.4	14.3	22.4	42.2
HCM Lane LOS	C	C	B	B	C	E
HCM 95th-tile Q	2	4.2	0.2	1.1	4.1	9.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	89	313	35
Future Vol, veh/h	0	89	313	35
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	92	323	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	42.2
HCM LOS	E

Lane

Intersection	
Intersection Delay, s/veh	25.3
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	33	267	19	0	121	288	49	0	9	135	119
Future Vol, veh/h	0	33	267	19	0	121	288	49	0	9	135	119
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	297	21	0	134	320	54	0	10	150	132
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	28.4	27.8	21.4
HCM LOS	D	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	11%	0%	100%	0%	34%
Vol Thru, %	51%	89%	0%	0%	85%	59%
Vol Right, %	45%	0%	100%	0%	15%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	263	300	19	121	337	229
LT Vol	9	33	0	121	0	79
Through Vol	135	267	0	0	288	135
RT Vol	119	0	19	0	49	15
Lane Flow Rate	292	333	21	134	374	254
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.605	0.732	0.042	0.304	0.783	0.556
Departure Headway (Hd)	7.455	7.908	7.127	8.149	7.527	7.862
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	482	457	501	441	479	458
Service Time	5.522	5.671	4.889	5.913	5.291	5.932
HCM Lane V/C Ratio	0.606	0.729	0.042	0.304	0.781	0.555
HCM Control Delay	21.4	29.5	10.2	14.5	32.6	20.4
HCM Lane LOS	C	D	B	B	D	C
HCM 95th-tile Q	3.9	5.9	0.1	1.3	7	3.3

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	79	135	15
Future Vol, veh/h	0	79	135	15
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	88	150	17
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	20.4
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	45.7
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	18	334	25	0	121	305	41	0	22	93	85
Future Vol, veh/h	0	18	334	25	0	121	305	41	0	22	93	85
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	19	344	26	0	125	314	42	0	23	96	88
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	43.3	34.1	20.1
HCM LOS	E	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	11%	5%	0%	100%	0%	20%
Vol Thru, %	47%	95%	0%	0%	88%	72%
Vol Right, %	42%	0%	100%	0%	12%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	352	25	121	346	455
LT Vol	22	18	0	121	0	93
Through Vol	93	334	0	0	305	326
RT Vol	85	0	25	0	41	36
Lane Flow Rate	206	363	26	125	357	469
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.497	0.862	0.056	0.311	0.83	1
Departure Headway (Hd)	8.674	8.549	7.793	8.985	8.378	7.985
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	414	428	462	403	435	460
Service Time	6.759	6.233	5.507	6.664	6.081	5.985
HCM Lane V/C Ratio	0.498	0.848	0.056	0.31	0.821	1.02
HCM Control Delay	20.1	45.6	11	15.7	40.6	70.9
HCM Lane LOS	C	E	B	C	E	F
HCM 95th-tile Q	2.7	8.6	0.2	1.3	7.9	13

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	93	326	36
Future Vol, veh/h	0	93	326	36
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	96	336	37
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	70.9
HCM LOS	F

Lane

Intersection	
Intersection Delay, s/veh	26.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	33	275	19	0	121	289	49	0	9	135	119
Future Vol, veh/h	0	33	275	19	0	121	289	49	0	9	135	119
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	306	21	0	134	321	54	0	10	150	132
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	30.2	28.5	21.7
HCM LOS	D	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	11%	0%	100%	0%	34%
Vol Thru, %	51%	89%	0%	0%	86%	59%
Vol Right, %	45%	0%	100%	0%	14%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	263	308	19	121	338	229
LT Vol	9	33	0	121	0	79
Through Vol	135	275	0	0	289	135
RT Vol	119	0	19	0	49	15
Lane Flow Rate	292	342	21	134	376	254
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.61	0.754	0.042	0.306	0.791	0.56
Departure Headway (Hd)	7.518	7.935	7.155	8.2	7.578	7.929
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	455	499	438	477	453
Service Time	5.587	5.699	4.918	5.964	5.342	6.002
HCM Lane V/C Ratio	0.61	0.752	0.042	0.306	0.788	0.561
HCM Control Delay	21.7	31.4	10.2	14.6	33.5	20.7
HCM Lane LOS	C	D	B	B	D	C
HCM 95th-tile Q	4	6.3	0.1	1.3	7.2	3.4

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	79	135	15
Future Vol, veh/h	0	79	135	15
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	88	150	17
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	20.7
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	46.8
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	18	335	25	0	121	313	41	0	22	93	85
Future Vol, veh/h	0	18	335	25	0	121	313	41	0	22	93	85
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	19	345	26	0	125	323	42	0	23	96	88
Number of Lanes	0	0	1	1	0	1	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	2
HCM Control Delay	44.2	36.5	20.3
HCM LOS	E	E	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	11%	5%	0%	100%	0%	20%
Vol Thru, %	47%	95%	0%	0%	88%	72%
Vol Right, %	42%	0%	100%	0%	12%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	353	25	121	354	455
LT Vol	22	18	0	121	0	93
Through Vol	93	335	0	0	313	326
RT Vol	85	0	25	0	41	36
Lane Flow Rate	206	364	26	125	365	469
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.5	0.868	0.056	0.312	0.852	1
Departure Headway (Hd)	8.732	8.589	7.832	9.009	8.403	8.034
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	412	426	460	403	434	455
Service Time	6.813	6.265	5.539	6.68	6.099	6.034
HCM Lane V/C Ratio	0.5	0.854	0.057	0.31	0.841	1.031
HCM Control Delay	20.3	46.6	11	15.7	43.6	71.2
HCM Lane LOS	C	E	B	C	E	F
HCM 95th-tile Q	2.7	8.7	0.2	1.3	8.4	13

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	93	326	36
Future Vol, veh/h	0	93	326	36
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	96	336	37
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	71.2
HCM LOS	F

Lane

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	20	35	0	431	30	0	22	108
Future Vol, veh/h	0	20	35	0	431	30	0	22	108
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	38	0	474	33	0	24	119
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.5	12.8	8.7
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	36%	17%
Vol Thru, %	93%	0%	83%
Vol Right, %	7%	64%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	461	55	130
LT Vol	0	20	22
Through Vol	431	0	108
RT Vol	30	35	0
Lane Flow Rate	507	60	143
Geometry Grp	1	1	1
Degree of Util (X)	0.578	0.084	0.184
Departure Headway (Hd)	4.22	5.026	4.625
Convergence, Y/N	Yes	Yes	Yes
Cap	861	716	779
Service Time	2.22	3.037	2.636
HCM Lane V/C Ratio	0.589	0.084	0.184
HCM Control Delay	12.8	8.5	8.7
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.8	0.3	0.7

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	25	41	0	286	19	0	14	277
Future Vol, veh/h	0	25	41	0	286	19	0	14	277
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	44	0	304	20	0	15	295
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.6	10.3	10.2
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	38%	5%
Vol Thru, %	94%	0%	95%
Vol Right, %	6%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	305	66	291
LT Vol	0	25	14
Through Vol	286	0	277
RT Vol	19	41	0
Lane Flow Rate	324	70	310
Geometry Grp	1	1	1
Degree of Util (X)	0.396	0.098	0.383
Departure Headway (Hd)	4.399	5.011	4.458
Convergence, Y/N	Yes	Yes	Yes
Cap	818	713	808
Service Time	2.425	3.052	2.483
HCM Lane V/C Ratio	0.396	0.098	0.384
HCM Control Delay	10.3	8.6	10.2
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.9	0.3	1.8

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	20	36	0	430	34	0	25	108
Future Vol, veh/h	0	20	36	0	430	34	0	25	108
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	40	0	473	37	0	27	119
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.5	12.9	8.7
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	36%	19%
Vol Thru, %	93%	0%	81%
Vol Right, %	7%	64%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	464	56	133
LT Vol	0	20	25
Through Vol	430	0	108
RT Vol	34	36	0
Lane Flow Rate	510	62	146
Geometry Grp	1	1	1
Degree of Util (X)	0.582	0.086	0.188
Departure Headway (Hd)	4.223	5.035	4.636
Convergence, Y/N	Yes	Yes	Yes
Cap	862	714	778
Service Time	2.223	3.045	2.647
HCM Lane V/C Ratio	0.592	0.087	0.188
HCM Control Delay	12.9	8.5	8.7
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.8	0.3	0.7

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	27	44	0	286	18	0	14	277
Future Vol, veh/h	0	27	44	0	286	18	0	14	277
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	29	47	0	304	19	0	15	295
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.7	10.3	10.3
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	38%	5%
Vol Thru, %	94%	0%	95%
Vol Right, %	6%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	304	71	291
LT Vol	0	27	14
Through Vol	286	0	277
RT Vol	18	44	0
Lane Flow Rate	323	76	310
Geometry Grp	1	1	1
Degree of Util (X)	0.397	0.105	0.385
Departure Headway (Hd)	4.417	5.012	4.472
Convergence, Y/N	Yes	Yes	Yes
Cap	815	713	805
Service Time	2.443	3.058	2.499
HCM Lane V/C Ratio	0.396	0.107	0.385
HCM Control Delay	10.3	8.7	10.3
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.9	0.4	1.8

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	21	36	0	455	31	0	23	116
Future Vol, veh/h	0	21	36	0	455	31	0	23	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	40	0	500	34	0	25	127
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.7	14.1	8.8
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	37%	17%
Vol Thru, %	94%	0%	83%
Vol Right, %	6%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	486	57	139
LT Vol	0	21	23
Through Vol	455	0	116
RT Vol	31	36	0
Lane Flow Rate	534	63	153
Geometry Grp	1	1	1
Degree of Util (X)	0.627	0.089	0.198
Departure Headway (Hd)	4.224	5.112	4.662
Convergence, Y/N	Yes	Yes	Yes
Cap	855	700	770
Service Time	2.244	3.152	2.689
HCM Lane V/C Ratio	0.625	0.09	0.199
HCM Control Delay	14.1	8.7	8.8
HCM Lane LOS	B	A	A
HCM 95th-tile Q	4.5	0.3	0.7

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	26	43	0	307	20	0	15	299
Future Vol, veh/h	0	26	43	0	307	20	0	15	299
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	46	0	327	21	0	16	318
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.8	10.8	10.7
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	38%	5%
Vol Thru, %	94%	0%	95%
Vol Right, %	6%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	327	69	314
LT Vol	0	26	15
Through Vol	307	0	299
RT Vol	20	43	0
Lane Flow Rate	348	73	334
Geometry Grp	1	1	1
Degree of Util (X)	0.429	0.104	0.417
Departure Headway (Hd)	4.441	5.114	4.497
Convergence, Y/N	Yes	Yes	Yes
Cap	811	699	802
Service Time	2.468	3.162	2.525
HCM Lane V/C Ratio	0.429	0.104	0.416
HCM Control Delay	10.8	8.8	10.7
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.2	0.3	2.1

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	21	37	0	454	35	0	26	116
Future Vol, veh/h	0	21	37	0	454	35	0	26	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	41	0	499	38	0	29	127
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.7	14.2	8.9
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	36%	18%
Vol Thru, %	93%	0%	82%
Vol Right, %	7%	64%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	489	58	142
LT Vol	0	21	26
Through Vol	454	0	116
RT Vol	35	37	0
Lane Flow Rate	537	64	156
Geometry Grp	1	1	1
Degree of Util (X)	0.631	0.091	0.203
Departure Headway (Hd)	4.228	5.12	4.673
Convergence, Y/N	Yes	Yes	Yes
Cap	854	699	768
Service Time	2.247	3.161	2.7
HCM Lane V/C Ratio	0.629	0.092	0.203
HCM Control Delay	14.2	8.7	8.9
HCM Lane LOS	B	A	A
HCM 95th-tile Q	4.6	0.3	0.8

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	28	46	0	307	19	0	15	299
Future Vol, veh/h	0	28	46	0	307	19	0	15	299
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	30	49	0	327	20	0	16	318
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.8	10.8	10.8
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	38%	5%
Vol Thru, %	94%	0%	95%
Vol Right, %	6%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	326	74	314
LT Vol	0	28	15
Through Vol	307	0	299
RT Vol	19	46	0
Lane Flow Rate	347	79	334
Geometry Grp	1	1	1
Degree of Util (X)	0.429	0.112	0.419
Departure Headway (Hd)	4.457	5.115	4.512
Convergence, Y/N	Yes	Yes	Yes
Cap	808	698	798
Service Time	2.489	3.167	2.542
HCM Lane V/C Ratio	0.429	0.113	0.419
HCM Control Delay	10.8	8.8	10.8
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.2	0.4	2.1

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	13	15	0	431	17	0	26	110
Future Vol, veh/h	0	13	15	0	431	17	0	26	110
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	16	0	449	18	0	27	115
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.2	11.7	8.5
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	46%	19%
Vol Thru, %	96%	0%	81%
Vol Right, %	4%	54%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	448	28	136
LT Vol	0	13	26
Through Vol	431	0	110
RT Vol	17	15	0
Lane Flow Rate	467	29	142
Geometry Grp	1	1	1
Degree of Util (X)	0.527	0.041	0.177
Departure Headway (Hd)	4.069	5.007	4.495
Convergence, Y/N	Yes	Yes	Yes
Cap	877	718	802
Service Time	2.143	3.015	2.501
HCM Lane V/C Ratio	0.532	0.04	0.177
HCM Control Delay	11.7	8.2	8.5
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.1	0.1	0.6

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	14	12	0	303	17	0	13	296
Future Vol, veh/h	0	14	12	0	303	17	0	13	296
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	13	0	322	18	0	14	315
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.4	10.2	10.2
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	54%	4%
Vol Thru, %	95%	0%	96%
Vol Right, %	5%	46%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	320	26	309
LT Vol	0	14	13
Through Vol	303	0	296
RT Vol	17	12	0
Lane Flow Rate	340	28	329
Geometry Grp	1	1	1
Degree of Util (X)	0.407	0.04	0.397
Departure Headway (Hd)	4.304	5.191	4.352
Convergence, Y/N	Yes	Yes	Yes
Cap	837	690	828
Service Time	2.318	3.223	2.367
HCM Lane V/C Ratio	0.406	0.041	0.397
HCM Control Delay	10.2	8.4	10.2
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2	0.1	1.9

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	13	14	0	436	22	0	26	110
Future Vol, veh/h	0	13	14	0	436	22	0	26	110
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	15	0	454	23	0	27	115
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.3	11.8	8.5
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	48%	19%
Vol Thru, %	95%	0%	81%
Vol Right, %	5%	52%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	458	27	136
LT Vol	0	13	26
Through Vol	436	0	110
RT Vol	22	14	0
Lane Flow Rate	477	28	142
Geometry Grp	1	1	1
Degree of Util (X)	0.538	0.039	0.177
Departure Headway (Hd)	4.061	5.041	4.502
Convergence, Y/N	Yes	Yes	Yes
Cap	878	714	800
Service Time	2.132	3.049	2.506
HCM Lane V/C Ratio	0.543	0.039	0.177
HCM Control Delay	11.8	8.3	8.5
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.3	0.1	0.6

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	12	10	0	304	19	0	13	298
Future Vol, veh/h	0	12	10	0	304	19	0	13	298
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	11	0	323	20	0	14	317
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.4	10.3	10.2
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	55%	4%
Vol Thru, %	94%	0%	96%
Vol Right, %	6%	45%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	323	22	311
LT Vol	0	12	13
Through Vol	304	0	298
RT Vol	19	10	0
Lane Flow Rate	344	23	331
Geometry Grp	1	1	1
Degree of Util (X)	0.41	0.034	0.399
Departure Headway (Hd)	4.292	5.205	4.344
Convergence, Y/N	Yes	Yes	Yes
Cap	842	688	830
Service Time	2.304	3.237	2.357
HCM Lane V/C Ratio	0.409	0.033	0.399
HCM Control Delay	10.3	8.4	10.2
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2	0.1	1.9

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	14	16	0	455	18	0	27	118
Future Vol, veh/h	0	14	16	0	455	18	0	27	118
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	17	0	474	19	0	28	123
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.3	12.3	8.6
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	47%	19%
Vol Thru, %	96%	0%	81%
Vol Right, %	4%	53%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	473	30	145
LT Vol	0	14	27
Through Vol	455	0	118
RT Vol	18	16	0
Lane Flow Rate	493	31	151
Geometry Grp	1	1	1
Degree of Util (X)	0.558	0.044	0.19
Departure Headway (Hd)	4.08	5.084	4.529
Convergence, Y/N	Yes	Yes	Yes
Cap	872	707	796
Service Time	2.16	3.094	2.533
HCM Lane V/C Ratio	0.565	0.044	0.19
HCM Control Delay	12.3	8.3	8.6
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.5	0.1	0.7

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	15	12	0	324	18	0	14	319
Future Vol, veh/h	0	15	12	0	324	18	0	14	319
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	13	0	345	19	0	15	339
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.6	10.7	10.7
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	56%	4%
Vol Thru, %	95%	0%	96%
Vol Right, %	5%	44%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	342	27	333
LT Vol	0	15	14
Through Vol	324	0	319
RT Vol	18	12	0
Lane Flow Rate	364	29	354
Geometry Grp	1	1	1
Degree of Util (X)	0.438	0.042	0.431
Departure Headway (Hd)	4.338	5.307	4.383
Convergence, Y/N	Yes	Yes	Yes
Cap	833	674	825
Service Time	2.352	3.345	2.398
HCM Lane V/C Ratio	0.437	0.043	0.429
HCM Control Delay	10.7	8.6	10.7
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.3	0.1	2.2

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	14	15	0	460	23	0	27	118
Future Vol, veh/h	0	14	15	0	460	23	0	27	118
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	16	0	479	24	0	28	123
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.4	12.5	8.6
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	48%	19%
Vol Thru, %	95%	0%	81%
Vol Right, %	5%	52%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	483	29	145
LT Vol	0	14	27
Through Vol	460	0	118
RT Vol	23	15	0
Lane Flow Rate	503	30	151
Geometry Grp	1	1	1
Degree of Util (X)	0.569	0.043	0.19
Departure Headway (Hd)	4.072	5.119	4.534
Convergence, Y/N	Yes	Yes	Yes
Cap	875	703	794
Service Time	2.152	3.127	2.54
HCM Lane V/C Ratio	0.575	0.043	0.19
HCM Control Delay	12.5	8.4	8.6
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.7	0.1	0.7

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	13	10	0	325	20	0	14	321
Future Vol, veh/h	0	13	10	0	325	20	0	14	321
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	11	0	346	21	0	15	341
Number of Lanes	0	1	0	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.6	10.7	10.7
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	57%	4%
Vol Thru, %	94%	0%	96%
Vol Right, %	6%	43%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	345	23	335
LT Vol	0	13	14
Through Vol	325	0	321
RT Vol	20	10	0
Lane Flow Rate	367	24	356
Geometry Grp	1	1	1
Degree of Util (X)	0.441	0.036	0.433
Departure Headway (Hd)	4.324	5.323	4.373
Convergence, Y/N	Yes	Yes	Yes
Cap	837	672	827
Service Time	2.337	3.361	2.387
HCM Lane V/C Ratio	0.438	0.036	0.43
HCM Control Delay	10.7	8.6	10.7
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.3	0.1	2.2

Intersection	
Intersection Delay, s/veh	39.5
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	28	323	48	0	18	347	143	0	77	266	31
Future Vol, veh/h	0	28	323	48	0	18	347	143	0	77	266	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	30	344	51	0	19	369	152	0	82	283	33
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	61.8	17.5	53.3
HCM LOS	F	C	F

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	21%	7%	13%	0%	0%	47%
Vol Thru, %	71%	81%	87%	100%	0%	47%
Vol Right, %	8%	12%	0%	0%	100%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	374	399	134	231	143	131
LT Vol	77	28	18	0	0	62
Through Vol	266	323	116	231	0	61
RT Vol	31	48	0	0	143	8
Lane Flow Rate	398	424	142	246	152	139
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.914	0.959	0.328	0.563	0.317	0.366
Departure Headway (Hd)	8.271	8.131	8.299	8.229	7.504	9.446
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	438	446	432	438	478	380
Service Time	6.028	5.892	6.069	5.999	5.274	7.224
HCM Lane V/C Ratio	0.909	0.951	0.329	0.562	0.318	0.366
HCM Control Delay	53.3	61.8	15.1	21.2	13.7	17.6
HCM Lane LOS	F	F	C	C	B	C
HCM 95th-tile Q	10.1	11.5	1.4	3.4	1.3	1.6

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	62	61	8
Future Vol, veh/h	0	62	61	8
Peak Hour Factor	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	66	65	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	17.6
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	39.6
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	24	350	57	0	27	316	121	0	58	176	32
Future Vol, veh/h	0	24	350	57	0	27	316	121	0	58	176	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	25	361	59	0	28	326	125	0	60	181	33
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	72.8	17.1	28.5
HCM LOS	F	C	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	22%	6%	20%	0%	0%	25%
Vol Thru, %	66%	81%	80%	100%	0%	72%
Vol Right, %	12%	13%	0%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	266	431	132	211	121	309
LT Vol	58	24	27	0	0	76
Through Vol	176	350	105	211	0	221
RT Vol	32	57	0	0	121	12
Lane Flow Rate	274	444	136	217	125	319
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.681	1	0.328	0.517	0.272	0.781
Departure Headway (Hd)	8.934	8.443	8.668	8.562	7.836	8.822
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	409	431	416	424	459	414
Service Time	6.574	6.143	6.385	6.283	5.58	6.465
HCM Lane V/C Ratio	0.67	1.03	0.327	0.512	0.272	0.771
HCM Control Delay	28.5	72.8	15.6	20.1	13.5	36.4
HCM Lane LOS	D	F	C	C	B	E
HCM 95th-tile Q	4.9	12.6	1.4	2.9	1.1	6.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	76	221	12
Future Vol, veh/h	0	76	221	12
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	78	228	12
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	36.4
HCM LOS	E

Lane

Intersection	
Intersection Delay, s/veh	42.3
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	36	323	48	0	18	348	143	0	77	269	31
Future Vol, veh/h	0	36	323	48	0	18	348	143	0	77	269	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	344	51	0	19	370	152	0	82	286	33
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	68.1	17.8	56.2
HCM LOS	F	C	F

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	20%	9%	13%	0%	0%	47%
Vol Thru, %	71%	79%	87%	100%	0%	47%
Vol Right, %	8%	12%	0%	0%	100%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	377	407	134	232	143	131
LT Vol	77	36	18	0	0	62
Through Vol	269	323	116	232	0	61
RT Vol	31	48	0	0	143	8
Lane Flow Rate	401	433	143	247	152	139
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.928	0.985	0.332	0.569	0.32	0.369
Departure Headway (Hd)	8.329	8.188	8.375	8.306	7.581	9.536
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	437	442	428	434	473	376
Service Time	6.087	5.951	6.15	6.081	5.355	7.317
HCM Lane V/C Ratio	0.918	0.98	0.334	0.569	0.321	0.37
HCM Control Delay	56.2	68.1	15.3	21.6	13.9	17.8
HCM Lane LOS	F	F	C	C	B	C
HCM 95th-tile Q	10.4	12.3	1.4	3.4	1.4	1.7

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	62	61	8
Future Vol, veh/h	0	62	61	8
Peak Hour Factor	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	66	65	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	17.8
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	39.7
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	25	350	57	0	30	324	123	0	58	176	32
Future Vol, veh/h	0	25	350	57	0	30	324	123	0	58	176	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	26	361	59	0	31	334	127	0	60	181	33
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	73	17.4	28.9
HCM LOS	F	C	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	22%	6%	22%	0%	0%	25%
Vol Thru, %	66%	81%	78%	100%	0%	72%
Vol Right, %	12%	13%	0%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	266	432	138	216	123	309
LT Vol	58	25	30	0	0	76
Through Vol	176	350	108	216	0	221
RT Vol	32	57	0	0	123	12
Lane Flow Rate	274	445	142	223	127	319
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.685	1	0.344	0.531	0.277	0.785
Departure Headway (Hd)	8.987	8.491	8.705	8.592	7.866	8.874
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	409	432	415	421	458	414
Service Time	6.61	6.191	6.41	6.3	5.598	6.501
HCM Lane V/C Ratio	0.67	1.03	0.342	0.53	0.277	0.771
HCM Control Delay	28.9	73	15.9	20.6	13.6	36.9
HCM Lane LOS	D	F	C	C	B	E
HCM 95th-tile Q	5	12.6	1.5	3	1.1	6.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	76	221	12
Future Vol, veh/h	0	76	221	12
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	78	228	12
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	36.9
HCM LOS	E

Lane

Intersection	
Intersection Delay, s/veh	47.2
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	29	363	53	0	19	393	150	0	82	282	32
Future Vol, veh/h	0	29	363	53	0	19	393	150	0	82	282	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	31	386	56	0	20	418	160	0	87	300	34
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	73.1	20.1	66.6
HCM LOS	F	C	F

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	21%	7%	13%	0%	0%	47%
Vol Thru, %	71%	82%	87%	100%	0%	47%
Vol Right, %	8%	12%	0%	0%	100%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	396	445	150	262	150	140
LT Vol	82	29	19	0	0	66
Through Vol	282	363	131	262	0	66
RT Vol	32	53	0	0	150	8
Lane Flow Rate	421	473	160	279	160	149
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.976	1	0.376	0.652	0.342	0.394
Departure Headway (Hd)	8.337	8.488	8.48	8.416	7.714	9.526
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	434	431	428	432	469	377
Service Time	6.093	6.209	6.18	6.116	5.414	7.302
HCM Lane V/C Ratio	0.97	1.097	0.374	0.646	0.341	0.395
HCM Control Delay	66.6	73.1	16.2	25.6	14.4	18.4
HCM Lane LOS	F	F	C	D	B	C
HCM 95th-tile Q	11.9	12.6	1.7	4.5	1.5	1.8

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	66	66	8
Future Vol, veh/h	0	66	66	8
Peak Hour Factor	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	70	70	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	18.4
HCM LOS	C

Lane

Intersection												
Intersection Delay, s/veh	45.7											
Intersection LOS	E											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	25	421	70	0	28	380	129	0	70	189	33
Future Vol, veh/h	0	25	421	70	0	28	380	129	0	70	189	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	26	434	72	0	29	392	133	0	72	195	34
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	75.2	21.1	36.4
HCM LOS	F	C	E

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	24%	5%	18%	0%	0%	25%
Vol Thru, %	65%	82%	82%	100%	0%	72%
Vol Right, %	11%	14%	0%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	516	155	253	129	332
LT Vol	70	25	28	0	0	82
Through Vol	189	421	127	253	0	238
RT Vol	33	70	0	0	129	12
Lane Flow Rate	301	532	159	261	133	342
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.766	1	0.397	0.644	0.302	0.861
Departure Headway (Hd)	9.165	8.872	8.97	8.879	8.177	9.053
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	394	410	400	407	439	400
Service Time	6.921	6.663	6.741	6.65	5.947	6.805
HCM Lane V/C Ratio	0.764	1.298	0.398	0.641	0.303	0.855
HCM Control Delay	36.4	75.2	17.6	26.5	14.5	47.7
HCM Lane LOS	E	F	C	D	B	E
HCM 95th-tile Q	6.3	12.3	1.9	4.4	1.3	8.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	82	238	12
Future Vol, veh/h	0	82	238	12
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	245	12
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	47.7
HCM LOS	E

Lane

Intersection	
Intersection Delay, s/veh	48.2
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	37	363	53	0	19	394	150	0	82	285	32
Future Vol, veh/h	0	37	363	53	0	19	394	150	0	82	285	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	386	56	0	20	419	160	0	87	303	34
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	73.3	20.3	69.6
HCM LOS	F	C	F

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	21%	8%	13%	0%	0%	47%
Vol Thru, %	71%	80%	87%	100%	0%	47%
Vol Right, %	8%	12%	0%	0%	100%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	399	453	150	263	150	140
LT Vol	82	37	19	0	0	66
Through Vol	285	363	131	263	0	66
RT Vol	32	53	0	0	150	8
Lane Flow Rate	424	482	160	279	160	149
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.988	1	0.378	0.656	0.343	0.397
Departure Headway (Hd)	8.383	8.539	8.515	8.451	7.749	9.599
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	433	429	425	430	468	377
Service Time	6.104	6.257	6.215	6.151	5.449	7.33
HCM Lane V/C Ratio	0.979	1.124	0.376	0.649	0.342	0.395
HCM Control Delay	69.6	73.3	16.3	25.9	14.4	18.5
HCM Lane LOS	F	F	C	D	B	C
HCM 95th-tile Q	12.3	12.6	1.7	4.6	1.5	1.9

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	66	66	8
Future Vol, veh/h	0	66	66	8
Peak Hour Factor	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	70	70	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	18.5
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	45.8
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	26	421	70	0	31	388	131	0	70	189	33
Future Vol, veh/h	0	26	421	70	0	31	388	131	0	70	189	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	434	72	0	32	400	135	0	72	195	34
Number of Lanes	0	0	1	0	0	0	2	1	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	75.3	21.6	36.8
HCM LOS	F	C	E

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	24%	5%	19%	0%	0%	25%
Vol Thru, %	65%	81%	81%	100%	0%	72%
Vol Right, %	11%	14%	0%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	517	160	259	131	332
LT Vol	70	26	31	0	0	82
Through Vol	189	421	129	259	0	238
RT Vol	33	70	0	0	131	12
Lane Flow Rate	301	533	165	267	135	342
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.769	1	0.413	0.659	0.307	0.863
Departure Headway (Hd)	9.195	8.909	8.987	8.89	8.188	9.081
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	394	410	400	405	438	400
Service Time	6.95	6.701	6.758	6.661	5.958	6.836
HCM Lane V/C Ratio	0.764	1.3	0.412	0.659	0.308	0.855
HCM Control Delay	36.8	75.3	18	27.4	14.6	48.1
HCM Lane LOS	E	F	C	D	B	E
HCM 95th-tile Q	6.4	12.2	2	4.6	1.3	8.4

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	82	238	12
Future Vol, veh/h	0	82	238	12
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	245	12
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	48.1
HCM LOS	E

Lane

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	11	31	7	0	3	25	16	0	7	32	2
Future Vol, veh/h	0	11	31	7	0	3	25	16	0	7	32	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	32	7	0	3	26	17	0	7	33	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.1	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	22%	7%	26%
Vol Thru, %	78%	63%	57%	41%
Vol Right, %	5%	14%	36%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	49	44	27
LT Vol	7	11	3	7
Through Vol	32	31	25	11
RT Vol	2	7	16	9
Lane Flow Rate	43	51	46	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.049	0.057	0.05	0.031
Departure Headway (Hd)	4.128	4.051	3.891	3.986
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	863	880	916	892
Service Time	2.174	2.092	1.934	2.037
HCM Lane V/C Ratio	0.05	0.058	0.05	0.031
HCM Control Delay	7.4	7.3	7.1	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	7	11	9
Future Vol, veh/h	0	7	11	9
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	7	11	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection												
Intersection Delay, s/veh	7.6											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	7	25	7	0	10	50	44	0	8	33	3
Future Vol, veh/h	0	7	25	7	0	10	50	44	0	8	33	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	28	8	0	11	56	49	0	9	37	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	7.6	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	18%	10%	20%
Vol Thru, %	75%	64%	48%	69%
Vol Right, %	7%	18%	42%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	39	104	49
LT Vol	8	7	10	10
Through Vol	33	25	50	34
RT Vol	3	7	44	5
Lane Flow Rate	49	44	117	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.058	0.05	0.127	0.065
Departure Headway (Hd)	4.251	4.134	3.914	4.231
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	832	855	906	836
Service Time	2.332	2.214	1.982	2.309
HCM Lane V/C Ratio	0.059	0.051	0.129	0.066
HCM Control Delay	7.6	7.4	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.4	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	34	5
Future Vol, veh/h	0	10	34	5
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	38	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.6
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	11	37	7	0	3	26	16	0	7	32	2
Future Vol, veh/h	0	11	37	7	0	3	26	16	0	7	32	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	39	7	0	3	27	17	0	7	33	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	7.2	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	20%	7%	26%
Vol Thru, %	78%	67%	58%	41%
Vol Right, %	5%	13%	36%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	55	45	27
LT Vol	7	11	3	7
Through Vol	32	37	26	11
RT Vol	2	7	16	9
Lane Flow Rate	43	57	47	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.049	0.065	0.051	0.031
Departure Headway (Hd)	4.142	4.057	3.9	4
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	860	879	913	888
Service Time	2.191	2.098	1.946	2.054
HCM Lane V/C Ratio	0.05	0.065	0.051	0.032
HCM Control Delay	7.4	7.4	7.2	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	7	11	9
Future Vol, veh/h	0	7	11	9
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	7	11	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	7	25	7	0	10	55	51	0	8	26	3
Future Vol, veh/h	0	7	25	7	0	10	55	51	0	8	26	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	28	8	0	11	62	57	0	9	29	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	7.6	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	18%	9%	20%
Vol Thru, %	70%	64%	47%	69%
Vol Right, %	8%	18%	44%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	39	116	49
LT Vol	8	7	10	10
Through Vol	26	25	55	34
RT Vol	3	7	51	5
Lane Flow Rate	42	44	130	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.049	0.05	0.141	0.065
Departure Headway (Hd)	4.274	4.131	3.888	4.248
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	827	856	912	832
Service Time	2.358	2.208	1.952	2.328
HCM Lane V/C Ratio	0.051	0.051	0.143	0.066
HCM Control Delay	7.6	7.4	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.5	0.2

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	34	5
Future Vol, veh/h	0	10	34	5
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	38	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.6
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	11	32	7	0	3	26	17	0	7	33	2
Future Vol, veh/h	0	11	32	7	0	3	26	17	0	7	33	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	33	7	0	3	27	18	0	7	34	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	7.1	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	22%	7%	26%
Vol Thru, %	79%	64%	57%	41%
Vol Right, %	5%	14%	37%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	42	50	46	27
LT Vol	7	11	3	7
Through Vol	33	32	26	11
RT Vol	2	7	17	9
Lane Flow Rate	44	52	48	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.05	0.059	0.052	0.031
Departure Headway (Hd)	4.134	4.056	3.889	3.993
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	861	880	916	890
Service Time	2.182	2.097	1.934	2.045
HCM Lane V/C Ratio	0.051	0.059	0.052	0.031
HCM Control Delay	7.4	7.4	7.1	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.2	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	7	11	9
Future Vol, veh/h	0	7	11	9
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	7	11	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	7	26	7	0	10	52	46	0	8	34	3
Future Vol, veh/h	0	7	26	7	0	10	52	46	0	8	34	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	29	8	0	11	58	52	0	9	38	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.5	7.6	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	17%	9%	20%
Vol Thru, %	76%	65%	48%	70%
Vol Right, %	7%	17%	43%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	45	40	108	50
LT Vol	8	7	10	10
Through Vol	34	26	52	35
RT Vol	3	7	46	5
Lane Flow Rate	51	45	121	56
Geometry Grp	1	1	1	1
Degree of Util (X)	0.06	0.052	0.132	0.066
Departure Headway (Hd)	4.262	4.143	3.916	4.242
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	829	853	905	833
Service Time	2.346	2.226	1.987	2.325
HCM Lane V/C Ratio	0.062	0.053	0.134	0.067
HCM Control Delay	7.6	7.5	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.5	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	35	5
Future Vol, veh/h	0	10	35	5
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	39	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.6
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	11	38	7	0	3	27	17	0	7	33	2
Future Vol, veh/h	0	11	38	7	0	3	27	17	0	7	33	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	40	7	0	3	28	18	0	7	34	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	7.2	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	20%	6%	26%
Vol Thru, %	79%	68%	57%	41%
Vol Right, %	5%	12%	36%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	42	56	47	27
LT Vol	7	11	3	7
Through Vol	33	38	27	11
RT Vol	2	7	17	9
Lane Flow Rate	44	58	49	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.05	0.066	0.053	0.031
Departure Headway (Hd)	4.147	4.061	3.899	4.006
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	858	879	914	887
Service Time	2.197	2.102	1.944	2.061
HCM Lane V/C Ratio	0.051	0.066	0.054	0.032
HCM Control Delay	7.4	7.4	7.2	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	7	11	9
Future Vol, veh/h	0	7	11	9
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	7	11	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	7	26	7	0	10	57	53	0	8	27	3
Future Vol, veh/h	0	7	26	7	0	10	57	53	0	8	27	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	29	8	0	11	64	60	0	9	30	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.5	7.6	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	17%	8%	20%
Vol Thru, %	71%	65%	48%	70%
Vol Right, %	8%	17%	44%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	38	40	120	50
LT Vol	8	7	10	10
Through Vol	27	26	57	35
RT Vol	3	7	53	5
Lane Flow Rate	43	45	135	56
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0.052	0.146	0.066
Departure Headway (Hd)	4.284	4.14	3.891	4.259
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	854	911	830
Service Time	2.373	2.22	1.958	2.344
HCM Lane V/C Ratio	0.052	0.053	0.148	0.067
HCM Control Delay	7.6	7.5	7.6	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.5	0.2

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	35	5
Future Vol, veh/h	0	10	35	5
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	39	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	5	1	3	0	4	0	14	0	1	26	4
Future Vol, veh/h	0	5	1	3	0	4	0	14	0	1	26	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	1	3	0	4	0	16	0	1	29	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	56%	22%	17%
Vol Thru, %	84%	11%	0%	71%
Vol Right, %	13%	33%	78%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	9	18	24
LT Vol	1	5	4	4
Through Vol	26	1	0	17
RT Vol	4	3	14	3
Lane Flow Rate	35	10	20	27
Geometry Grp	1	1	1	1
Degree of Util (X)	0.038	0.011	0.02	0.03
Departure Headway (Hd)	3.936	3.968	3.626	3.971
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	912	901	986	904
Service Time	1.949	1.995	1.653	1.985
HCM Lane V/C Ratio	0.038	0.011	0.02	0.03
HCM Control Delay	7.1	7	6.7	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	17	3
Future Vol, veh/h	0	4	17	3
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	19	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	2	3	0	1	2	10	0	3	28	5
Future Vol, veh/h	0	3	2	3	0	1	2	10	0	3	28	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	2	3	0	1	2	10	0	3	29	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	38%	8%	9%
Vol Thru, %	78%	25%	15%	81%
Vol Right, %	14%	38%	77%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	8	13	47
LT Vol	3	3	1	4
Through Vol	28	2	2	38
RT Vol	5	3	10	5
Lane Flow Rate	38	8	14	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.041	0.009	0.014	0.054
Departure Headway (Hd)	3.941	3.944	3.643	3.952
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	910	904	979	908
Service Time	1.958	1.981	1.68	1.967
HCM Lane V/C Ratio	0.042	0.009	0.014	0.054
HCM Control Delay	7.1	7	6.7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0.2

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	38	5
Future Vol, veh/h	0	4	38	5
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	40	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	5	1	3	0	4	0	14	0	1	26	4
Future Vol, veh/h	0	5	1	3	0	4	0	14	0	1	26	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	1	3	0	4	0	16	0	1	29	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	56%	22%	17%
Vol Thru, %	84%	11%	0%	71%
Vol Right, %	13%	33%	78%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	9	18	24
LT Vol	1	5	4	4
Through Vol	26	1	0	17
RT Vol	4	3	14	3
Lane Flow Rate	35	10	20	27
Geometry Grp	1	1	1	1
Degree of Util (X)	0.038	0.011	0.02	0.03
Departure Headway (Hd)	3.936	3.968	3.626	3.971
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	912	901	986	904
Service Time	1.949	1.995	1.653	1.985
HCM Lane V/C Ratio	0.038	0.011	0.02	0.03
HCM Control Delay	7.1	7	6.7	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	17	3
Future Vol, veh/h	0	4	17	3
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	19	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	2	3	0	1	2	10	0	3	21	5
Future Vol, veh/h	0	3	2	3	0	1	2	10	0	3	21	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	2	3	0	1	2	10	0	3	22	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	38%	8%	9%
Vol Thru, %	72%	25%	15%	81%
Vol Right, %	17%	38%	77%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	8	13	47
LT Vol	3	3	1	4
Through Vol	21	2	2	38
RT Vol	5	3	10	5
Lane Flow Rate	30	8	14	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.033	0.009	0.014	0.054
Departure Headway (Hd)	3.925	3.933	3.632	3.947
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	914	908	983	910
Service Time	1.942	1.965	1.664	1.96
HCM Lane V/C Ratio	0.033	0.009	0.014	0.054
HCM Control Delay	7.1	7	6.7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	38	5
Future Vol, veh/h	0	4	38	5
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	40	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection												
Intersection Delay, s/veh	7											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	5	1	3	0	4	0	15	0	1	27	4
Future Vol, veh/h	0	5	1	3	0	4	0	15	0	1	27	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	1	3	0	4	0	17	0	1	30	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	56%	21%	16%
Vol Thru, %	84%	11%	0%	72%
Vol Right, %	12%	33%	79%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	9	19	25
LT Vol	1	5	4	4
Through Vol	27	1	0	18
RT Vol	4	3	15	3
Lane Flow Rate	36	10	21	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.039	0.011	0.021	0.031
Departure Headway (Hd)	3.941	3.973	3.621	3.976
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	911	900	987	903
Service Time	1.954	2	1.648	1.99
HCM Lane V/C Ratio	0.04	0.011	0.021	0.031
HCM Control Delay	7.1	7	6.7	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	18	3
Future Vol, veh/h	0	4	18	3
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	20	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	2	3	0	1	2	10	0	3	29	5
Future Vol, veh/h	0	3	2	3	0	1	2	10	0	3	29	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	2	3	0	1	2	10	0	3	30	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	38%	8%	8%
Vol Thru, %	78%	25%	15%	82%
Vol Right, %	14%	38%	77%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	8	13	49
LT Vol	3	3	1	4
Through Vol	29	2	2	40
RT Vol	5	3	10	5
Lane Flow Rate	39	8	14	51
Geometry Grp	1	1	1	1
Degree of Util (X)	0.042	0.009	0.014	0.056
Departure Headway (Hd)	3.944	3.948	3.647	3.955
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	910	903	977	908
Service Time	1.961	1.987	1.685	1.969
HCM Lane V/C Ratio	0.043	0.009	0.014	0.056
HCM Control Delay	7.1	7	6.7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	40	5
Future Vol, veh/h	0	4	40	5
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	42	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection												
Intersection Delay, s/veh	7											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	5	1	3	0	4	0	15	0	1	27	4
Future Vol, veh/h	0	5	1	3	0	4	0	15	0	1	27	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	1	3	0	4	0	17	0	1	30	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	56%	21%	16%
Vol Thru, %	84%	11%	0%	72%
Vol Right, %	12%	33%	79%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	9	19	25
LT Vol	1	5	4	4
Through Vol	27	1	0	18
RT Vol	4	3	15	3
Lane Flow Rate	36	10	21	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.039	0.011	0.021	0.031
Departure Headway (Hd)	3.941	3.973	3.621	3.976
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	911	900	987	903
Service Time	1.954	2	1.648	1.99
HCM Lane V/C Ratio	0.04	0.011	0.021	0.031
HCM Control Delay	7.1	7	6.7	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	18	3
Future Vol, veh/h	0	4	18	3
Peak Hour Factor	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	20	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	2	3	0	1	2	10	0	3	22	5
Future Vol, veh/h	0	3	2	3	0	1	2	10	0	3	22	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	2	3	0	1	2	10	0	3	23	5
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7	6.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	38%	8%	8%
Vol Thru, %	73%	25%	15%	82%
Vol Right, %	17%	38%	77%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	8	13	49
LT Vol	3	3	1	4
Through Vol	22	2	2	40
RT Vol	5	3	10	5
Lane Flow Rate	31	8	14	51
Geometry Grp	1	1	1	1
Degree of Util (X)	0.034	0.009	0.014	0.056
Departure Headway (Hd)	3.929	3.936	3.636	3.95
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	913	907	981	909
Service Time	1.946	1.971	1.67	1.963
HCM Lane V/C Ratio	0.034	0.009	0.014	0.056
HCM Control Delay	7.1	7	6.7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	40	5
Future Vol, veh/h	0	4	40	5
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	42	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection												
Intersection Delay, s/veh	7.2											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	27	8	0	2	21	17	0	2	16	3
Future Vol, veh/h	0	3	27	8	0	2	21	17	0	2	16	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	35	10	0	3	27	22	0	3	21	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.2	7.1	7.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	8%	5%	38%
Vol Thru, %	76%	71%	53%	46%
Vol Right, %	14%	21%	42%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	38	40	26
LT Vol	2	3	2	10
Through Vol	16	27	21	12
RT Vol	3	8	17	4
Lane Flow Rate	27	49	51	33
Geometry Grp	1	1	1	1
Degree of Util (X)	0.03	0.054	0.055	0.038
Departure Headway (Hd)	4.067	3.968	3.831	4.113
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	876	900	931	867
Service Time	2.112	2.003	1.868	2.157
HCM Lane V/C Ratio	0.031	0.054	0.055	0.038
HCM Control Delay	7.2	7.2	7.1	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	12	4
Future Vol, veh/h	0	10	12	4
Peak Hour Factor	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	15	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.3
HCM LOS	A

Lane

Intersection												
Intersection Delay, s/veh	7.3											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	4	20	3	0	8	26	14	0	2	16	10
Future Vol, veh/h	0	4	20	3	0	8	26	14	0	2	16	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	23	3	0	9	30	16	0	2	18	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.3	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	15%	17%	46%
Vol Thru, %	57%	74%	54%	49%
Vol Right, %	36%	11%	29%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	27	48	39
LT Vol	2	4	8	18
Through Vol	16	20	26	19
RT Vol	10	3	14	2
Lane Flow Rate	32	31	55	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.035	0.035	0.061	0.052
Departure Headway (Hd)	3.918	4.074	3.951	4.171
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	908	875	903	855
Service Time	1.966	2.119	1.992	2.213
HCM Lane V/C Ratio	0.035	0.035	0.061	0.053
HCM Control Delay	7.1	7.3	7.3	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	18	19	2
Future Vol, veh/h	0	18	19	2
Peak Hour Factor	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	21	22	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	29	8	0	2	21	17	0	2	16	3
Future Vol, veh/h	0	3	29	8	0	2	21	17	0	2	16	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	37	10	0	3	27	22	0	3	21	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.1	7.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	7%	5%	38%
Vol Thru, %	76%	72%	53%	46%
Vol Right, %	14%	20%	42%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	40	40	26
LT Vol	2	3	2	10
Through Vol	16	29	21	12
RT Vol	3	8	17	4
Lane Flow Rate	27	51	51	33
Geometry Grp	1	1	1	1
Degree of Util (X)	0.03	0.057	0.055	0.038
Departure Headway (Hd)	4.072	3.974	3.833	4.118
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	875	899	931	865
Service Time	2.118	2.009	1.87	2.163
HCM Lane V/C Ratio	0.031	0.057	0.055	0.038
HCM Control Delay	7.2	7.3	7.1	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	12	4
Future Vol, veh/h	0	10	12	4
Peak Hour Factor	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	15	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	4	20	3	0	8	26	14	0	2	9	10
Future Vol, veh/h	0	4	20	3	0	8	26	14	0	2	9	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	23	3	0	9	30	16	0	2	10	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.2	7.2	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	15%	17%	46%
Vol Thru, %	43%	74%	54%	49%
Vol Right, %	48%	11%	29%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	27	48	39
LT Vol	2	4	8	18
Through Vol	9	20	26	19
RT Vol	10	3	14	2
Lane Flow Rate	24	31	55	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.026	0.035	0.06	0.052
Departure Headway (Hd)	3.852	4.058	3.935	4.164
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	924	878	906	857
Service Time	1.897	2.101	1.974	2.203
HCM Lane V/C Ratio	0.026	0.035	0.061	0.053
HCM Control Delay	7	7.2	7.2	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	18	19	2
Future Vol, veh/h	0	18	19	2
Peak Hour Factor	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	21	22	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	28	8	0	2	22	18	0	2	17	3
Future Vol, veh/h	0	3	28	8	0	2	22	18	0	2	17	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	36	10	0	3	28	23	0	3	22	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.2	7.1	7.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	8%	5%	38%
Vol Thru, %	77%	72%	52%	46%
Vol Right, %	14%	21%	43%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	39	42	26
LT Vol	2	3	2	10
Through Vol	17	28	22	12
RT Vol	3	8	18	4
Lane Flow Rate	28	50	54	33
Geometry Grp	1	1	1	1
Degree of Util (X)	0.032	0.055	0.057	0.038
Departure Headway (Hd)	4.075	3.975	3.831	4.119
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	874	898	931	865
Service Time	2.121	2.012	1.87	2.164
HCM Lane V/C Ratio	0.032	0.056	0.058	0.038
HCM Control Delay	7.3	7.2	7.1	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	12	4
Future Vol, veh/h	0	10	12	4
Peak Hour Factor	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	15	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	4	21	3	0	8	27	15	0	2	17	10
Future Vol, veh/h	0	4	21	3	0	8	27	15	0	2	17	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	24	3	0	9	31	17	0	2	20	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.3	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	14%	16%	46%
Vol Thru, %	59%	75%	54%	49%
Vol Right, %	34%	11%	30%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	28	50	41
LT Vol	2	4	8	19
Through Vol	17	21	27	20
RT Vol	10	3	15	2
Lane Flow Rate	33	32	57	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.036	0.037	0.063	0.055
Departure Headway (Hd)	3.933	4.083	3.951	4.179
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	904	872	902	853
Service Time	1.983	2.13	1.995	2.224
HCM Lane V/C Ratio	0.037	0.037	0.063	0.055
HCM Control Delay	7.1	7.3	7.3	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	19	20	2
Future Vol, veh/h	0	19	20	2
Peak Hour Factor	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	22	23	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.5
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	3	30	8	0	2	22	18	0	2	17	3
Future Vol, veh/h	0	3	30	8	0	2	22	18	0	2	17	3
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	38	10	0	3	28	23	0	3	22	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.1	7.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	7%	5%	38%
Vol Thru, %	77%	73%	52%	46%
Vol Right, %	14%	20%	43%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	41	42	26
LT Vol	2	3	2	10
Through Vol	17	30	22	12
RT Vol	3	8	18	4
Lane Flow Rate	28	53	54	33
Geometry Grp	1	1	1	1
Degree of Util (X)	0.032	0.058	0.057	0.038
Departure Headway (Hd)	4.081	3.98	3.834	4.125
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	873	897	930	864
Service Time	2.127	2.017	1.872	2.17
HCM Lane V/C Ratio	0.032	0.059	0.058	0.038
HCM Control Delay	7.3	7.3	7.1	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	12	4
Future Vol, veh/h	0	10	12	4
Peak Hour Factor	0.78	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	15	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	4	21	3	0	8	27	15	0	2	10	10
Future Vol, veh/h	0	4	21	3	0	8	27	15	0	2	10	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	24	3	0	9	31	17	0	2	11	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.2	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	14%	16%	46%
Vol Thru, %	45%	75%	54%	49%
Vol Right, %	45%	11%	30%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	28	50	41
LT Vol	2	4	8	19
Through Vol	10	21	27	20
RT Vol	10	3	15	2
Lane Flow Rate	25	32	57	47
Geometry Grp	1	1	1	1
Degree of Util (X)	0.027	0.036	0.063	0.055
Departure Headway (Hd)	3.871	4.067	3.936	4.172
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	919	876	906	855
Service Time	1.92	2.113	1.977	2.214
HCM Lane V/C Ratio	0.027	0.037	0.063	0.055
HCM Control Delay	7	7.3	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	19	20	2
Future Vol, veh/h	0	19	20	2
Peak Hour Factor	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	22	23	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.5
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	6	29	5	0	6	17	11	0	2	1	2
Future Vol, veh/h	0	6	29	5	0	6	17	11	0	2	1	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	5	0	6	17	11	0	2	1	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.2	7	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	15%	18%	68%
Vol Thru, %	20%	72%	50%	16%
Vol Right, %	40%	12%	32%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	40	34	19
LT Vol	2	6	6	13
Through Vol	1	29	17	3
RT Vol	2	5	11	3
Lane Flow Rate	5	41	35	19
Geometry Grp	1	1	1	1
Degree of Util (X)	0.006	0.045	0.037	0.022
Departure Headway (Hd)	3.919	3.958	3.848	4.111
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	911	906	931	870
Service Time	1.952	1.975	1.868	2.141
HCM Lane V/C Ratio	0.005	0.045	0.038	0.022
HCM Control Delay	7	7.2	7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.1	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	13	3	3
Future Vol, veh/h	0	13	3	3
Peak Hour Factor	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	3	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	12	27	2	0	1	7	15	0	2	3	3
Future Vol, veh/h	0	12	27	2	0	1	7	15	0	2	3	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	30	2	0	1	8	17	0	2	3	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	6.8	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	29%	4%	53%
Vol Thru, %	38%	66%	30%	9%
Vol Right, %	38%	5%	65%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	41	23	32
LT Vol	2	12	1	17
Through Vol	3	27	7	3
RT Vol	3	2	15	12
Lane Flow Rate	9	46	26	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.01	0.051	0.026	0.039
Departure Headway (Hd)	3.909	4.061	3.663	3.945
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	913	883	976	906
Service Time	1.943	2.081	1.69	1.974
HCM Lane V/C Ratio	0.01	0.052	0.027	0.04
HCM Control Delay	7	7.3	6.8	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.2	0.1	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	17	3	12
Future Vol, veh/h	0	17	3	12
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	19	3	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	6	34	5	0	6	16	11	0	2	1	2
Future Vol, veh/h	0	6	34	5	0	6	16	11	0	2	1	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	35	5	0	6	16	11	0	2	1	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.2	7	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	13%	18%	68%
Vol Thru, %	20%	76%	48%	16%
Vol Right, %	40%	11%	33%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	45	33	19
LT Vol	2	6	6	13
Through Vol	1	34	16	3
RT Vol	2	5	11	3
Lane Flow Rate	5	46	34	19
Geometry Grp	1	1	1	1
Degree of Util (X)	0.006	0.051	0.036	0.022
Departure Headway (Hd)	3.927	3.962	3.848	4.119
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	909	906	931	868
Service Time	1.962	1.979	1.868	2.151
HCM Lane V/C Ratio	0.006	0.051	0.037	0.022
HCM Control Delay	7	7.2	7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.2	0.1	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	13	3	3
Future Vol, veh/h	0	13	3	3
Peak Hour Factor	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	3	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	12	29	2	0	1	3	8	0	2	3	3
Future Vol, veh/h	0	12	29	2	0	1	3	8	0	2	3	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	32	2	0	1	3	9	0	2	3	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	6.7	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	28%	8%	53%
Vol Thru, %	38%	67%	25%	9%
Vol Right, %	38%	5%	67%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	43	12	32
LT Vol	2	12	1	17
Through Vol	3	29	3	3
RT Vol	3	2	8	12
Lane Flow Rate	9	48	13	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.01	0.054	0.014	0.039
Departure Headway (Hd)	3.892	4.05	3.664	3.928
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	917	885	975	910
Service Time	1.925	2.07	1.692	1.957
HCM Lane V/C Ratio	0.01	0.054	0.013	0.04
HCM Control Delay	7	7.3	6.7	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.2	0	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	17	3	12
Future Vol, veh/h	0	17	3	12
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	19	3	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	6	30	5	0	6	18	11	0	2	1	2
Future Vol, veh/h	0	6	30	5	0	6	18	11	0	2	1	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	31	5	0	6	18	11	0	2	1	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.2	7	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	15%	17%	70%
Vol Thru, %	20%	73%	51%	15%
Vol Right, %	40%	12%	31%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	41	35	20
LT Vol	2	6	6	14
Through Vol	1	30	18	3
RT Vol	2	5	11	3
Lane Flow Rate	5	42	36	20
Geometry Grp	1	1	1	1
Degree of Util (X)	0.006	0.046	0.038	0.023
Departure Headway (Hd)	3.924	3.962	3.856	4.123
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	910	905	930	867
Service Time	1.957	1.979	1.875	2.153
HCM Lane V/C Ratio	0.005	0.046	0.039	0.023
HCM Control Delay	7	7.2	7	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.1	0.1	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	14	3	3
Future Vol, veh/h	0	14	3	3
Peak Hour Factor	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	14	3	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	12	28	2	0	1	7	16	0	2	3	3
Future Vol, veh/h	0	12	28	2	0	1	7	16	0	2	3	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	31	2	0	1	8	18	0	2	3	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	6.8	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	29%	4%	55%
Vol Thru, %	38%	67%	29%	9%
Vol Right, %	38%	5%	67%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	42	24	33
LT Vol	2	12	1	18
Through Vol	3	28	7	3
RT Vol	3	2	16	12
Lane Flow Rate	9	47	27	37
Geometry Grp	1	1	1	1
Degree of Util (X)	0.01	0.053	0.027	0.04
Departure Headway (Hd)	3.914	4.063	3.657	3.958
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	912	882	977	903
Service Time	1.949	2.083	1.685	1.989
HCM Lane V/C Ratio	0.01	0.053	0.028	0.041
HCM Control Delay	7	7.3	6.8	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.2	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	18	3	12
Future Vol, veh/h	0	18	3	12
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	20	3	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.2
HCM LOS	A

Lane

Intersection												
Intersection Delay, s/veh	7.1											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	6	35	5	0	6	17	11	0	2	1	2
Future Vol, veh/h	0	6	35	5	0	6	17	11	0	2	1	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	36	5	0	6	17	11	0	2	1	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.2	7	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	13%	18%	70%
Vol Thru, %	20%	76%	50%	15%
Vol Right, %	40%	11%	32%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	46	34	20
LT Vol	2	6	6	14
Through Vol	1	35	17	3
RT Vol	2	5	11	3
Lane Flow Rate	5	47	35	20
Geometry Grp	1	1	1	1
Degree of Util (X)	0.006	0.052	0.037	0.023
Departure Headway (Hd)	3.932	3.966	3.855	4.131
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	908	905	929	865
Service Time	1.967	1.983	1.876	2.162
HCM Lane V/C Ratio	0.006	0.052	0.038	0.023
HCM Control Delay	7	7.2	7	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.2	0.1	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	14	3	3
Future Vol, veh/h	0	14	3	3
Peak Hour Factor	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	14	3	3
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.3
HCM LOS	A

Lane

Intersection												
Intersection Delay, s/veh	7.1											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	12	30	2	0	1	3	9	0	2	3	3
Future Vol, veh/h	0	12	30	2	0	1	3	9	0	2	3	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	33	2	0	1	3	10	0	2	3	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	6.7	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	27%	8%	55%
Vol Thru, %	38%	68%	23%	9%
Vol Right, %	38%	5%	69%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	44	13	33
LT Vol	2	12	1	18
Through Vol	3	30	3	3
RT Vol	3	2	9	12
Lane Flow Rate	9	49	14	37
Geometry Grp	1	1	1	1
Degree of Util (X)	0.01	0.055	0.015	0.04
Departure Headway (Hd)	3.896	4.053	3.65	3.941
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	916	885	979	908
Service Time	1.93	2.072	1.678	1.97
HCM Lane V/C Ratio	0.01	0.055	0.014	0.041
HCM Control Delay	7	7.3	6.7	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.2	0	0.1

Intersection
Intersection Delay, s/veh
Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	18	3	12
Future Vol, veh/h	0	18	3	12
Peak Hour Factor	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	20	3	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Lane

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Manhattan Beach Boulevard
Peak hr: AM
Annual Growth: 1.00%

Combined Project

N-S St: Sepulveda Boulevard
E-W St: Manhattan Beach Boulevard
Project: Skechers Design Center and Offices Project/1-14-4065-2
File: ICU9

Date: 5/22/2016
Date of Count: 2016
Projection Year: 2020

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	127	1600	0.079	1	128	1600	0.080	0	128	1600	0.080
NB Thru	2794	4800	0.602 *	7	2801	4800	0.604 *	0	2801	4800	0.604 *
NB Right	96	0	0.000	2	98	0	0.000	0	98	0	0.000
SB Left	118	2880	0.041 *	0	118	2880	0.041 *	0	118	2880	0.041 *
SB Thru	895	4800	0.215	76	971	4800	0.231	0	971	4800	0.231
SB Right	138	0	0.000	0	138	0	0.000	0	138	0	0.000
EB Left	193	1600	0.121 *	0	193	1600	0.121 *	0	193	1600	0.121 *
EB Thru	520	3200	0.163	0	520	3200	0.163	0	520	3200	0.163
EB Right	136	1600	0.085	3	139	1600	0.087	0	139	1600	0.087
WB Left	149	1600	0.093	18	167	1600	0.104	0	167	1600	0.104
WB Thru	563	3200	0.176 *	0	563	3200	0.176 *	0	563	3200	0.176 *
WB Right [3]	173	1600	0.067	0	173	1600	0.067	0	173	1600	0.067
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			1.040				1.041				1.041
LOS			F				F				F

	2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	5	18	150	1600	0.094	1	151	1600	0.094	0	151	1600	0.094
NB Thru	113	123	3030	4800	0.657 *	7	3037	4800	0.659 *	0	3037	4800	0.659 *
NB Right	4	24	124	0	0.000	2	126	0	0.000	0	126	0	0.000
SB Left	5	2	125	2880	0.043 *	0	125	2880	0.043 *	0	125	2880	0.043 *
SB Thru	36	128	1059	4800	0.253	76	1135	4800	0.269	0	1135	4800	0.269
SB Right	6	10	154	0	0.000	0	154	0	0.000	0	154	0	0.000
EB Left	8	10	211	1600	0.132 *	0	211	1600	0.132 *	0	211	1600	0.132 *
EB Thru	21	8	549	3200	0.172	0	549	3200	0.172	0	549	3200	0.172
EB Right	6	17	159	1600	0.099	3	162	1600	0.101	0	162	1600	0.101
WB Left	6	32	187	1600	0.117	18	205	1600	0.128	0	205	1600	0.128
WB Thru	23	12	598	3200	0.187 *	0	598	3200	0.187 *	0	598	3200	0.187 *
WB Right [3]	7	2	182	1600	0.070	0	182	1600	0.070	0	182	1600	0.070
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					1.119				1.121				1.121
LOS					F				F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Manhattan Beach Boulevard

N-S St:	Sepulveda Boulevard	Peak hr:	PM	Date:	5/22/2016
E-W St:	Manhattan Beach Boulevard	Annual Growth:	1.00%	Date of Count:	2016
Project:	Skechers Design Center and Offices Project/1-14-4065-2			Projection Year:	2020
File:	ICU9	***Combined Project***			

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	230	1600	0.144 *	8	238	1600	0.149 *	0	238	1600	0.149 *
NB Thru	1220	4800	0.288	68	1288	4800	0.305	0	1288	4800	0.305
NB Right	162	0	0.000	16	178	0	0.000	0	178	0	0.000
SB Left	171	2880	0.059	0	171	2880	0.059	0	171	2880	0.059
SB Thru	2141	4800	0.471 *	9	2150	4800	0.473 *	0	2150	4800	0.473 *
SB Right	121	0	0.000	0	121	0	0.000	0	121	0	0.000
EB Left	233	1600	0.146	0	233	1600	0.146	0	233	1600	0.146
EB Thru	528	3200	0.165 *	0	528	3200	0.165 *	0	528	3200	0.165 *
EB Right	133	1600	0.083	0	133	1600	0.083	0	133	1600	0.083
WB Left	276	1600	0.173 *	3	279	1600	0.174 *	0	279	1600	0.174 *
WB Thru	519	3200	0.162	0	519	3200	0.162	0	519	3200	0.162
WB Right [3]	140	1600	0.028	0	140	1600	0.028	0	140	1600	0.028
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			1.053				1.061				1.061
LOS			F				F				F

	2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	9	13	252	1600	0.158 *	8	260	1600	0.163 *	0	260	1600	0.163 *
NB Thru	50	193	1463	4800	0.346	68	1531	4800	0.363	0	1531	4800	0.363
NB Right	7	27	196	0	0.000	16	212	0	0.000	0	212	0	0.000
SB Left	7	5	183	2880	0.064	0	183	2880	0.064	0	183	2880	0.064
SB Thru	87	218	2446	4800	0.538 *	9	2455	4800	0.540 *	0	2455	4800	0.540 *
SB Right	5	9	135	0	0.000	0	135	0	0.000	0	135	0	0.000
EB Left	9	11	253	1600	0.158	0	253	1600	0.158	0	253	1600	0.158
EB Thru	21	8	557	3200	0.174 *	0	557	3200	0.174 *	0	557	3200	0.174 *
EB Right	5	12	150	1600	0.094	0	150	1600	0.094	0	150	1600	0.094
WB Left	11	20	307	1600	0.192 *	3	310	1600	0.194 *	0	310	1600	0.194 *
WB Thru	21	4	544	3200	0.170	0	544	3200	0.170	0	544	3200	0.170
WB Right [3]	6	7	153	1600	0.032	0	153	1600	0.032	0	153	1600	0.032
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					1.161				1.170				1.170
LOS					F				F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 8th Street
Peak hr: AM
Annual Growth: 1.00%

Combined Project

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Skechers Design Center and Offices Project/1-14-4065-2
File: ICU10

Date: 5/22/2016
Date of Count: 2016
Projection Year: 2020

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION				2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	18	1600	0.011	0	18	1600	0.011	0	18	1600	0.011	1	35	54	1600	0.034	0	54	1600	0.034	0	54	1600	0.034
NB Thru	3089	4800	0.645 *	11	3100	4800	0.647 *	0	3100	4800	0.647 *	125	130	3344	4800	0.698 *	11	3355	4800	0.700 *	0	3355	4800	0.700 *
NB Right	7	0	0.000	0	7	0	0.000	0	7	0	0.000	0	0	7	0	0.000	0	7	0	0.000	0	7	0	0.000
SB Left [4]	6	1600	0.004 *	0	6	1600	0.004 *	0	6	1600	0.004 *	0	1	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *
SB Thru	1108	4800	0.239	101	1209	4800	0.260	0	1209	4800	0.260	45	132	1285	4800	0.277	101	1386	4800	0.298	0	1386	4800	0.298
SB Right	40	0	0.000	0	40	0	0.000	0	40	0	0.000	2	2	44	0	0.000	0	44	0	0.000	0	44	0	0.000
EB Left	21	0	0.013 *	0	21	0	0.013 *	0	21	0	0.013 *	1	19	41	0	0.026 *	0	41	0	0.026 *	0	41	0	0.026 *
EB Thru	46	1600	0.043	0	46	1600	0.045	0	46	1600	0.045	2	6	54	1600	0.061	0	54	1600	0.063	0	54	1600	0.063
EB Right	2	0	0.000	3	5	0	0.000	0	5	0	0.000	0	0	2	0	0.000	3	5	0	0.000	0	5	0	0.000
WB Left	22	0	0.014	0	22	0	0.014	0	22	0	0.014	1	0	23	0	0.014	0	23	0	0.014	0	23	0	0.014
WB Thru	72	1600	0.059 *	0	72	1600	0.059 *	0	72	1600	0.059 *	3	9	84	1600	0.067 *	0	84	1600	0.067 *	0	84	1600	0.067 *
WB Right	55	1600	0.034	0	55	1600	0.034	0	55	1600	0.034	2	1	58	1600	0.036	0	58	1600	0.036	0	58	1600	0.036
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.821				0.823				0.823					0.895				0.897				0.897
LOS			D				D				D					D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 No northbound left-turns 3-7 PM
4 No southbound left-turns 7-9 AM

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Skechers Design Center and Offices Project/1-14-4065-2
File: ICU10

Sepulveda Boulevard @ 8th Street
Peak hr: PM
Annual Growth: 1.00%

Combined Project

Date: 5/22/2016
Date of Count: 2016
Projection Year: 2020

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	2	1600	0.001 *	0	2	1600	0.001 *	0	2	1600	0.001 *
NB Thru	1481	4800	0.312	89	1570	4800	0.330	0	1570	4800	0.330
NB Right	16	0	0.000	0	16	0	0.000	0	16	0	0.000
SB Left [4]	48	1600	0.030	0	48	1600	0.030	0	48	1600	0.030
SB Thru	2554	4800	0.534 *	11	2565	4800	0.536 *	0	2565	4800	0.536 *
SB Right	9	0	0.000	0	9	0	0.000	0	9	0	0.000
EB Left	34	0	0.021	0	34	0	0.021	0	34	0	0.021
EB Thru	28	1600	0.051 *	0	28	1600	0.051 *	0	28	1600	0.051 *
EB Right	20	0	0.000	0	20	0	0.000	0	20	0	0.000
WB Left	21	0	0.013 *	0	21	0	0.013 *	0	21	0	0.013 *
WB Thru	18	1600	0.024	0	18	1600	0.024	0	18	1600	0.024
WB Right	19	1600	0.012	0	19	1600	0.012	0	19	1600	0.012
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			0.700				0.702				0.702
LOS			B				C				C

	2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	0	33	35	1600	0.022 *	0	35	1600	0.022 *	0	35	1600	0.022 *
NB Thru	60	167	1708	4800	0.359	89	1797	4800	0.378	0	1797	4800	0.378
NB Right	1	0	17	0	0.000	0	17	0	0.000	0	17	0	0.000
SB Left [4]	2	1	51	1600	0.032	0	51	1600	0.032	0	51	1600	0.032
SB Thru	104	246	2904	4800	0.607 *	11	2915	4800	0.610 *	0	2915	4800	0.610 *
SB Right	0	2	11	0	0.000	0	11	0	0.000	0	11	0	0.000
EB Left	1	21	56	0	0.035	0	56	0	0.035	0	56	0	0.035
EB Thru	1	7	36	1600	0.071 *	0	36	1600	0.071 *	0	36	1600	0.071 *
EB Right	1	0	21	0	0.000	0	21	0	0.000	0	21	0	0.000
WB Left	1	0	22	0	0.014 *	0	22	0	0.014 *	0	22	0	0.014 *
WB Thru	1	9	28	1600	0.031	0	28	1600	0.031	0	28	1600	0.031
WB Right	1	1	21	1600	0.013	0	21	1600	0.013	0	21	1600	0.013
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					0.814				0.816				0.816
LOS					D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 No northbound left-turns 3-7 PM
4 No southbound left-turns 7-9 AM

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 2nd Street
Peak hr: AM
Annual Growth: 1.00%

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Skechers Design Center and Offices Project/1-14-4065-2
File: ICU11

Combined Project

Date: 5/22/2016
Date of Count: 2016
Projection Year: 2020

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION				2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	20	1600	0.013	1	21	1600	0.013	0	21	1600	0.013	1	1	22	1600	0.014	1	23	1600	0.014	0	23	1600	0.014
NB Thru	2903	4800	0.608 *	11	2914	4800	0.611 *	0	2914	4800	0.611 *	118	161	3182	4800	0.667 *	11	3193	4800	0.669 *	0	3193	4800	0.669 *
NB Right	17	0	0.000	0	17	0	0.000	0	17	0	0.000	1	0	18	0	0.000	0	18	0	0.000	0	18	0	0.000
SB Left	43	1600	0.027 *	0	43	1600	0.027 *	0	43	1600	0.027 *	2	5	50	1600	0.031 *	0	50	1600	0.031 *	0	50	1600	0.031 *
SB Thru	979	4800	0.218	105	1084	4800	0.239	0	1084	4800	0.239	40	115	1134	4800	0.251	105	1239	4800	0.273	0	1239	4800	0.273
SB Right	65	0	0.000	0	65	0	0.000	0	65	0	0.000	3	2	70	0	0.000	0	70	0	0.000	0	70	0	0.000
EB Left	55	1600	0.034 *	0	55	1600	0.034 *	0	55	1600	0.034 *	2	2	59	1600	0.037 *	0	59	1600	0.037 *	0	59	1600	0.037 *
EB Thru	108	1600	0.077	0	108	1600	0.079	0	108	1600	0.079	4	0	112	1600	0.081	0	112	1600	0.083	0	112	1600	0.083
EB Right	15	0	0.000	3	18	0	0.000	0	18	0	0.000	1	1	17	0	0.000	3	20	0	0.000	0	20	0	0.000
WB Left	39	1600	0.024	0	39	1600	0.024	0	39	1600	0.024	2	0	41	1600	0.026	0	41	1600	0.026	0	41	1600	0.026
WB Thru	93	1600	0.098 *	0	93	1600	0.098 *	0	93	1600	0.098 *	4	3	100	1600	0.108 *	0	100	1600	0.108 *	0	100	1600	0.108 *
WB Right	64	0	0.000	0	64	0	0.000	0	64	0	0.000	3	5	72	0	0.000	0	72	0	0.000	0	72	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.868				0.870				0.870					0.942				0.945				0.945
LOS			D				D				D					E				E				E

* *Key conflicting movement as a part of ICU*
1 *Counts conducted by: City Traffic Counters*
2 *Capacity expressed in veh/hour of green*

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 2nd Street
Peak hr: PM
Annual Growth: 1.00%

Combined Project

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Skechers Design Center and Offices Project/1-14-4065-2
File: ICU11

Date: 5/22/2016
Date of Count: 2016
Projection Year: 2020

Movement	2016 EXISTING TRAFFIC 1 Volume	2 Capacity	V/C Ratio	2016 EXISTING WITH PROJECT Added Volume	Total Volume	2 Capacity	V/C Ratio	2016 EXISTING W/ PROJECT + MITIGATION Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	22	1600	0.014 *	5	27	1600	0.017 *	0	27	1600	0.017 *
NB Thru	1368	4800	0.290	89	1457	4800	0.309	0	1457	4800	0.309
NB Right	26	0	0.000	0	26	0	0.000	0	26	0	0.000
SB Left	35	1600	0.022	0	35	1600	0.022	0	35	1600	0.022
SB Thru	2292	4800	0.483 *	12	2304	4800	0.486 *	0	2304	4800	0.486 *
SB Right	27	0	0.000	0	27	0	0.000	0	27	0	0.000
EB Left	69	1600	0.043	0	69	1600	0.043	0	69	1600	0.043
EB Thru	77	1600	0.091 *	0	77	1600	0.091 *	0	77	1600	0.091 *
EB Right	68	0	0.000	0	68	0	0.000	0	68	0	0.000
WB Left	39	1600	0.024 *	0	39	1600	0.024 *	0	39	1600	0.024 *
WB Thru	52	1600	0.053	0	52	1600	0.053	0	52	1600	0.053
WB Right	33	0	0.000	0	33	0	0.000	0	33	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			0.712				0.718				0.718
LOS			C				C				C

Movement	2020 FUTURE PRE-PROJECT Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	2020 FUTURE WITH PROJECT Added Volume	Total Volume	2 Capacity	V/C Ratio	2020 FUTURE W/ PROJECT + MITIGATION Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	1	3	26	1600	0.016 *	5	31	1600	0.019 *	0	31	1600	0.019 *
NB Thru	56	215	1639	4800	0.347	89	1728	4800	0.366	0	1728	4800	0.366
NB Right	1	0	27	0	0.000	0	27	0	0.000	0	27	0	0.000
SB Left	1	6	42	1600	0.026	0	42	1600	0.026	0	42	1600	0.026
SB Thru	93	215	2600	4800	0.548 *	12	2612	4800	0.550 *	0	2612	4800	0.550 *
SB Right	1	2	30	0	0.000	0	30	0	0.000	0	30	0	0.000
EB Left	3	1	73	1600	0.046	0	73	1600	0.046	0	73	1600	0.046
EB Thru	3	0	80	1600	0.096 *	0	80	1600	0.096 *	0	80	1600	0.096 *
EB Right	3	3	74	0	0.000	0	74	0	0.000	0	74	0	0.000
WB Left	2	0	41	1600	0.026 *	0	41	1600	0.026 *	0	41	1600	0.026 *
WB Thru	2	3	57	1600	0.059	0	57	1600	0.059	0	57	1600	0.059
WB Right	1	4	38	0	0.000	0	38	0	0.000	0	38	0	0.000
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					0.786				0.792				0.792
LOS					C				C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	5	3	17	0	1	19	77	2938	9	34	1003	32
Future Vol, veh/h	5	3	17	0	1	19	77	2938	9	34	1003	32
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	2	0	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	3	18	0	1	20	81	3093	9	36	1056	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2546	4410	549	3756	4422	1591	1091	0	0	3102	0	0
Stage 1	1146	1146	-	3259	3259	-	-	-	-	-	-	-
Stage 2	1400	3264	-	497	1163	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	29	~ 1	411	5	~ 1	82	354	-	-	~ 33	-	-
Stage 1	157	272	-	4	22	-	-	-	-	-	-	-
Stage 2	132	22	-	478	267	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 1	410	-	~ 1	79	353	-	-	~ 32	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	121	272	-	3	17	-	-	-	-	-	-	-
Stage 2	69	17	-	451	267	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.5	12.2
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	353	-	-	-	-	~ 32	-	-
HCM Lane V/C Ratio	0.23	-	-	-	-	1.118	-	-
HCM Control Delay (s)	18.2	-	-	-	-	$ 383.6	-	-
HCM Lane LOS	C	-	-	-	-	F	-	-
HCM 95th %tile Q(veh)	0.9	-	-	-	-	3.9	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	12

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	5	1	46	0	0	30	40	1356	8	25	2292	18
Future Vol, veh/h	5	1	46	0	0	30	40	1356	8	25	2292	18
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	1	0	0	27
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	47	0	0	31	41	1384	8	26	2339	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3035	3873	1181	2457	3878	723	2358	0	0	1392	0	0
Stage 1	2400	2400	-	1469	1469	-	-	-	-	-	-	-
Stage 2	635	1473	-	988	2409	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	14	3	157	33	3	316	82	-	-	252	-	-
Stage 1	20	64	-	93	190	-	-	-	-	-	-	-
Stage 2	395	189	-	239	63	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	7	~ 1	157	-	1	309	82	-	-	246	-	-
Mov Cap-2 Maneuver	7	~ 1	-	-	1	-	-	-	-	-	-	-
Stage 1	10	57	-	47	95	-	-	-	-	-	-	-
Stage 2	174	95	-	147	56	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 804.3		2.5	0.2
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	82	-	-	26	-	246	-	-
HCM Lane V/C Ratio	0.498	-	-	2.041	-	0.104	-	-
HCM Control Delay (s)	86.2	-	-	$ 804.3	-	21.3	-	-
HCM Lane LOS	F	-	-	F	-	C	-	-
HCM 95th %tile Q(veh)	2.1	-	-	6.5	-	0.3	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	8	3	21	0	1	14	117	2951	7	31	1067	75
Future Vol, veh/h	8	3	21	0	1	14	117	2951	7	31	1067	75
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	2	0	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	3	22	0	1	15	123	3106	7	33	1123	79

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2719	4590	605	3874	4625	1597	1204	0	0	3114	0	0
Stage 1	1230	1230	-	3356	3356	-	-	-	-	-	-	-
Stage 2	1489	3360	-	518	1269	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	22	~ 1	378	4	~ 1	82	312	-	-	33	-	-
Stage 1	137	248	-	4	20	-	-	-	-	-	-	-
Stage 2	115	20	-	464	238	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 1	377	-	~ 1	79	311	-	-	~ 32	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	83	248	-	2	12	-	-	-	-	-	-	-
Stage 2	50	12	-	431	238	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.9	9.2
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	311	-	-	-	-	~ 32	-	-
HCM Lane V/C Ratio	0.396	-	-	-	-	1.02	-	-
HCM Control Delay (s)	24	-	-	-	-	$ 349.2	-	-
HCM Lane LOS	C	-	-	-	-	F	-	-
HCM 95th %tile Q(veh)	1.8	-	-	-	-	3.5	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	56.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	25	0	101	0	0	15	38	1441	3	17	2306	20
Future Vol, veh/h	25	0	101	0	0	15	38	1441	3	17	2306	20
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	1	0	0	27
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	103	0	0	15	39	1470	3	17	2353	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3065	3950	1189	2526	3958	764	2374	0	0	1473	0	0
Stage 1	2399	2399	-	1549	1549	-	-	-	-	-	-	-
Stage 2	666	1551	-	977	2409	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 13	3	155	30	3	297	80	-	-	230	-	-
Stage 1	~ 20	64	-	82	174	-	-	-	-	-	-	-
Stage 2	378	173	-	243	63	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 7	1	155	6	1	290	80	-	-	225	-	-
Mov Cap-2 Maneuver	~ 7	1	-	6	1	-	-	-	-	-	-	-
Stage 1	~ 10	59	-	42	89	-	-	-	-	-	-	-
Stage 2	179	89	-	75	58	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 1746.3	18.1	2.2	0.2
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	80	-	-	30	290	225	-	-
HCM Lane V/C Ratio	0.485	-	-	4.286	0.053	0.077	-	-
HCM Control Delay (s)	86.6	-		$ 1746.3	18.1	22.3	-	-
HCM Lane LOS	F	-	-	F	C	C	-	-
HCM 95th %tile Q(veh)	2	-	-	15.4	0.2	0.2	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	5	3	18	0	1	20	80	3211	9	35	1167	33
Future Vol, veh/h	5	3	18	0	1	20	80	3211	9	35	1167	33
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	2	0	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	3	19	0	1	21	84	3380	9	37	1228	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2842	4879	636	4122	4892	1735	1265	0	0	3389	0	0
Stage 1	1321	1321	-	3553	3553	-	-	-	-	-	-	-
Stage 2	1521	3558	-	569	1339	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	19	~ 1	361	3	~ 1	65	291	-	-	~ 23	-	-
Stage 1	119	224	-	3	15	-	-	-	-	-	-	-
Stage 2	110	15	-	433	220	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 1	360	-	~ 1	63	291	-	-	~ 22	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	85	224	-	2	11	-	-	-	-	-	-	-
Stage 2	46	11	-	404	220	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.5	19.9
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	291	-	-	-	-	~ 22	-	-
HCM Lane V/C Ratio	0.289	-	-	-	-	1.675	-	-
HCM Control Delay (s)	22.3	-	-	-	-	$ 703	-	-
HCM Lane LOS	C	-	-	-	-	F	-	-
HCM 95th %tile Q(veh)	1.2	-	-	-	-	4.8	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	18.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	5	1	48	0	0	31	42	1604	8	26	2627	19
Future Vol, veh/h	5	1	48	0	0	31	42	1604	8	26	2627	19
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	1	0	0	27
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	49	0	0	32	43	1637	8	27	2681	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3484	4475	1352	2854	4481	849	2701	0	0	1645	0	0
Stage 1	2744	2744	-	1727	1727	-	-	-	-	-	-	-
Stage 2	740	1731	-	1127	2754	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	7	~ 1	120	18	1	261	54	-	-	189	-	-
Stage 1	11	42	-	61	142	-	-	-	-	-	-	-
Stage 2	340	141	-	196	42	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 2	0	120	3	0	255	54	-	-	185	-	-
Mov Cap-2 Maneuver	~ 2	0	-	3	0	-	-	-	-	-	-	-
Stage 1	~ 2	36	-	12	29	-	-	-	-	-	-	-
Stage 2	59	29	-	96	36	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 1369.2	21.1	4.7	0.3
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	54	-	-	18	255	185	-	-
HCM Lane V/C Ratio	0.794	-	-	3.061	0.124	0.143	-	-
HCM Control Delay (s)	186.4	-		$ 1369.2	21.1	27.7	-	-
HCM Lane LOS	F	-	-	F	C	D	-	-
HCM 95th %tile Q(veh)	3.4	-	-	7.4	0.4	0.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	21.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	8	3	22	0	1	15	120	3224	7	32	1231	76
Future Vol, veh/h	8	3	22	0	1	15	120	3224	7	32	1231	76
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	2	0	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	3	23	0	1	16	126	3394	7	34	1296	80

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3016	5059	692	4239	5095	1741	1378	0	0	3401	0	0
Stage 1	1405	1405	-	3650	3650	-	-	-	-	-	-	-
Stage 2	1611	3654	-	589	1445	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	14	~ 1	331	2	0	65	256	-	-	~ 23	-	-
Stage 1	103	204	-	2	13	-	-	-	-	-	-	-
Stage 2	96	13	-	421	195	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 6	~ 1	330	-	0	63	256	-	-	~ 22	-	-
Mov Cap-2 Maneuver	~ 6	~ 1	-	-	0	-	-	-	-	-	-	-
Stage 1	52	204	-	1	7	-	-	-	-	-	-	-
Stage 2	30	7	-	385	195	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 2408.9		1.1	15.4
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	256	-	-	8	-	~ 22	-	-
HCM Lane V/C Ratio	0.493	-	-	4.342	-	1.531	-	-
HCM Control Delay (s)	32	-	-	$ 2408.9	-	$ 644.5	-	-
HCM Lane LOS	D	-	-	F	-	F	-	-
HCM 95th %tile Q(veh)	2.5	-	-	5.6	-	4.4	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	174.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	25	0	103	0	0	16	40	1689	3	18	2641	21
Future Vol, veh/h	25	0	103	0	0	16	40	1689	3	18	2641	21
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	1	0	0	27
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	105	0	0	16	41	1723	3	18	2695	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3514	4551	1360	2923	4561	890	2717	0	0	1727	0	0
Stage 1	2743	2743	-	1807	1807	-	-	-	-	-	-	-
Stage 2	771	1808	-	1116	2754	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 7	1	119	16	1	245	53	-	-	172	-	-
Stage 1	~ 11	42	-	53	129	-	-	-	-	-	-	-
Stage 2	326	129	-	199	42	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 2	0	119	1	0	239	53	-	-	168	-	-
Mov Cap-2 Maneuver	~ 2	0	-	1	0	-	-	-	-	-	-	-
Stage 1	~ 2	37	-	12	29	-	-	-	-	-	-	-
Stage 2	67	29	-	21	37	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 6157.8	21.2	4.2	0.2
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	53	-	-	10	239	168	-	-
HCM Lane V/C Ratio	0.77	-	-	13.061	0.068	0.109	-	-
HCM Control Delay (s)	183.1	-	-	$ 6157.8	21.2	29	-	-
HCM Lane LOS	F	-	-	F	C	D	-	-
HCM 95th %tile Q(veh)	3.2	-	-	17.8	0.2	0.4	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Duncan Avenue-Duncan Drive

N-S St:	Sepulveda Boulevard	Peak hr:	AM	Date:	5/22/2016
E-W St:	Duncan Avenue-Duncan Drive	Annual Growth:	1.00%	Date of Count:	2016
Project:	Skechers Design Center and Offices Project/1-14-4065-2			Projection Year:	2020
File:	ICU12				

Combined Project

Movement	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION			
	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	77	1600	0.048	40	117	1600	0.073	0	117	1600	0.073
NB Thru	2938	4800	0.614 *	13	2951	4800	0.616 *	0	2951	4800	0.616 *
NB Right	9	0	0.000	-2	7	0	0.000	0	7	0	0.000
SB Left	34	1600	0.021 *	-3	31	1600	0.019 *	0	31	1600	0.019 *
SB Thru	1003	4800	0.216	64	1067	4800	0.238	0	1067	4800	0.238
SB Right	32	0	0.000	43	75	0	0.000	0	75	0	0.000
EB Left	5	0	0.003	3	8	0	0.005	0	8	0	0.005
EB Thru	3	1600	0.016	0	3	1600	0.020 *	0	3	1600	0.020 *
EB Right	17	0	0.000	4	21	0	0.000	0	21	0	0.000
WB Left	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	1	1600	0.013	0	1	1600	0.009	0	1	1600	0.009
WB Right	19	0	0.000	-5	14	0	0.000	0	14	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			0.751				0.756				0.756
LOS			C				C				C

Movement	2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	3	0	80	1600	0.050	40	120	1600	0.075	0	120	1600	0.075
NB Thru	119	154	3211	4800	0.671 *	13	3224	4800	0.673 *	0	3224	4800	0.673 *
NB Right	0	0	9	0	0.000	-2	7	0	0.000	0	7	0	0.000
SB Left	1	0	35	1600	0.022 *	-3	32	1600	0.020 *	0	32	1600	0.020 *
SB Thru	41	123	1167	4800	0.250	64	1231	4800	0.272	0	1231	4800	0.272
SB Right	1	0	33	0	0.000	43	76	0	0.000	0	76	0	0.000
EB Left	0	0	5	0	0.003	3	8	0	0.005	0	8	0	0.005
EB Thru	0	0	3	1600	0.016	0	3	1600	0.021 *	0	3	1600	0.021 *
EB Right	1	0	18	0	0.000	4	22	0	0.000	0	22	0	0.000
WB Left	0	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	1	1600	0.013	0	1	1600	0.010	0	1	1600	0.010
WB Right	1	0	20	0	0.000	-5	15	0	0.000	0	15	0	0.000
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					0.809				0.814				0.814
LOS					D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Duncan Avenue-Duncan Drive

N-S St:	Sepulveda Boulevard	Peak hr:	PM	Date:	5/22/2016
E-W St:	Duncan Avenue-Duncan Drive	Annual Growth:	1.00%	Date of Count:	2016
Project:	Skechers Design Center and Offices Project/1-14-4065-2			Projection Year:	2020
File:	ICU12	***Combined Project***			

Movement	2016 EXISTING TRAFFIC 1 Volume	2 Capacity	V/C Ratio	2016 EXISTING WITH PROJECT Added Volume	Total Volume	2 Capacity	V/C Ratio	2016 EXISTING W/ PROJECT + MITIGATION Added Volume	Total Volume	2 Capacity	V/C Ratio	2020 FUTURE PRE-PROJECT Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	2020 FUTURE WITH PROJECT Added Volume	Total Volume	2 Capacity	V/C Ratio	2020 FUTURE W/ PROJECT + MITIGATION Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	40	1600	0.025 *	-2	38	1600	0.024 *	0	38	1600	0.024 *	2	0	42	1600	0.026 *	-2	40	1600	0.025 *	0	40	1600	0.025 *
NB Thru	1356	4800	0.284	85	1441	4800	0.301	0	1441	4800	0.301	55	193	1604	4800	0.336	85	1689	4800	0.353	0	1689	4800	0.353
NB Right	8	0	0.000	-5	3	0	0.000	0	3	0	0.000	0	0	8	0	0.000	-5	3	0	0.000	0	3	0	0.000
SB Left	25	1600	0.016	-8	17	1600	0.011	0	17	1600	0.011	1	0	26	1600	0.016	-8	18	1600	0.011	0	18	1600	0.011
SB Thru	2292	4800	0.481 *	14	2306	4800	0.485 *	0	2306	4800	0.485 *	93	242	2627	4800	0.551 *	14	2641	4800	0.555 *	0	2641	4800	0.555 *
SB Right	18	0	0.000	2	20	0	0.000	0	20	0	0.000	1	0	19	0	0.000	2	21	0	0.000	0	21	0	0.000
EB Left	5	0	0.003	20	25	0	0.016	0	25	0	0.016	0	0	5	0	0.003	20	25	0	0.016	0	25	0	0.016
EB Thru	1	1600	0.033 *	-1	0	1600	0.079 *	0	0	1600	0.079 *	0	0	1	1600	0.034 *	-1	0	1600	0.080 *	0	0	1600	0.080 *
EB Right	46	0	0.000	55	101	0	0.000	0	101	0	0.000	2	0	48	0	0.000	55	103	0	0.000	0	103	0	0.000
WB Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	1600	0.019	0	0	1600	0.009	0	0	1600	0.009	0	0	0	1600	0.019	0	0	1600	0.010	0	0	1600	0.010
WB Right	30	0	0.000	-15	15	0	0.000	0	15	0	0.000	1	0	31	0	0.000	-15	16	0	0.000	0	16	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *				0.100 *
ICU			0.639				0.687				0.687					0.711				0.760				0.760
LOS			B				B				B					C				C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Longfellow Avenue-Longfellow Drive

N-S St:	Sepulveda Boulevard-Pacific Coast Highway	Peak hr: AM	Date: 5/22/2016
E-W St:	Longfellow Avenue-Longfellow Drive	Annual Growth: 1.00%	Date of Count: 2016
Project:	Skechers Design Center and Offices Project/1-14-4065-2		Projection Year: 2020
File:	ICU13	***Combined Project***	

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004
NB Thru	3038	4800	0.637 *	53	3091	4800	0.651 *	0	3091	4800	0.651 *
NB Right	21	0	0.000	11	32	0	0.000	0	32	0	0.000
SB Left	47	1600	0.029 *	12	59	1600	0.037 *	0	59	1600	0.037 *
SB Thru	963	4800	0.203	56	1019	4800	0.215	0	1019	4800	0.215
SB Right	11	0	0.000	0	11	0	0.000	0	11	0	0.000
EB Left	11	0	0.007 *	0	11	0	0.007 *	0	11	0	0.007 *
EB Thru	25	1600	0.029	2	27	1600	0.030	0	27	1600	0.030
EB Right	10	0	0.000	0	10	0	0.000	0	10	0	0.000
WB Left	15	1600	0.009	0	15	1600	0.009	0	15	1600	0.009
WB Thru	18	1600	0.041 *	0	18	1600	0.041 *	0	18	1600	0.041 *
WB Right	47	0	0.000	1	48	0	0.000	0	48	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			0.814				0.836				0.836
LOS			D				D				D

	2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	0	0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004
NB Thru	123	154	3315	4800	0.695 *	53	3368	4800	0.709 *	0	3368	4800	0.709 *
NB Right	1	0	22	0	0.000	11	33	0	0.000	0	33	0	0.000
SB Left	2	0	49	1600	0.031 *	12	61	1600	0.038 *	0	61	1600	0.038 *
SB Thru	39	123	1125	4800	0.237	56	1181	4800	0.248	0	1181	4800	0.248
SB Right	0	0	11	0	0.000	0	11	0	0.000	0	11	0	0.000
EB Left	0	0	11	0	0.007 *	0	11	0	0.007 *	0	11	0	0.007 *
EB Thru	1	0	26	1600	0.029	2	28	1600	0.031	0	28	1600	0.031
EB Right	0	0	10	0	0.000	0	10	0	0.000	0	10	0	0.000
WB Left	1	0	16	1600	0.010	0	16	1600	0.010	0	16	1600	0.010
WB Thru	1	0	19	1600	0.043 *	0	19	1600	0.043 *	0	19	1600	0.043 *
WB Right	2	0	49	0	0.000	1	50	0	0.000	0	50	0	0.000
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					0.875				0.897				0.897
LOS					D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Longfellow Avenue-Longfellow Drive

N-S St:	Sepulveda Boulevard-Pacific Coast Highway	Peak hr:	PM	Date:	5/22/2016
E-W St:	Longfellow Avenue-Longfellow Drive	Annual Growth:	1.00%	Date of Count:	2016
Project:	Skechers Design Center and Offices Project/1-14-4065-2			Projection Year:	2020
File:	ICU13	***Combined Project***			

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	24	1600	0.015 *	0	24	1600	0.015 *	0	24	1600	0.015 *
NB Thru	1338	4800	0.283	66	1404	4800	0.297	0	1404	4800	0.297
NB Right	21	0	0.000	-1	20	0	0.000	0	20	0	0.000
SB Left	20	1600	0.013	-4	16	1600	0.010	0	16	1600	0.010
SB Thru	2398	4800	0.502 *	61	2459	4800	0.515 *	0	2459	4800	0.515 *
SB Right	13	0	0.000	0	13	0	0.000	0	13	0	0.000
EB Left	13	0	0.008	0	13	0	0.008	0	13	0	0.008
EB Thru	14	1600	0.026 *	0	14	1600	0.026 *	0	14	1600	0.026 *
EB Right	15	0	0.000	0	15	0	0.000	0	15	0	0.000
WB Left	39	1600	0.024 *	7	46	1600	0.029 *	0	46	1600	0.029 *
WB Thru	17	1600	0.027	0	17	1600	0.028	0	17	1600	0.028
WB Right	26	0	0.000	1	27	0	0.000	0	27	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			0.668				0.685				0.685
LOS			B				B				B

	2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	1	0	25	1600	0.016 *	0	25	1600	0.016 *	0	25	1600	0.016 *
NB Thru	54	193	1585	4800	0.335	66	1651	4800	0.348	0	1651	4800	0.348
NB Right	1	0	22	0	0.000	-1	21	0	0.000	0	21	0	0.000
SB Left	1	0	21	1600	0.013	-4	17	1600	0.011	0	17	1600	0.011
SB Thru	97	242	2737	4800	0.573 *	61	2798	4800	0.586 *	0	2798	4800	0.586 *
SB Right	1	0	14	0	0.000	0	14	0	0.000	0	14	0	0.000
EB Left	1	0	14	0	0.009	0	14	0	0.009	0	14	0	0.009
EB Thru	1	0	15	1600	0.028 *	0	15	1600	0.028 *	0	15	1600	0.028 *
EB Right	1	0	16	0	0.000	0	16	0	0.000	0	16	0	0.000
WB Left	2	0	41	1600	0.026 *	7	48	1600	0.030 *	0	48	1600	0.030 *
WB Thru	1	0	18	1600	0.028	0	18	1600	0.029	0	18	1600	0.029
WB Right	1	0	27	0	0.000	1	28	0	0.000	0	28	0	0.000
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					0.743				0.760				0.760
LOS					C				C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	3	53	47	3047	929	37
Future Vol, veh/h	3	53	47	3047	929	37
Conflicting Peds, #/hr	0	0	0	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	55	49	3174	968	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2355	503	1006	0	-	0
Stage 1	987	-	-	-	-	-
Stage 2	1368	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	60	440	389	-	-	-
Stage 1	246	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	52	440	389	-	-	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	246	-	-	-	-	-
Stage 2	157	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	389	-	314	-	-
HCM Lane V/C Ratio	0.126	-	0.186	-	-
HCM Control Delay (s)	15.6	-	19.1	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	0.7	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	4	62	5	1389	2438	10
Future Vol, veh/h	4	62	5	1389	2438	10
Conflicting Peds, #/hr	0	0	0	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	64	5	1432	2513	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3102	1262	2524	0	-	0
Stage 1	2519	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	23	138	67	-	-	-
Stage 1	26	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	21	138	67	-	-	-
Mov Cap-2 Maneuver	21	-	-	-	-	-
Stage 1	26	-	-	-	-	-
Stage 2	440	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	91	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	67	-	103	-	-
HCM Lane V/C Ratio	0.077	-	0.661	-	-
HCM Control Delay (s)	63.2	-	91	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	0.2	-	3.3	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	5	64	42	3111	992	35
Future Vol, veh/h	5	64	42	3111	992	35
Conflicting Peds, #/hr	0	0	0	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	67	44	3241	1033	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2436	535	1070	0	-	0
Stage 1	1052	-	-	-	-	-
Stage 2	1384	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	54	419	362	-	-	-
Stage 1	225	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	47	419	362	-	-	-
Mov Cap-2 Maneuver	47	-	-	-	-	-
Stage 1	225	-	-	-	-	-
Stage 2	155	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	362	-	266	-	-
HCM Lane V/C Ratio	0.121	-	0.27	-	-
HCM Control Delay (s)	16.3	-	23.5	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.1	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	16	57	5	1447	2507	13
Future Vol, veh/h	16	57	5	1447	2507	13
Conflicting Peds, #/hr	0	0	0	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	59	5	1492	2585	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3198	1299	2598	0	-	0
Stage 1	2591	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	20	131	62	-	-	-
Stage 1	23	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	18	131	62	-	-	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	23	-	-	-	-	-
Stage 2	425	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 370.5	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	62	-	55	-	-
HCM Lane V/C Ratio	0.083	-	1.368	-	-
HCM Control Delay (s)	68.3	-	$ 370.5	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	0.3	-	6.7	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	0.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	3	55	49	3325	1090	39
Future Vol, veh/h	3	55	49	3325	1090	39
Conflicting Peds, #/hr	0	0	0	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	57	51	3464	1135	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2644	588	1176	0	-	0
Stage 1	1156	-	-	-	-	-
Stage 2	1488	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	42	387	322	-	-	-
Stage 1	194	-	-	-	-	-
Stage 2	154	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	35	387	322	-	-	-
Mov Cap-2 Maneuver	35	-	-	-	-	-
Stage 1	194	-	-	-	-	-
Stage 2	130	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.4	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	322	-	255	-	-
HCM Lane V/C Ratio	0.159	-	0.237	-	-
HCM Control Delay (s)	18.3	-	23.4	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.6	-	0.9	-	-

Intersection						
Int Delay, s/veh	3.2					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	4	65	5	1638	2779	10
Future Vol, veh/h	4	65	5	1638	2779	10
Conflicting Peds, #/hr	0	0	0	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	67	5	1689	2865	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3556	1438	2875	0	-	0
Stage 1	2870	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	13	105	44	-	-	-
Stage 1	15	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	12	105	44	-	-	-
Mov Cap-2 Maneuver	12	-	-	-	-	-
Stage 1	15	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	201.4	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	44	-	72	-	-
HCM Lane V/C Ratio	0.117	-	0.988	-	-
HCM Control Delay (s)	97.4	-	201.4	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	5.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	5	66	44	3389	1153	37
Future Vol, veh/h	5	66	44	3389	1153	37
Conflicting Peds, #/hr	0	0	0	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	69	46	3530	1201	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2724	620	1240	0	-	0
Stage 1	1220	-	-	-	-	-
Stage 2	1504	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	37	369	299	-	-	-
Stage 1	177	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	31	369	299	-	-	-
Mov Cap-2 Maneuver	31	-	-	-	-	-
Stage 1	177	-	-	-	-	-
Stage 2	128	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.4	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	299	-	209	-	-
HCM Lane V/C Ratio	0.153	-	0.354	-	-
HCM Control Delay (s)	19.2	-	31.4	-	-
HCM Lane LOS	C	-	D	-	-
HCM 95th %tile Q(veh)	0.5	-	1.5	-	-

Intersection	
Int Delay, s/veh	14

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	16	60	5	1696	2848	13
Future Vol, veh/h	16	60	5	1696	2848	13
Conflicting Peds, #/hr	0	0	0	0	0	12
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	62	5	1748	2936	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3653	1475	2949	0	-	0
Stage 1	2943	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	~ 11	99	40	-	-	-
Stage 1	~ 14	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 10	99	40	-	-	-
Mov Cap-2 Maneuver	~ 10	-	-	-	-	-
Stage 1	~ 14	-	-	-	-	-
Stage 2	357	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 847	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	40	-	34	-	-
HCM Lane V/C Ratio	0.129	-	2.304	-	-
HCM Control Delay (s)	107.9	-	$ 847	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	8.9	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Pacific Coast Highway @ 30th Street
Peak hr: AM
Annual Growth: 1.00%

Combined Project

N-S St: Pacific Coast Highway
E-W St: 30th Street
Project: Skechers Design Center and Offices Project/1-14-4065-2
File: ICU14

Date: 5/22/2016
Date of Count: 2016
Projection Year: 2020

	2016 EXISTING TRAFFIC			2016 EXISTING WITH PROJECT				2016 EXISTING W/ PROJECT + MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	47	1600	0.029	-5	42	1600	0.026	0	42	1600	0.026
NB Thru	3047	4800	0.635 *	64	3111	4800	0.648 *	0	3111	4800	0.648 *
NB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
SB Thru	929	4800	0.201	63	992	4800	0.214	0	992	4800	0.214
SB Right	37	0	0.000	-2	35	0	0.000	0	35	0	0.000
EB Left	3	0	0.002	2	5	0	0.003	0	5	0	0.003
EB Thru	0	1600	0.035 *	0	0	1600	0.043 *	0	0	1600	0.043 *
EB Right	53	0	0.000	11	64	0	0.000	0	64	0	0.000
WB Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *
ICU			0.770				0.791				0.791
LOS			C				C				C

	2020 FUTURE PRE-PROJECT					2020 FUTURE WITH PROJECT				2020 FUTURE W/ PROJECT + MITIGATION			
Movement	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	2	0	49	1600	0.031	-5	44	1600	0.028	0	44	1600	0.028
NB Thru	124	154	3325	4800	0.693 *	64	3389	4800	0.706 *	0	3389	4800	0.706 *
NB Right	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SB Left	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
SB Thru	38	123	1090	4800	0.235	63	1153	4800	0.248	0	1153	4800	0.248
SB Right	2	0	39	0	0.000	-2	37	0	0.000	0	37	0	0.000
EB Left	0	0	3	0	0.002	2	5	0	0.003	0	5	0	0.003
EB Thru	0	0	0	1600	0.036 *	0	0	1600	0.044 *	0	0	1600	0.044 *
EB Right	2	0	55	0	0.000	11	66	0	0.000	0	66	0	0.000
WB Left	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WB Right	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Yellow Allowance					0.100 *				0.100 *				0.100 *
ICU					0.829				0.850				0.850
LOS					D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 No northbound left-turn 3-7 PM

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322   Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Pacific Coast Highway @ 30th Street
Peak hr: PM
Annual Growth: 1.00%

N-S St: Pacific Coast Highway
E-W St: 30th Street
Project: Skechers Design Center and Offices Project/1-14-4065-2
File: ICU14

Combined Project

Date: 5/22/2016
Date of Count: 2016
Projection Year: 2020

Movement	2016 EXISTING TRAFFIC 1 Volume	2 Capacity	V/C Ratio	2016 EXISTING WITH PROJECT Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	5	1600	0.003 *	0	5	1600	0.003 *
NB Thru	1389	4800	0.289	58	1447	4800	0.301
NB Right	0	0	0.000	0	0	0	0.000
SB Left	0	0	0.000	0	0	0	0.000
SB Thru	2438	4800	0.510 *	69	2507	4800	0.525 *
SB Right	10	0	0.000	3	13	0	0.000
EB Left	4	0	0.003	12	16	0	0.010
EB Thru	0	1600	0.041 *	0	0	1600	0.046 *
EB Right	62	0	0.000	-5	57	0	0.000
WB Left	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	0.000	0	0	0	0.000
WB Right	0	0	0.000	0	0	0	0.000
Yellow Allowance			0.100 *				0.100 *
ICU			0.654				0.674
LOS			B				B

Movement	2016 EXISTING W/ PROJECT + MITIGATION Added Volume	Total Volume	2 Capacity	V/C Ratio	2020 FUTURE PRE-PROJECT Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	0	5	1600	0.003 *	0	0	5	1600	0.003 *
NB Thru	0	1447	4800	0.301	56	193	1638	4800	0.341
NB Right	0	0	0	0.000	0	0	0	0	0.000
SB Left	0	0	0	0.000	0	0	0	0	0.000
SB Thru	0	2507	4800	0.525 *	99	242	2779	4800	0.581 *
SB Right	0	13	0	0.000	0	0	10	0	0.000
EB Left	0	16	0	0.010	0	0	4	0	0.003
EB Thru	0	0	1600	0.046 *	0	0	0	1600	0.043 *
EB Right	0	57	0	0.000	3	0	65	0	0.000
WB Left	0	0	0	0.000 *	0	0	0	0	0.000 *
WB Thru	0	0	0	0.000	0	0	0	0	0.000
WB Right	0	0	0	0.000	0	0	0	0	0.000
Yellow Allowance				0.100 *					0.100 *
ICU				0.674					0.727
LOS				B					C

Movement	2020 FUTURE WITH PROJECT Added Volume	Total Volume	2 Capacity	V/C Ratio	2020 FUTURE W/ PROJECT + MITIGATION Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	0	5	1600	0.003 *	0	5	1600	0.003 *
NB Thru	58	1696	4800	0.353	0	1696	4800	0.353
NB Right	0	0	0	0.000	0	0	0	0.000
SB Left	0	0	0	0.000	0	0	0	0.000
SB Thru	69	2848	4800	0.596 *	0	2848	4800	0.596 *
SB Right	3	13	0	0.000	0	13	0	0.000
EB Left	12	16	0	0.010	0	16	0	0.010
EB Thru	0	0	1600	0.048 *	0	0	1600	0.048 *
EB Right	-5	60	0	0.000	0	60	0	0.000
WB Left	0	0	0	0.000 *	0	0	0	0.000 *
WB Thru	0	0	0	0.000	0	0	0	0.000
WB Right	0	0	0	0.000	0	0	0	0.000
Yellow Allowance				0.100 *				0.100 *
ICU				0.747				0.747
LOS				C				C

* *Key conflicting movement as a part of ICU*
1 *Counts conducted by: City Traffic Counters*
2 *Capacity expressed in veh/hour of green*
3 *No northbound left-turn 3-7 PM*

Intersection	
Int Delay, s/veh	9.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	67	3038	18	49	936
Future Vol, veh/h	0	67	3038	18	49	936
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	70	3165	19	51	975

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3666	1592	0	0	3183	0
Stage 1	3174	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	11	82	-	-	~ 30	-
Stage 1	9	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	11	82	-	-	~ 30	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	9	-	-	-	-	-
Stage 2	527	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	149.3	0	31.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	82	~ 30	-
HCM Lane V/C Ratio	-	-	0.851	1.701	-
HCM Control Delay (s)	-	-	149.3	$ 624.5	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	4.4	5.9	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	52	1354	24	3	2511
Future Vol, veh/h	0	52	1354	24	3	2511
Conflicting Peds, #/hr	0	0	0	44	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	53	1382	24	3	2562

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2425	703	0	0	1406	0
Stage 1	1394	-	-	-	-	-
Stage 2	1031	-	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	55	326	-	-	248	-
Stage 1	138	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	326	-	-	248	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	138	-	-	-	-	-
Stage 2	262	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	326	248	-
HCM Lane V/C Ratio	-	-	0.163	0.012	-
HCM Control Delay (s)	-	-	18.2	19.7	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection	
Int Delay, s/veh	10.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	22	0	0	67	82	3097	18	49	935	75
Future Vol, veh/h	0	0	22	0	0	67	82	3097	18	49	935	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	6	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	50	-	65
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	23	0	0	70	85	3226	19	51	974	78

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2537	4492	493	3898	4482	1622	974	0	0	3245	0	0
Stage 1	1076	1076	-	3406	3406	-	-	-	-	-	-	-
Stage 2	1461	3416	-	492	1076	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	29	1	446	4	1	78	403	-	-	~ 28	-	-
Stage 1	176	294	-	3	18	-	-	-	-	-	-	-
Stage 2	120	18	-	482	294	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	3	1	444	3	1	78	401	-	-	~ 28	-	-
Mov Cap-2 Maneuver	3	1	-	3	1	-	-	-	-	-	-	-
Stage 1	139	294	-	2	14	-	-	-	-	-	-	-
Stage 2	10	14	-	455	294	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	165.8	0.4	32
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	401	-	-	444	78	~ 28	-	-
HCM Lane V/C Ratio	0.213	-	-	0.052	0.895	1.823	-	-
HCM Control Delay (s)	16.4	-	-	13.5	165.8	$ 692.6	-	-
HCM Lane LOS	C	-	-	B	F	F	-	-
HCM 95th %tile Q(veh)	0.8	-	-	0.2	4.6	6	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	11.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	148	0	0	52	20	1412	24	3	2559	16
Future Vol, veh/h	0	0	148	0	0	52	20	1412	24	3	2559	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	44	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	50	-	-	50	-	65
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	90	98	90	98	98	98	98	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	164	0	0	53	22	1441	24	3	2611	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3238	4127	1350	2549	4115	733	2611	0	0	1465	0	0
Stage 1	2617	2617	-	1498	1498	-	-	-	-	-	-	-
Stage 2	621	1510	-	1051	2617	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	10	2	~ 120	29	2	312	61	-	-	232	-	-
Stage 1	13	49	-	89	184	-	-	-	-	-	-	-
Stage 2	402	181	-	219	49	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	6	1	~ 116	-	1	312	59	-	-	232	-	-
Mov Cap-2 Maneuver	6	1	-	-	1	-	-	-	-	-	-	-
Stage 1	8	48	-	56	115	-	-	-	-	-	-	-
Stage 2	209	114	-	-	48	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	299.2		1.5	0
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	59	-	-	116	-	232	-	-
HCM Lane V/C Ratio	0.377	-	-	1.418	-	0.013	-	-
HCM Control Delay (s)	99	-	-	299.2	-	20.7	-	-
HCM Lane LOS	F	-	-	F	-	C	-	-
HCM 95th %tile Q(veh)	1.4	-	-	11.4	-	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon